Creating value in archives:
Overcoming obstacles to digital records appraisal

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Abstract

Digitalization transforms society and public sector services. Automation, the internet of things and possibilities for big data analysis put strain on the public sector archival community to adapt archival theory and practice to the digital environment, and to leave paper thinking behind. Along with digitalization follow new roles, new collaborations and new possibilities for the archival community. Usability is a key function for the substantiation of digital records and digital archives as resources in society: resources for democratic processes, knowledge development, business possibilities and information gathering. Digital archives formation starts with digital records appraisal, which is the first step in creating value in digital archives. In this first step, usability is a basic value to be considered. This thesis focuses on two areas; the usability of digital records and the construction of a model for digital records appraisal, which will be sustainable throughout changes in the normative, theoretical and technical environment.

Usability of public sector archives requires quality in official records. Good quality means authentic digital records with integrity, understandable in their context and accessible for use of any type or purpose. The public sector in Sweden, and in other countries, need to adapt to digitalization of records appraisal and disposal in order to create good quality in their digital archives.

The research strategy is set up in three steps towards gaining knowledge about the state of the art of records appraisal and disposal in Sweden and views of e-archives experts on future paths for digital appraisal and disposal. The first two studies are comparative, using two archival authorities to set the empirical ground of appraisal and disposal and the third indicates a direction for a strategy for change. The methods are mainly qualitative using regulative documents related to appraisal and disposal, interviews with experts and a focus group discussion. Data from documents, interviews and the focus group discussion are interpreted by text analysis.

The studies reveal areas for improvement; i) the use of terminology in governance of appraisal and disposal; ii) the distribution of responsibilities for digital records appraisal and disposal processes, including responsibilities for digital records in systems and networks and; iii) strategic planning for methodological progress. Suggestions for future action are drawn from the concluding results. However, I consider an important result to be the introduction of a coherent model for digital records appraisal. Appraisal and disposal may change from selection to assessment of value to capture.
Sammandrag


Arkivens användbarhet ställer krav på kvalitet i allmänna handlingar. God kvalitet innebär fullständiga, autentiska digitala handlingar, möjliga att förstå i sitt sammanhang och tillgängliga för användning. Arkivarier inom offentlig sektor i Sverige och i andra länder är viktiga experter för de samverkansgrupper som utarbetar IT-system. Att delta i metodutveckling och styrning av digital arkivbildning och ta ansvar för resultat är en central uppgift.

Forskningsplanen baserades på att i tre steg undersöka praktiken i styrning och genomförande av gallringsutredningar i två jämförande studier och en framtidsspanning. Det innebar att undersöka på vilket sätt och på vilka grunder värde skapas i dagens arkiv och vad dagens praktiker kan tänka om framtida möjligheter Kvalitativ metod användes huvudsakligen för textanalys av styrdokument och anteckningar från intervjuer och gruppdiskussion.

Resultaten visar på möjliga förbättringsområden; i) terminologi och begreppsanvändning i styrdokument; ii) ansvarsfördelning i processen för arkivbildning och gallring; och iii) strategisk planering för metodutveckling. Den föreslagna modellen för värdebedömning ser jag som ett viktigt resultat. Gallringsutredning förändras från att bedöma vad som är värt att bevara till att bedöma vad som är värdefullt att skapa i system och arkiv.
List of papers


1 Introduction

1.1 Background and motivation

Digitalization transforms society, in Sweden as well as in other countries. Enormous amounts of data are created, collected and stored for multiple use (SOU, 2016:85; 2016:1b, p34). The public sector also takes part in an ongoing development of e-governance (Persson & Goldkuhl, 2010, p47).

Common arguments for forming and keeping archives are for evidential, accountability or memory reasons (Cunningham, 2017, p56) and these arguments are valid at individual, organizational, sector and societal levels. Records preserved for the long term in archival institutions, such as national archives, are kept for reasons of research and societal memory. Archives are also resources that can be used for gaining knowledge or simply to inform. To fulfil these reasons for keeping archives, records need to be authentic, complete, unchanged, accessible and understandable in their original context. One can argue that these reasons and requirements put user needs and usability of archives content into the fore.

My research has focused on the formation of public sector archives based on the Swedish example. Today, in the Swedish public sector, few records are other than born digital, whereas traditionally archives are formed by paper records. My studies were focused on problems related to digital records appraisal including usability aspects and the role of appraisal in the formation of digital archives.

The specifics of digital records and how they differ from paper records has intrigued me since the end of the 1990s. I found their possibilities for use and usability not to be a priority among the archival tasks at my workplace. The prerequisite was that digital records should be stable and unchangeable, and use was focused on maintaining stable records for the purpose of evidence and keeping the selected cultural heritage unchanged. Possibilities that are imbedded in the digital records themselves and in their surrounding interconnected systems were not explored. The years during and after the experience of implementation of a digital archive at Stockholm City Archives (the formal name of which is e-arkiv Stockholm) were both enriching and frustrating, as I noted how difficult it was to give substance to the potential of the digital format, for example re-processing and analysis of different kinds of records, such as text files or records in databases.

Things have changed since 2010 when the e-arkiv Stockholm was implemented. Awareness of prevailing paper thinking has increased, but it
still remains (Klareld & Gidlund, 2017). Since the time of the e-arkiv Stockholm project a technological development named digitalization or digital transformation has gathered strength, affecting the communication habits and work processes of the public sector, with increased use of handheld devices and a variety of digital channels for communication, for private use and in the line of business, as well as by systems. Digitalization is transforming society to be increasingly dependent of enormous amounts of data, “big data”, which are collected, stored and can be analysed by any interested party with the knowledge and the means to do so. This “big data” is characterized by three main properties; volume, velocity and variety (SOU, 2016:85; 2016:1b, p34). Public sector authorities also collect big amounts of data on anything that falls within public sector jurisdictions, such as traffic, pollution and social services throughout citizens’ life spans. The development has also changed citizens’ expectations of public sector services, seemingly towards demands for more individualized services (SOU, 2016:85; 2016:1a, p216) which, according to the SOU report, may lead to the need to manage big amounts of personal data. This development also concerns the archival sphere, given that the mission of archives is to respond to all needs of the information society, to build memory and to engage in needs of their users (Delmas, 2001, p30). Archivists are concerned with at least two aspects of this development; the scope of public sector archives and the task of digital records appraisal. Possibilities for different methods of using and processing digital records for any purpose are also raised. This kind of further use of official records in public sector archives is promoted by the EU Directive on the Re-use of Public Sector Information and by global leaders (EC Directive 2003:98; Group of Eight, 2013 ;SFS, 2010:566). Public sector archivists in Sweden, as professionals in records processes and keepers of archives, have responsibility for the formation of archives and means to act (SFS, 1949:105, 1990:782).

1.2 Ethical considerations

The ethical considerations I found relevant for my studies are:

- Bias – I have studied my own workplace and another related archival institution. I know, but I am not close to, almost every person I have interviewed. I have avoided persons whom I am more closely acquainted. Text is used to minimize bias in analysis of research data, avoiding interpretation of unspoken messages in interviews, which I think would have been more influenced by bias.
The fact that the funder of the research is my employer. There has been no pressure or lever to influence the choice of focus or methods for conducting the research.

Directions of interviews and focus group focused on participants’ professional standpoints. Participants were informed by letter in advance about the research in which they were invited to participate.

The Swedish archival sector is small. Participants’ contributions have been anonymised.

I do not consider the research topic to be sensitive, nor does it have the potential to harm any participants.

1.3 Outline of the thesis
This thesis consists of three main parts; i) the scope, problems, strategy of research, and research questions (sections 1 and 2); ii) the theoretical framework, studies performed and prerequisites for the research (sections 3 to 5); and iii) the results from the studies, the resulting model for digital records appraisal and the conclusions drawn from the research (sections 6-7).

Following the introduction in section 1, section 2 presents the scope of the thesis, problems identified, areas of research and the research questions. It describes features of the Swedish setting, outlines the areas of research and provides short introductions to the three studies with their research questions.

Section 3 introduces the theoretical framework used: archival theory and appraisal theory, to target the main area of appraisal. Two models of archives formation are presented, which are useful for understanding the different purposes and views on how archives are formed. The section ends with a discussion on appraisal of records and archives and a discussion about value in archives and records and how appraisal and value are related. Section 4 presents the research strategy for the three studies: how they connect and lead forward towards a coherent result. Research methods are generally described, followed by a description of each study, data collection and analysis. Section 3.6 summarizes the prerequisites of the research and how it was made possible. Section 4 summarizes the three papers that present the studies included in the thesis: their questions, results and conclusions.

In section 5.1 and 5.2 the conclusions from the three studies are presented to provide the grounds for the following section, which puts forward a model for digital records appraisal. Section 5.3 describes my theory of appraisal fundamentals and how the model developed, growing to coherency during research and literature studies. The records appraisal model and the components of value creation in archives are illustrated and described.
Chapter 7 concludes the research endeavour with a short reasoning around the findings. It ends with a summarized conclusion in an answer to the overarching question, with four main suggestions for future actions and improvement.

2 Scope of the thesis

2.1 Research problem, aim and the main research question

Digital records appraisal is a core issue in the endeavour to adapt archival theory and practice to a digitalized public sector. My research combines empirical methods with theory and literature using the Swedish example and aiming to create a model that can be used by archivists in their tasks of digital records appraisal. The model is drawn at a general level in order to cater for changes in social norms and paradigm shifts in the archival discourse over time. The research is focused on the usability of digital records and archives, which I see as a prerequisite for access and use.

The scope of public sector digital archives and the appraisal of digital records are closely connected areas, since digital records appraisal seems to be the key factor in archives formation within IT-systems, some of which are trans-organisational. The scope of records appraisal is complicated by the large amounts of records created and captured in these systems and, with the scenario of the internet of things (IoT) the level of complexity increases when collecting or selecting records in the public sector.

Aspects of user needs, value assessment and aspects of usability are to be determined in digital records appraisal including possibilities for a variety of methods for using and processing digital records. Further use of official records in public sector archives is promoted by the EU Directive on Public Sector Information and also by global leaders (EC Directive 2003/98; Group of Eight & G7, 2013), which I see as underpinning the need for archival concern and engagement (Kallberg, 2013). The public sector archival community is facing the need to adapt archival theory and practice, as well as traditional methods and processes for records appraisal to digital conditions. Usability of digital archives content is a part of digital records appraisal that directs a focus on further use of digital records and archives.

Digitalization in society transforms public sector bureaucracy (Persson & Goldkuhl, 2010) including ambitions for Open Government and use of public
records as open data (EC Directive 2003/98; Group of Eight & G7, 2013). Current expectations and demands for e-government give a wider scope to records appraisal and the value of records than mere disposition of records for long term preservation. The scope is wider both in time and in function and it is no longer restricted to long term value and preserving evidence and memory. In addition, records appraisal must fulfil the requirement of keeping records valued for their usability, such as knowledge development or customer services (EC Directive 2003/98; SOU, 2016:85; 2016:1b). The problem can be described as a backlog of regulations and practice of records and archives appraisal, or a failure to keep up with the changing environment. The identified research problem is that the grounds for and methods of appraisal are in need of review. The overarching research question is:

- How can digital records appraisal strategies ensure sustainable selection of digital records that create value in digital archives and meet requirements for usability?

2.2 Areas of study and research questions

2.2.1 Introduction

The scope of research includes three studies designed to acquire knowledge about the state of the art of appraisal in Sweden today, which will in turn provide the grounds for a model of digital records appraisal. The studies focus on appraisal of official records in a digitalized public sector environment. Records appraisal is seen as a method to create value in archives (Brothman, 1991, p82), which positions the archivist as central to archives formation. The Swedish public sector is used as an example to explore the practice and theory of digital records appraisal. The first study focuses on concepts and the use of terms; the second explores the state of the art of records appraisal in Sweden; and the third focuses on the future of digital records appraisal in a digitalised public sector.

2.2.2 The scope of the studies and their research questions

The need for reviewing the grounds and methods for appraisal and appraisal strategies directed the research towards three areas of investigation; the use of terminology connected to problems of understanding between different professionals involved in digital records appraisal (McDonald, 2010; Runardotter, 2007); appraisal implementation and its regulatory and normative environment; and ideas about future ways of managing digital records appraisal and e-archives strategies.
Current practice in the appraisal of digital records is explored in questions of archives formation, preservation issues and appraisal when setting up IT-systems that manage records. Other issues, besides paper thinking (Kallberg, 2012; Klareld & Gidlund, 2017), are communication problems when archivists are to cooperate with other professionals, mainly from the IT-sector (Runardotter, 2009) and professional identity (Runardotter, 2009; Kallberg, 2012; Klareld & Gidlund, 2017).

The three studies, as well as the normative and regulatory environment, provide the grounds for a model for digital records appraisal, which includes a view on how value is created in archives. The three studies and their respective research questions are presented immediately below. The model developed from the studies is presented in section 6.3.

a) First study: Examining terminology in regulatory documents.
The first study examined term use in regulatory documents concerning appraisal and how terms can be interpreted. In a digitalized office environment records appraisal should be performed in advance, during the act of system setting and then implemented by all personnel that handle records in business processes (ISO 15489-1, 2016). Previous research has identified various problem areas, for example residual paper thinking (Cook, 1994; Klareld & Gidlund, 2017; Runardotter, Mörtberg & Mirijamdotter, 2011) and communication problems between archivists and IT-professionals. Archivists’ paper thinking has caused an empty space of responsibility for digital records processes, a space that is being taken by IT-professionals (Kallberg, 2013; Runardotter et al., 2011). Cooperation between archivists and IT-professionals has also been shown to be problematic due to differences in language and understanding of terminology (Runardotter, 2009). Knowledge about the use of terms and interpretations provide the basis for progress in cooperation and communication about the governance of appraisal, as part of a digital appraisal strategy.

The research questions for this study are:
- How can records related terms in steering documents governing the records appraisal process be interpreted; and
- How are they used?

b) Second study: Examining value creation through understandings of appraisal theory and norms in practice.
The second study examines the interpretation of regulations and guiding documents. Traditional appraisal practice identifies value for long term The
preservation in archives. Two traditional models for appraisal are dominant: the collection model and the selection model (McKemmish, Reed, & Piggott, 2005). Both models are reactive, which means appraisal is done from the archive’s point of view, performed in time for disposal. The collection model is performed from an outside perspective of an archival institution. The selection model is performed in cooperation between an archive holder and an archival institution, combining an inside and an outside perspective on long term value. Tensions exist in methods, roles and responsibilities of the appraising archivists. Identification of value is based on theories of archival value (Cook 2004; Nilsson 1983), combined with societal norms codified in legislation, regulations and policies. The resulting value of archives content depends on practitioners’ understanding of these norms (Brothman, 1991). The research question for this study is:

*How do appraisal theory, normative regulations and appraisal practice meet the aims of value in digital archives?*

This question contributes to the overarching question through exploring how current appraisal and disposal practice fulfils value goals. Areas of improvement are indicated.

c) **Third study: Exploring practitioners’ views on steps towards adaption of records appraisal to a digitalized public sector**

The third study examines practitioners’ views on future actions for digital records appraisal. Citizens’ expectations of public sector services rise with digitalization in society. These expectations affect bureaucracy in several ways (Persson & Goldkuhl, 2010), since the amount of records that may be needed will increase substantially (SOU, 2016:85; 2016:1a). In the case of individualized public services, the increasing amount of records will affect digital records appraisal and the scope of the archive. Methods and models for appraisal and value creation in archives need to be adapted to increasing amounts of records in systems and databases and developed for purposes of usability. In Europe, as well as globally, political intentions include making public sector records available in support of innovation, economic growth and democratic development (EC Directive 2003/98; Group of Eight & G7, 2013). Archives content is described as assets for the creating organization and for other potential users (Schellenberg, 1998 (1956); & ISO 15489-1:2016 &ISO 30301:2019). The value of potential use of digital archives content is a parameter in digital archives appraisal. This melts down to questions on usability of digitalarchives content and responsibilities for archives creation, usability of digital archives content and responsibilities for archives creation,
i.e. records appraisal methods, processes and procedures. The research question is:

- **How can records appraisal adapt to the digital environment and provide content to digital archives that are usable for access and reprocessing?**

This question contributes to the overarching question through exploring practitioners’ current views on future paths for digital records appraisal and provided inspiration for future strategies for value creation and usability

### 2.3 The framework of public sector archives in Sweden

The public sector in Sweden has three political arenas, each one autonomous and responsible for recordkeeping regulations, appraisal performance, retention decisions and long-term preservation of public records. General elections to parliament, municipalities and county councils or regions are held every fourth year. The three arenas are: i) the state sector, in which the National Archives is the archival authority, ii) the municipalities, in which the municipal executive board or a delegated agency is the archival authority, and iii) the county councils or regions, in which the county council or regional executive board or a delegated agency is the archival authority (SFS 1990:782, §§ 7-8).

In larger municipalities or county councils and regions the delegated authority may be an archival institution. There are 290 municipalities and 20 county councils and regions in Sweden. The public archival sector is regulated by several national laws, and is under the influence of EU directives, for example further use of public sector information (SFS, 2010:566; EC Directive 2003/98). The two most important laws that affect archives formation and appraisal are the Freedom of the Press Act (SFS, 1949:105) and the Archives Act (SFS, 1990:782). The central and local governments are further regulated by codes of statutes or ordinances.

Public sector archives are formed by official records from the operations of public organizations (SFS, 1990:782). The properties of a record and an official record are stated in chapter 2 of the Freedom of the Press (and Access to Information) Act (SFS, 1949:105). It is stated in §3 that a record is a “representation in writing or image and a recording that can be read, listened to or otherwise perceived by technical means only”; “A record is official if kept by an authority and …is considered as received or created by a public authority.”; and §7 “A record is considered created …when it is executed…or the case…is finally handled…” (My translation). In addition, §9 states that any record is official if archived. The Archives Act (SFS, 1990:782) states that the public organization shall define and delimit the archive and determine which records are official
Digital archives formation is thus currently based upon what records are appreciated as being a part of the organizational archive, fulfil the prerequisites of being official and are deemed to be archival records. Determining which records are official and deemed to be archival is very complex in a digitalized setting, with trans-organizational, shared records systems and databases of data harvested from (for example) traffic or environmental measures, and communicating records systems (using the internet of things).

The studies included in this thesis use the framework of the Swedish public sector when exploring the practice of records appraisal, digital records included, and how regulations and guidance on records appraisal matters are communicated and understood. The Swedish public sector has specific requirements related to archives creation and records appraisal, which are proper to present when introducing the scope of this thesis. This section provides a short description of how the public sector is organized and describes the legal environment that rules archives formation and records appraisal.

The Freedom of the Press (and Access to Information) Act 2§ (SFS, 1949:105) gives an extensive right of access to public records, a right that is restricted only by giving reference to a paragraph in the Official Secrets Act (SFS, 2009:400) when access is required. A denial may be appealed in court.

The Archives Act (SFS, 1990:782) states that the aim of public archives (§3) is to satisfy the conditions stated in the Freedom of the Press Act regarding the right to access and how official records are defined. It states that public archives are a part of the national heritage. There are three requirements, which define the values of public archives: i) the right to access official records, ii) the need for information for the administration of justice and the public sector administration and, iii) research needs. It also gives public authorities the right to destroy official records, with the condition that the retained archive fulfills the requirements of §3 and after a decision by an archival authority (§10). The Archives Act also regulates public sector obligations for the care and keeping of official records, including general requirements concerning material and methods for records creation. By November 2019 a governmental committee will present a review of the archival sector and its relevant legislation, and propose necessary regulatory changes (Direktiv, 2017:106). Currently the process for records appraisal, retention decisions and destruction of archival records in the Swedish public sector is divided in two main parts, as illustrated in figure 1.
The Archives Act divides the responsibility for the appraisal process between two authorities; the archive’s creator and the archival authority. The result is a cross organizational process in two parts; i) The archive’s creator decides which records are official and, when a need for disposal of redundant records occurs, it sets the scope of appraisal, performs an appraisal inquiry and proposes a retention and disposal plan to the archival authority for approval; ii) The archival authority performs an appraisal inquiry based on the proposal focused on long term societal and research needs. The archival authority makes a formal decision about the retention and disposal plan and communicates this to the archive’s creator, who is obliged to carry out the retention and disposal activities accordingly. In the digitalized office environment, appraisal and disposal schedules may be programmed into the system at the point of system creation.

3 Theoretical framework

3.1 Introduction
This section describes the framework within which my research is carried out. The framework is presented in four parts: archival theory, archives formation, records appraisal and archival values. The framework consists of literature that give guidance for the research strategy in answering the overarching research question (see section 2:1) and support the creation of a model for digital records appraisal:
1. Archival theory: The development of archival principles from the end of the 19th century. Focus is on the interdependence between practice and theory and views on the responsibilities of archivists and the influence of technology that has driven questions of appraisal to the fore. This connection lead to the research strategy for the three studies.

2. Archives formation: Different views on the role of archives, how they are formed, the role of the archivist in archives formation and the influence of appraisal and appraising archivists.

3. Records appraisal: the development of methods and views on appraisal goals and the archival responsibility for the result informs studies (b) and (c).

4. Archival values: divergent ideas that influence and cross-feed each other, informs study (b) and (c) and also the creation of the Digital Appraisal Model (see section 6.3.2).

3.2 Archival theory

The focus of this section is the development of archival principles during the first six decades of 20th century. These principles are still valid in the Swedish public archival sector. In the later 20th and first decades of 21st century principles are influenced by the development of technology. Major themes concern the concept of a record, views on the role of archives and archivists and adapting methods for how to keep records in a changing technological environment.

Archival theory and practice connect in a mutual interest in the raison d’etre of archives. A reason for keeping archives in the “information society” (my translation) is the importance of connection and mediation between individuals, business areas and time in history (Nilsson, 1976, p16). The connection between theory and practice has its roots in the history of the development of principles and standards for the formation, organization and description of archives. The first coherent principles for the management of archives were gathered in the Dutch Manual by Muller, Feith and Fruin (Ridener, 2009) forming the first standardized description of 19th century archives management in the Netherlands. The Dutch Manual is considered the start for archival theory and methodology, and a result of a presumed evolution during the course of the 19th century (Muller, Feith, & Fruin, 2003). Important matters addressed in the Dutch Manual were the basis for and the delimitation of archives, the separation of archival collections (p33), the arrangement of archives in original order corresponding to the administration
that created the documents (pp52, 59), and the description of archives in inventories in “order to gain a general view of the collection” (p108). Tendencies at the time were to respect the original order and to use the content of documents as grounds for their place in the archive, i.e. arrange according to subject (Muller et al., 2003, p ix-xii).

Archival methodology acts “as intermediary between theory and practice” formulated as principles guiding practice (Livelton, 2015, p91). Today, the guiding principles of practice are provenance (i.e. the separation of archives creators from each other); original inner order; and the definition and delimitation of archives (Nilsson, 1976, pp18-53). The three principles can be seen as inseparable parts of a whole (Horsman, 1994, p51). The First Stockholm Conference on Archival Theory and the Principle of Provenance in 1993 discussed the principle of provenance in the light of traditions and organizational and technological changes (Abukhanfusa & Sydbeck, 1993). The principle was viewed in a context of IT development and less stability of the organization of public sector, which affects the concepts of primary and secondary provenance (Roper, 1994, p188). Separating public agency archives from each other is an issue when IT systems are shared between agencies. One element of special importance at the conference was the recognition of metadata (Roper, 1994, p189).

These main principles, provenance, internal order and the identification of the scope of the archive for defining and delimiting the archive are matters of concern for the professional role of the archivist. Basic concepts and aspects are discussed about the archivist’s attitude towards what the professional role represents and what norms and values direct decisions on scope, arrangement and description. In the 1920s Sir Hilary Jenkinson, the Keeper of the British National Archives, focused on reasons for keeping archives (Jenkinson, 1922). Jenkinson accepted the principles of provenance and internal order, but defined archives as formed by the records delivered to the archive after the records’ creators have culled them. He claimed that the impartial archivist takes care of the archival records as objective evidence of what happened. The role of the archivist is that of the keeper and the nature of archival records are their evidential value in the context of the surrounding records (Ridener, 2009, p41). The scope of the archive is, according to Jenkinson, set by the records creating agency. In the 1950s the archivist Theodore Schellenberg of the US National Archives and Records Administration, changed and expanded the concept of the archive to include the whole lifespan of records and explained how the archival concern is the keeping and organization of records (Ridener, 2009, p70). He claimed that “Whenever records are brought together originally in
relation to action, they should not be rearranged in relation to subject” (Schellenberg, 1964, p93). By doing this, Schellenberg introduced the records life cycle to archival theory together with the concept of records management. The views and principles of archival theory and its connection to practice developed during the first half of 20th century are still considered the fundamental pillars of today.

Views on archives during the second half of the 20th and the beginning of the 21st centuries have been influenced by the growth of post-modern thinking and its criticism of objectivity, which turned the focus onto the content of the archive and questioned archives’ objectivity and the impartiality of the keeper. The archivist, seen as an impartial keeper of records as evidence of enduring value, changed into archivists as subjects, acting upon the archive in the coherence of present times. The archival focus on records’ informational content kept as evidence was questioned; on records characteristics, the critical theorists asked about “the context behind the text, the power relationships shaping the documentary heritage, and indeed the document’s structure, resident information system and narrative conventions are more important that the objective thing itself or its content…Nothing is impartial. Nothing is objective” (Cook, 2001, p7).

Technological development also became increasingly notable when electronic records became part of records processes and reached the archival institutions. By the end of the 1980s a discussion on the archival consequences of digital records and criticism of archival methods began, which increased during the following decades (Ridener, 2009, p102). Information technology and globalization required archival theorists to rethink. Part of this concerned digital records’ quality and usefulness as evidence (Bearman, 1994; Shabou, 2015) and risk factors in digital records processes and preservation (Bearman, 2007). Another focus was on the role and tasks of the archivist, as the amount of records created in the public sector was overwhelming. In 2001 the first international standard on records management was launched, the ISO 15489-1 which outlined suggestions for best practice in archives formation.

The three archival principles (provenance including original order and delimitation of the archive) keep their prime importance although the way to keep or establish provenance has changed from a physical place on a shelf to complexity of metadata and the storage room has become one or several servers. Provenance is maintained through metadata and may be shared between originating organizations. The scope of the archive itself, the fonds, have blurry borders as a result of shared systems and co-created records and databases. This was predicted by Terry Cook in 2001 (Cook, 2001, p21). The
problem of blurry borders is, in my experience, met in practice by changes in structure and description of archives, and border problems are solved by national or local regulations based on pragmatic and economic agreements.

Problems I see in the Swedish public sector of today, when most records are digital, are how the concept of the archive is separated from the origin of the records. The creation of a model for digital records appraisal as a part of this research project is a response to this separation, the technological context of archival principles, the role of the archivist and the questions surrounding objectivity or subjectivity. Hand in hand with these matters are the formation of archives, records appraisal and views on archival values.

3.3 Archives formation

The idea of the archive as we see it today developed during the 19th century, (Cunningham, 2005). The Dutch Manual defines the archive as “the whole of written, drafted or printed documents ex officio, received or created by any agency or one of its civil servants” (Hofman, 2005). This is the starting point; it relates to records as a whole, with the whole being transferred to the archive. It is the records as a whole that are the reason for the current division between the archive creators and the archival institution. The Swedish definition for public sector states: “The archive of a public agency is formed by the official records of the agency’s business and those records referred to in the 2nd chapter 3§ of the Freedom of the Press Act and that the agency has decided to take into custody for archiving” (SFS, 1990:782) (my translation). Public sector digital archives are formed by records, created or received in the line of business. The archive is seen as “post-facto” or as an ongoing process and records management systems as the archive and its container (Hofman, 2005). The archive in its container is demarcated to the records assessed as having value for retention and preservation in the system (p136). Hofman lists 12 perspectives on the archive (p155):

- All records from an organization
- Reflects activities
- A level of aggregation of records
- An organic relic of activities
- “the fonds” – the archivists’ unit for preservation
- A conglomerate from diverse sources
- Evidence of functions performed
- A conscious construction made by a power elite
- A net of related records
- A node in a net of related records
A building brick in societal memory
- A record of the performance of an organization or a person.

Digital records appraisal and the formation of archives are affected by the perspective taken on what archives represent, which may include several of the aspects listed. In the Swedish public sector environment, shared IT systems and blurry borders between a public agency and its contracted entrepreneurs complicates the perspective on how traditional archives are formed. In order to understand the complexity, the formation of archives is illustrated and described in metaphors of human existence or as a continuum. In the following, commonly used models are presented. These are The Life Cycle model and the Records Continuum Model.

**The Life Cycle model** (Atherton, 1985) is commonly used by organizations in Sweden. The life cycle perspective has its roots in Schellenberg’s view on the interest of archivists’ in archives formation in the originating organization (Schellenberg 1988 (1956)). The term was introduced by the National Archives of USA and Canada. The Life Cycle Model has been broadly accepted and used for description of records processes by public sector agencies in Sweden (Anderson et al, 2016, pp 35-37). The model is considered relevant and suitable for business needs for records retention and disposal. It is criticised as being unsuitable for digital records and digital archives as it separates the archive’s creating organization from the archival institution; (McKemmish, 1997). For example, it does not include the complexity of digital records dissemination in shared systems (McKemmish et al., 2005, p161). In this publication the authors do not criticize the life cycle; their purpose here is to address the complexity of digital archive systems. They also seem to be distinguishing between the organization and the archives, precisely because they are writing about archival systems, although they are, after all, supporters of the Records Continuum Model.

The Life Cycle model describes the life of records in analogy to the human life cycle; they are born by creation and capture, they grow to the standing of approved records, they live as used and active records for a period of time, then get less used and active and they finally become inactive and redundant for organizational business. This inactive and redundant stage is the point of action for archival appraisal for collection or selection of records for disposition, to be preserved in the custody of an archive or destroyed. The Life Cycle model allows for the movement of public agency records into the archival sphere, and separates records management from archives (Atherton, 1985; Schellenberg, 1964). In the digitalized environment, one of the challenges for the Life Cycle model in regards to the separation between
creating organization and the archival institution is merging business and records processes and keeping the archival bond through migrations and conversions (Duranti, 2001). This leads to either a collection or a selection model in regards to records appraisal for long-term value and disposal to an archival institution (McKemmish et al., 2005). The selection model is the present Swedish norm. There are two professional lines for Swedish public sector archivists; the public agency archivist and the archival institution archivist; the profession of archivists encompasses that of records managers. The Life Cycle view on records formation, linking records and archives management together, introduced by Schellenberg, has moved further towards continuum thinking.

The **Records Continuum model (RCM)** emanates from Australia (Upward, McKemmish, & Reed, 2011, p198) and was introduced into archival discourse during the 1990s. It was as a response to the more complex digital formation of records and archives. The idea of the archive as a unit from the moment of creation, and a holistic view of records management and archives, was presented by Margaret Cross Norton and the Illinois State Archive 1922-1957. Cross Norton used the term “moments old” to name the idea (Upward, 2005, p199). The Records Continuum model was first presented in 1996 and reviewed in 2005. It is influenced by postmodern thinking, and has influenced the international records management standard (15489-1, 2016), first released in 2001. The model embraces the important change in possibilities that information technology offers, such as to share, disseminate and exploit records for any purpose. It describes records processes as an on-going development, where a record is created and later, by influence of use and users, it changes, multiplies and gains something like an eternal life in never-ending changes of shape, content and multiplicity (McKemmish, 2001). This notion of records’ eternal life in cyberspace, I interpret as a consequence of dissemination and exploitation, which is out of the reach of the creators’ and primary stakeholders’ control. Records are no longer single static objects, they are composed by parts of content and metadata linked together in systems that may take various shapes, depending on the device or program used. The model connects to standardized metadata which allows for records’ evidential, transactional and contextual nature over time (McKemmish, 2001; McKemmish, Acland, Ward, & Reed, 2006, p6), and does not focus on records content or informational value (McKemmish, 2001). One crucial difference in relation to the life cycle model is that “continuum archivists” argue for an integration of current and historical archives (Upward et al., 2011). This
integration is important for my research aims of digital archives usability and creation of a model for digital records appraisal.

The Records Continuum model shows up the weakness of the Life Cycle separation between the current archive of a public agency, and the historical archive of a public sector archival institution. In my view, the digitalized environment allows records to be current independently of when they were created.

One can look at the models from both a practical point of view and a theoretical point of view. The Life Cycle model and the Records Continuum model are useful tools to understanding and meeting immediate business requirements, as well as other use of official records that may occur in the present or in the future. This useful but complex combination of digital records formation, control and use and of past, present and future of records is commented on by Brian Brothman. He writes: “A thing has properties and attributes of being; it has an identity. As we will see, the concept of record formation sidesteps prevalent commonplace notions of identity in record-keeping discourse. The paradoxes of records formation complicate the sameness and difference of records from themselves in time; they blur the boundaries that separate product and process, beginning and ending, past and present, creating or making and keeping, record and recording” (Brothman, 2006, p 243).

These aspects of past, present and future are aspects of digital records and of records appraisal considerations, which suit my model for digital records appraisal. They include value considerations and usability options.

3.4 Records appraisal

Records appraisal has historically been driven by the need to be selective as changing technologies increased the volume of records created. The current problem, caused by digitalization, is the need to handle increasing masses of records, including the handling of big data (SOU, 2016:85; 2016:1b, p34). The concept of records appraisal was introduced in governmental archives of World War I (Ridener, 2009, p40) as a consequence of the amount of paper records created by the war administration. Hilary Jenkinson partly avoided the problem by separating the originating organization from the archive, as he accepted that the creators should cull their documents (Jenkinson, 1922). Schellenberg expanded the concept of records appraisal in the 1950s. He took a holistic approach to archives formation by involving appraisal of organizational records into the archival sphere. One implication of records appraisal is destruction, which also implicates non-capture, if the moment of capture is included in the concept of records appraisal.
Appraisal and retention decisions are important elements in the formation of archives, as well as the notion of common memory (Hofman, 2005, p146). Records appraisal is a method to create value in archives (Brothman, 1991, p82). Brothman also reflects upon the aim of appraisal in a democracy. He argues that citizens have an interest in knowing how they have ruled themselves and an interest in archival appraisal. Archivists in democracies are trusted to see to the interests of citizens, and therefore need also to account for their decisions (Eastwood, 2002, p71). Questions of democracy and societal norms (Badersten, 2003/04) and also questions of responsibility (Lundström, 1988) are the concerns of appraising archivists and values in archives towards stakeholders, including citizens.

In his exposé of the development of archival ideas, Terry Cook draws the conclusion that postmodern ideas must influence archival thinking “…the dominant intellectual trend of this age is postmodernism, and it will thus necessarily affect archives.” (Cook, 2001, p6). Cook’s view changes the focus of appraisal from records content and context to contemporary governmental functions and context in society, a top-down method called Macro Appraisal. This method seeks to identify socio-historic processes by triangulating the governmental body, private organizations and citizens, looking for the impact of public sector governance in society, as grounds for archival selection. Identified agencies of most impact are selected for a hermeneutic method of records appraisal and permanent preservation (Cook, 1997, p32).

The Records Continuum model suggests that a post-modern view should nourish theory, support practice and adapt appraisal to the ideas of records continuum. Here, the concept of records appraisal means that the iterative processes of an organization indicate what records to capture and which of these should be placed in a trans-organizational archives (McKemmish et al., 2005). This is in contrast to a traditional appraisal checklist (p179). Further contextualisation may then be necessary for an external collective archive (p175). The Records Continuum model seems to reach beyond final custodial archives, a stand that raises the question of archival responsibility.

Access is another concept forwarded as central to records appraisal. A focus on access should implicate neutrality of appraisal decisions and, as records only contain information potentials, the aim is to keep the most complete information potential post-cull (Menne-Haritz, 2001, p67). Appraisal based on access analyzes the internal structure of an archive and uses description and arrangement scheme as indicators for records value. The most representative and typical records can be used as nodes for structure
relationships. Motivations should be documented and transparent to users (Menne-Haritz, 2001).

In practice, archivists follow policies or handbooks. As Richard Cox puts it at the beginning of this century:

“Archival appraisal seems to have drifted into a world of confused, conflicting, or complacent methods, theories, and practices – at least when seen by the typical archival practitioner. Some archivists in the field embrace specific guiding concepts, while others seem to operate with little knowledge of changing perspectives concerning this archival function” (Cox, 2002, p289).

Attitudes toward appraisal affect appraisal performance, which may be pro-active or re-active. As I see it, both the collection and the selection model, described by McKemmish, Reed and Piggott are re-active. In the Swedish public sector, appraisal is also mostly re-active. In the case of appraisal at system settings, appraisal work may be done pro-actively. As digitalization of public sector today includes the internet of things and big data, and big data is characterized as volume, velocity and variety (SOU, 2016:85; 2016:1b, p34), the appraisal task should be done pro-actively in order to identify the scope of the archive and that of appraisal.

3.5 Archival values

“… who determines worthiness? According to what values? And what happens when the values and the determiner change over time? ”(Cook 2001, p9).

Archival values are closely related to usability for the archives creator as evidence, as well as usability for other users to show evidentiality. Schellenberg identified primary and secondary values in records. Primary value refers to business needs for the originating organization. Secondary value refers to any other use of records, by any user in the contemporary or future time. Both categories concern usability. (Schellenberg, 1998 (1956), pp133-160)

Terry Cook connects archival value to paradigms within the archival discourse, identifying four phases (Cook, 2013). These appraisal paradigms (Foscarini, 2017) can also be interpreted as the main purposes of archives; evidence, memory, identity and community. Identity and community have an appraisal focus, while evidence and memory have a usability focus. The memory value is organizational as well as societal and cultural.

Couture identified five basic principles for appraisal of archival value (Couture, 2005, p103):

- Records provide evidence of societal activities;
- The assessment is objective and mirrors values contemporary to the appraised records;
- Relations between appraisal of archival and informational values and other archival functions are respected;
- There is a balance between administrative and cultural objectives; and
- There is a balance between considerations related to context and considerations related to records use.

Value aspects in archives are intrinsic, since they are built on the whole value of its records, while the records themselves are extrinsic, since they depend on their archival context for value (Badersten, 2003/04) (see figure 4 section 5.3.2). Evidence and memory are records values, both dependent on quality and context. Records quality is defined in ISO records management standards as authenticity, reliability, integrity and access (15489-1, 2016).

Archives contextual values lie in provenance, structure, processes and interdependences and in the intrinsic value in archives (Nilsson, 1976), and, in my opinion, the extrinsic value in records. The value in records lie in the memory of society and its institutions (Cook, 2004). Terry Cook calls for a distinct and clearly expressed idea of values attached to archives. Highest impact is one assessment criteria that may be a way to capture the power relations in society through archives.

The view of value taken by Terry Cook and his macro appraisal differs substantially (Cook, 2004) from Nilsson’s (1976). Cook rather promotes the extrinsic values in archives, as he takes a top-down view from a societal and even global level for appraisal, and values interaction between the state, enterprises and citizens (Cook, 2004; Klett, 2019). In my opinion, the consequences of archival values being considered as either intrinsic or extrinsic, affect the result of what is left in the whole of public sector archives. To consider the whole of public archives as a desirable asset, appraisal would strive towards a digital net of connected archives, and affect the scope of appraisal and appraisal parameters, maybe requiring more attention on external circumstances than otherwise. There is another substantial difference between the two theorists: Nilsson’s archive reflects the execution of the power of the public agency. Cook’s archive reflects the normative ambitions of the archivists’ doings, at least in theory. In both cases, I would say, after appraisal the influence of the archivists’ normative ambitions have influence, particularly when adopting Brothman’s idea of appraisal as a method to create value in archives (Brothman, 1991).

I have selected these two theorists, to exemplify notions of value in appraisal matters for two reasons; they were both archivists at the national
archives of their countries (Sweden and Canada) and they were both known and probably influential in their corresponding national contexts (study (b)). I interpret their theoretical stances on archival values and triangulate theory with the stances on archival values in normative regulations and in appraisal practice. (Klett, 2019, paper 2)

The most influential theorists from four countries and their thinking on appraisal values and value criteria during 20th century (Couture, 2005) is illustrated in the list below and is my understanding of the variety of value criteria, the views on value and aims of appraisal;

- The importance of hierarchy between organizations (Meisner, 1939)
- Prioritize appraisal according to organizational importance (Cook, 1992)
- Use and relevance rather than provenance (Eastwood, 1992b, Zimmermann, 1958)
- Content as headmost value (Zimmermann, 1958)
- Market demand (Zimmermann, 1958, Eastwood 1992a)
- Independence from advocacy groups (Zechel, 1965a, Zechel, 1965b)
- Marxist values as the sole parameters (Booms, 1987)
- Archives to mirror Society (Booms, 1972)
- Appraisal based on contemporary values (Booms, 1972)
- Value for creators, for administrative history, for history (Brooks, 1940)
- Prime values specified as legal, financial and administrative and secondary values as evidential and research values (Schellenberg, Brooks and Bauer in Couture 2005, p 94, note 37),
- Records characteristics (Brichford, 1977)
- Administrative (Müller, 1926)
- Research value specified as uniqueness, type, quality, credibility, reliability, age, material, use (Brichford, 1977)
- Archival value specified as links between documents and costs for preservation and storage (Brichford, 1977)
- Trans institutional appraisal (Samuels, 1986)
- Documentation strategy (Samuels, 1986, Cook, 1992)
- Appraisal through risk management (Bearman, 1989)
- Pre-appraisal, meaning appraisal before creation (Couture, 2005, p106)

The list exemplifies the amplitude of strategies and normative positions taken on records appraisal that are present at the same time, as well as indicating how they influence each other. This breadth of views on the grounds for value assessment and used parameters is an argument for
transparency into the grounds for appraisal and destruction decisions, for the sake of user understanding of archives content. Taking this range of possible appraisal strategies and normative positions in account is included in my appraisal model (see figures 3, p51 and 5, p55).

The Swedish appraisal policy of 1995 (Riksarkivet 1995) states that the aim of appraisal is primarily to preserve documentation of the core business of state agencies, with focus on the archives as part of the national cultural heritage. Important values are the relational web and informational structure of an archive. Transparency, evidential and research needs are the basic values that must remain after culling. Regulative documents are records of importance, as are those providing evidence of the real performance of its core business – direct informational value. The use of records is a parameter, which provides information about the surrounding society of the archival holder (i.e. the state agency). Research value is by default theory bound, and seen as dependent on the nature of the research questions. Value criteria mentioned are: uniqueness; continuity; reliable data quality and a possibility for critical examination; the possibility to identify and link data to individuals or other minimum units; the possibility to assess the representability of information; functional connections to other records and information from within or outside the archive holder being appraised. As a remedy for handling large amounts of records, selective preservation by sampling has been deployed based on geographical area, date of birth or sample archives (Riksarkivet, 1995). This method of selection by sampling has been criticized but is still used, for example in social acts of individuals and police files (Rydén, 2014).

A pre-study report for a revised policy on appraisal and disposal focuses on epistemology and risk analysis (Riksarkivet, 2012b). It takes inspiration from macro appraisal based on sector and function analysis and German vertical-horizontal model for sector analysis. It combines the epistemological perspectives with dimensions of archives (Riksarkivet, 2012b, fig 1). The proposed model for sector analysis (Riksarkivet, 2012b, fig 2) includes identification of sector borders, its stakeholders and its included fields. It proposes a two-step risk analysis where the first step is to analyze the archival dimensions (empirical, rationality and authenticity) and the second is to analyze links between dimensions (Riksarkivet, 2012b, p20). Each step concludes in a key performance indicator, the second builds on the first and gives a basis for further appraisal work that includes the records themselves.
3.6 Research prerequisites – experience

Prerequisites for the three studies and the model proposed in this thesis are my previous experience as a practicing archivist and an ambition to deliver results that may contribute to the Swedish archival dialogue. My international experience as expert in the ISO Records Management standardization committee TC46 SC11 since around 2003 and in the Swedish Standards Institute (SIS) mirror committee, TK 546, since 2002, tells me that the Swedish questions and problems are not limited to Swedish grounds. Internationally the archival sector has much in common, although local rules may differ as to views on the bonds between organizational archives and records management and among institutional archives on the constitution of value in archives.

The persons that participated in the studies are experts in archives and information technology that I have met in some professional capacity, others were recommended to me. A few come from my own workplace, but I have not been involved in their area of business for many years. What they all have in common is interest and engagement in records appraisal and the questions asked and discussed in my research.

The research strategy is, as a whole, largely based on my professional experience as a practicing archivist in the Swedish public sector since 1987 and at Stockholm City Archives since 1994. The focus of my professional work has been archives formation and the supervision of archival regulations, both state and municipal; as head of operations at Stockholm City Archives; leader of the Stockholm e-Archives Project. I have also been responsible for quality development at the City Archives which was honoured with the Stockholm Quality Award in 2004. Developing and improving processes, procedures and methods has been a task in my professional life.

A curiosity for digital records and archives has engaged my interest since the 1990s, especially during and after the Stockholm City e-Archives Project 2007-2010. The circumstances and problems in digital archives formation that were experienced made me question the process and procedures of appraisal and disposal enquiries and how ambitions of access and usability to digital records were limited by traditional records requirements. Problems of importance that I have experienced are inadequacies in knowledge about the formation of digital records and archives and value creating factors. The research then took the direction of investigating whether my experience was general and, if so, what were the roots of the problems and how could I contribute?
3.7 Research approach

3.7.1 The research studies

My research includes studies on the current state of the art in Swedish practice of appraisal and disposal and is based on the example of two archival institutions; the Swedish National Archives and Stockholm City Archives, including agencies within their jurisdiction. The outset for the studies is that laws, regulations, policies and other regulatory documents are important channels for informing practicing archivists about how they should position themselves in matters of appraisal and disposition. Studies (a) and (b) gathered empirical data on practitioners’ understanding of these regulatory documents concerning appraisal. A third study (c) explored views and wishes among archivists and IT professionals on the future of digital records appraisal and e-archives formation. My research aims to result in a model for digital records appraisal that would ensure usability of digital records and archives.

Archival authorities use several channels and methods to communicate about archives regulations. Besides regulatory documents that are used as data in this research, there are other channels not explored here, such as internet, e-mails, meetings and workshops. The research partly focuses on the understanding of regulatory documents, based on a viewpoint that they represent communication between a regulating agent and an implementing agent. The term ‘agent’ is used as a function, where regulations are produced at one end and implemented at the other end.

3.7.2 Research methodology and methods used

Mainly qualitative research methods are used; interpreting texts in documents, notes from interviews and a transcribed focus group discussion. Together, the outcomes of the three studies provide the basis for the model for digital records appraisal presented in chapter 6. The results of these studies should help to clarify the communication channels currently used between normative agents and appraisal practitioners. They should also reveal problems in and understanding of the current state of appraisal and disposal regulation and practice, which provides grounds for deduction.

In study (a), a quantitative method is applied to identify preferences for use of terms in documents that regulate appraisal. A comparative method based on definitions is used to interpret how the selected terms are understood. In study (b), qualitative content analysis, with a hermeneutical approach, is used for the documents that regulate appraisal (Hellspong, 2001a). Study (c) is based on interpretation of a focus group discussion. In all
three studies, interview data uses deductive methods, interpreting and categorizing data (Graneheim, Lindgren, & Lundman, 2017; Merriam, 1994a).

3.8 Data collection and analysis
3.8.1 Study (a) Examining terminology in regulative documents.

The study on terminology analysed a chain of written regulations that affect the formation of archives. The use and definitions of some archival core concepts were examined.

Quantitative method was applied for analysis of the regulatory documents used as data sources. Selection was based on the hierarchy of steering levels, from legislation, ordinances and statutes, to policies and instructions and down to the level of retention decisions. With the exception of the relevant legislation, the scope was set to include valid regulations and decisions that were digitally accessible and fell within a time span between 2007 and February 2016. A very large volume of retention decisions was found in the state sector. Therefore, these retention decisions were sampled by selecting every 10th decision, which resulted in a total of 181 regulatory documents (Klett, 2017).

The method of counting the occurrences of terms within documents depended on the file format. In the case of Word files, the Word software search tool was used. When the document was a pdf file, counting had to be done manually, which means the exact number of each term cannot be guaranteed: minor inaccuracies could have happened, but this was not considered to be significant to the results. Excel was used to show absolute and weighted frequencies for comparison of the two example organizations.

The qualitative part of this study used functional text analysis (Hellspong, 2001b). The data consisted of definitions collected from reliable national and international terminology databases and a terminology report. These were the ISO concept database (ISO/CDB) (ISO, CDB); the Multilingual Archival Terminology (MAT) (International Council of Archives & InterPARES); Riksteormbanken, a Swedish national database for business terminology (Rikstermbanken); and a terminology report which resulted from a series of workshops held at the Swedish Standards Institute (SIS): Begrepp och termer – definitioner och hierarkier [Concepts and terms – definitions and hierarchies] (my translation)(Persson & Svensson, 2011). The majority of definitions selected came from the archival and IT-sectors and some from governmental
sectors. Based on the character and common features of each term, definitions were grouped and interpreted in search of a possible consensus suggestion.

3.8.2 Study (b) Examining value creation through understandings of appraisal theory and norms in practice.

This study explored understandings of regulations and guidelines and the possible influences of theories concerning archival values and appraisal grounds, foundational norms and views of responsibility. The study contains a complexity of data sources and analysis, combining theory and empiricism. Qualitative methods included deep reading and content analysis and interpretation of appraisal theory from the two theorists Nils Nilsson and Terry Cook (Cook, 2004; Nilsson, 1976, 1983), and content analysis of regulatory documents and notes from interviews. The documentary data sources were:

1. The legislation and the regulations currently in force, and
2. Guidelines dated between 2007 and February 2016 from the Swedish National Archives and Stockholm City Archives.

Semi-structured interviews with professionals involved in appraisal at normative, decision and executing levels were undertaken during summer–autumn 2017. Interviewees were selected using the snowball method and contacted by e-mail. This method is used, for example, in the case of a predetermined criterion for inclusion: in this case experts involved in records appraisal issues (Williamson & Johanson, 2013). They were informed of the research and the study and questions were sent by e-mail prior to a face-to-face interview. Notes taken during the interview were analysed using qualitative content analysis. These three data sources – the selected publications of the two theorists, the normative regulations and the practitioners – were grouped as “working agents” with influence on archives formation. The term working agents is chosen in order to clarify what I see as i) the active role of the three data sources and ii) the connection between theory and practice. Analysis of the answers to a set of questions put to the three groups of working agents were categorized. Categorization analysis included three steps: finding answers to the questions; rephrasing answers to statements; and identifying categories. The results from analysis of the three working agents were triangulated to identify similarities among them and influences of ideas between them. Finally conclusions from triangulation were compared to responsibility theory and normative theory, based on two articles, one by Badersten and the other by Lundström (Badersten, 2003/04; Lundström, 1988).
3.8.3 Study (c) Exploring practitioners’ views on steps towards adaption of records appraisal to a digitalized public sector

This study explored ideas of future value creation in digital archives in the light of recent literature on appraisal. The data consisted of one recorded and transcribed focus group discussion. The focus group method (Wibeck, 2010) was chosen to explore one prime issue, the future of digital records appraisal; to intersect different experiences and knowledge in an open discussion; and conclude on the outcome. Selection of focus group members was made based on knowledge of their expertise and led by the need to include the various voices of archivists and IT-professionals from across the state, municipal and private sectors. Eight of eleven invited experts accepted and participated in the focus group discussion in May 2018.

Qualitative content analysis of the transcribed discussion followed a three step procedure (Merriam, 1994), assembling themes of discussion into categories and were discussed against a background of recent literature on records appraisal.

4 Summary of included papers

4.1 Paper 1: Examining the use of core terms in a records appraisal context – two Swedish examples (Klett, 2017)

A version of this paper was presented at the conference Trust and Transparency in EGovernment, Oslo and Akershus University October 26 2016, and subsequently submitted and accepted for publication in a Special Issue of Tidskriftet Arkiv, 8 (1) 2018. Its purpose was to explore potential sources of ambiguity which may entail a risk that the scope of appraisal excludes potential archival values. The research question is: How can records-related core terms in steering documents that govern the appraisal process for records and archives be interpreted and how are they used?

The paper examines the use and understanding of core concepts in regulatory documents concerning records appraisal. The study also includes two concepts that connect to archival values, “informational value” and “usability”. The documents represent the three levels of hierarchy, from legislation and regulations to retention decisions. Together they form the directions upon which appraisal is effectuated. Despite not being exactly synonymous, the terms examined can all be interpreted as “official record”.

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The following terms are examined in Swedish and in English: “information”; “data”; “piece of information (uppgift)”; “Metadata”; “record (handling)”; “business information (verksamhetsinformation)”; and “document (dokument)”. The added concepts are “informational value (informationsvärde)” and “usability (användbarhet)”.

Qualitative and quantitative methods were used in a comparative study of two Swedish archival institutions. The study included two parts; one examined core definitions from authoritative sources, using functional text analysis (Hellspong, 2001b). The intention is to clarify differences and to seek unifying understandings in definitions related to the archival or the IT sectors. The other part used quantitative method, counting frequencies of each term, which were presented in the paper as diagrams. The two Swedish public sector archival institutions were compared, the National Archives and Stockholm City Archives.

The study found a broad vocabulary that may confuse the reader, especially at decision level. The dominating terms are “record (handling)” and “information”. The term “Record” is specific and the Swedish term “handling” is a core term, as it is related to delimitation of public sector archives if determined to be an official record, although it is used in legal texts and it is not widely understood. The term “information” is general and not sufficiently distinct for the purpose of scoping appraisal. A change towards broadened vocabulary can be seen, which, combined with the variety of definitions found for each term, increases the risk of misunderstandings in the practice of appraisal. A suggestion is that records appraisal could benefit from forming an adjusted version of Communities of Practice (Wenger & Snyder, 2000) to develop common understanding of terminology relevant for the task.

The reason for including English in a study based on documents in Swedish is due to my belief that there are benefits to be derived from sharing experiences within the international community of archivists and from having an international perspective on vocabulary used in regulating documents. Vocabulary problems in the ongoing digital transformation for the Swedish archival sector may also occur elsewhere.

The paper shows the importance of clear communication in relation to records appraisal and suggests a strategy to mitigate unwanted results. In answer to the research question How can records-related core terms in steering documents that govern the appraisal process for records and archives be interpreted and how are they used?, an outcome arising from the study and the above reasoning, is the proposal that a strategy for structured cooperation between professionals involved in digital archives formation and records appraisal
should include common understanding of terminology and agreed definitions.

4.2 Paper 2: Theory, regulation and practice in Swedish digital records appraisal.

This paper is published in the *Records Management Journal*. Its purpose was to explore the state of the art of creation of value in archives in a digitalized environment. The research question is: *How do appraisal theory, normative regulations and appraisal practice meet the aims of values in digital archives?*

Archival appraisal includes “theory, rationales, policies and procedures” (Craig, 2015). This is interpreted as follows: theory defines archival value, rationales are based on societal norms and regulations formalize norms; finally, policies interpret and explain the regulations and guides to procedures. Knowledge and understanding concerning the aims of records appraisal developed through the working agents can be a starting point for change and adaption to e-governance in the public sector. According to my interpretation of Craig’s dictum, strategies for identifying value consist of a combination of theory, norms and processes. Three working agents were then identified: theory, regulations and practice. How these may work together and influence each other is the theme of the paper.

Digitalization and e-governance in the public sector challenges traditional archival practice and residual paper thinking. This entails a need to modify traditional conceptions of archives formation based on paper. Digital records are not tangible and stable in format and appearance as are paper records, which should have consequences for appraisal rationales and procedures. The concept of value is central in records appraisal as the meaning of archives is to keep and protect informational assets for possible use in the present and over time. Qualitative content analysis was used to investigate possible influences between theory, norms and practice and the understandings by their representatives using triangulation. The result was related to responsibility and normative theories.

Five value domains were identified: aims of appraisal; basis for analysis; types of informational value; influential factors and reasons for retention or destruction. Triangulation of theory, norms and practice indicates a two-way influence between theory and norms and between theory and practice, and one-way between norms and practice (figure 2).
Figure 2. Inter-influences between agents of theory, norms and practice

The results show differing views on the role of the archive in society and views about on what the archivist should build appraisal performance. The findings also show that changes in regulations and practice do not follow the development of digitalization. The study used the Swedish example, where the archival values stated in the Swedish Archives Act (SFS 1990:782) are grounded in societal norms of democracy, transparency and citizens’ needs; with its specific rules such as an extensive right to access public records; and the way the scope of the archive is set by an equivalence between archival records and official records. Indeed, almost any record of a public sector agency may acquire the status of official record.

The Swedish example indicates that societal norms formalized in regulations, bind appraisal performance to paper thinking and leaves prevalent archival discourse aside. Nevertheless, at the practitioner’s level, some influences are seen in thoughts of impact, sector views and aspects of citizens’ views on the public administration. Executive archival professionals of an agency seem more inclined than the normative and supervising professionals to consider external aspects and the specifics of digital format. This may be an effect of mission, tasks and restrictions in legislation and regulations. Task-level responsibility was the kind of responsibility found to be taken as a result. This means that there is only partial, not full knowledge of the result of appraisal, which is the value in archives. The absence of accountability for the archive/archivist with responsibility for retention and disposal, is due to the lack of a forum for audit and clear criteria for assessment. Responsibilities fail to balance normative purposes with appraisal methods (Hurley, 2005, p230), which I interpret in the Swedish case
as the lack of audit of the result of appraisal in terms of archival values and the division of responsibility for scoping appraisal and for retention decisions.

The paper concludes that two kinds of risk are exposed when responsibilities are divided. First: accountability control and knowledge of appraisal grounds may be set aside due to lack of knowledge about business operations. Second: appraisal in a two–step process and a re-active selection model applied due to business redundancy, or without archival competence, for example at system setting, leaves a black box of records with unrealized potential archival value.

Out of the above reasoning, the answer to the research question “How do appraisal theory, normative regulations and appraisal practice meet the aims of values in digital archives?” is, that with current processes and procedures in the Swedish system, it is not possible to know how the aims of value are met in digital archives, and, I would say, not in traditional archives either.

4.3 Paper 3: Digital records appraisal towards societal digitalization in the public sector. – A focus group discussion.

This paper has been submitted to the International Journal of Public Information Systems. It explores practitioners’ views on digital records appraisal and the commitment of archives in a digitalized public sector, where usability of archival records is a central function. The research question is: How can records appraisal adapt to the digital environment and provide content to digital archives that are usable for access and re-processing?

Qualitative deductive method was used for analyzing a focus group discussion. The group meeting began with an introduction, informing participants about the research in which the focus group was a part. It then continued as a free discussion. The participants came from state, municipal and private sectors. The analyzed discussion was then related to recent literature. The assembled group was experienced in implementation and administration of digital archives, of regulating and supervising archives and records formation, including appraisal. An information letter gave directions for preparation, among which one task was to think digitally and proactively, and preferably unfettered by current regulations.

An idea presented by two of the participants at the start of the discussion was to preserve everything in a “neutral container”. This idea then became a kind of center point for the discussion. Analysis of the discussion identified three different themes, under which 9 topics were found. These were
digitalization, archives formation and use and usability. The problems discussed are well known in literature, such as paper thinking, trans-organizational systems and co-creation of records, the validity of the principle of provenance, the contradiction between stability and usability for processing, the aims and objectives of archives and the role of the archivist.

Based on the focus group discussion and the literature, the paper concludes by identifying five main components that can be used as a strategy for adaptation to digitalization. The discussion confirms awareness of needs for change among the archival community and others involved in digital archives formation and records appraisal.

Ideas for further exploration suggested are i) trying out the idea of Communities of Practice into an adjusted version for appraisal performance, ii) further exploring Penn’s principle of Archival value (Penn, 2014) and iii) replacing the idea of permanent preservation of digital records with the task of maintaining and preserving as much as possible for as long as possible. To this I would like to add that it could be fruitful to combine Penn’s principle with system theory, as Luciana Duranti presents system properties. She writes; “Systems behave as wholes. Thus changes in any part of the system constitutes a change in the system as a whole”; and “Systems are more than the sum of their parts as they encompass the relationships among the parts and the processes enacted to them” (Duranti, 2001, p40).

5 Discussion

5.1 Introduction

This chapter extracts the results of the three studies and explains how their amalgamated results drawn from theory and empirical studies feed into the aim of my research; the model for digital records appraisal. This is presented in two sections; the conclusions from the empirical studies of the state of art of Swedish appraisal and the introduction of a model for digital records appraisal.

5.2 Concluding results of the empirical studies

The overarching research question for the thesis is: How can digital records appraisal strategies ensure sustainable selection of digital records to create archival value and meet requirements of usability?

The objectives for the three empirical studies were to investigate the state of the art of records appraisal and disposal and identify problem areas as a
base for constructing the model for digital records appraisal. Together the three empirical studies indicate the following problem areas:

- **Risks of precarious scoping of records appraisal**
- **Risk to digital archives usability because appraisal regulations and processes have failed to keep pace with technological change, and perpetuate paper thinking on archival values and value criteria in relation to digitalization**
- **Lack of strategy for archives to meet the demanding future of digitalization and “volume, velocity and variety” (SOU, 2016:85; 2016:1b, p34) in archives formation.**

Of the three indicated problem areas, the digital records appraisal model (see section 6.3 and 6.4) seeks to answer to parts of the second; expanded notions of archival values (6.4), value parameters as ground for criteria and usability as a product of digitalization (6.3). A suggested strategy is one outcome of paper 3 (see also section 7.2).

**Paper 1** “Examining the use of core terms in a records appraisal context – two Swedish examples”, put the research questions “How can records-related core terms in steering documents that govern the appraisal process for records and archives be interpreted and how are they used?”

The paper concludes that communication with a broad terminology related to the concept of a record is dependent on mutual specific knowledge to distinguish the terms used from one another, knowledge that embraces agents of regulation as well as agents of practice. Lack of knowledge entails the risk of misunderstanding with precarious scope of appraisal as a consequence, which in turn may affect archives value. Communicating definitions of term is one way to clarify concepts and distinctions between terms and lessen risks, repeated training is another.

**Paper 2** “Theory, regulation and practice in Swedish digital records appraisal” put the research question “How do appraisal theory, normative rules and appraisal practice meet the aims of values in archives?”

The paper concludes by identifying two main problem areas;

i) that prevalent archival discourse and effects of digitalization are set aside, particularly when digitalization purports to enhance archival values such as possibilities for use and processing records at “molecule level” thus extracting knowledge and;

ii) taking active responsibility for retention decisions without the full picture of the scope of appraisal, entails risks to
accountability control and lost values in digital archives due to a lack of appraisal competences in business operations.

Remedies suggested are training and “...various professions cooperating in a structured way...” (Klett, 2019: paper 2), for development, maintenance, communication and implementation of appraisal knowledge. Pilot projects to support appraisal decisions, built into systems of business intelligence were suggested.

**Paper 3** “Digital records appraisal towards societal digitalization in the public sector. – A focus group discussion” put the research question “How can records appraisal adapt to the digital environment and provide content to digital archives that are usable for access and re-processing?”

The paper concludes in a strategy of five components for adaption to digitalization. Three of them are policy statements to be taken, two are added suggestions of tasks to investigate, inspired by literature; one for forming multi-professional groups of stakeholders records appraisal groups inspired by Communities of Practice (Wenger & Snyder, 2000); and the other to explore Penn’s principle of archival value in the environment of digital archives networks (Penn, 2014).

The following section presents my suggestion for a records appraisal model, adapted to the digital format, showing areas of appraisal grounds and areas of parameters for assessment. In other words; the model is intended to be sustainable, to support the task of appraisal over time. The model is intended to support creation of archival value by digital records appraisal and requirements of usability.

### 5.3 Introducing a model for digital records appraisal in a value context

#### 5.3.1 The development of a records appraisal model

Section 5.3 describes my theory of appraisal fundamentals and its implications in a model for digital records appraisal. It has been developed through the reading and research which underpins this thesis. In the following, a background is given before the model is presented in figures 4 and 5. The intention is to create a sustainable model at a general level, which can function over time. The model is described before going into more detail about the fundamentals that are included. The idea is that the fundamental grounds of the model are to be kept up to date through continuous invigilation concerning their developments and changes. These are i) three
areas of investigation to be performed, which are presented in figure 3; ii) parameters for assessment, which are to be defined in assessment criteria, revised when needed, presented in figure 4; and iii) the composition of archival value that provides grounds for the appraisal investigation, presented in figure 5.

The first draft of the model was a four-field drawing where I placed subjects that needed to be considered during appraisal. This four-fielder grew step-by-step during reading, discussions and interviews as the research progressed. The model was developed by placing the appraisal activities into a coordinate system. The x-axis illustrates direction that connects appraisal to use, a movement which also connects theories and assessment of archival values in records with substantiation of value, through the use of records in practice. This connection of norms, theory and practice is clarified in the second study (Klett, 2019: paper 2). The emphasis on epistemology was inspired by a conversation with a representative from the Swedish National Archives (Riksarkivet, 2012a). The substantiation of usability involves presumptive users who are the collective of all archive stakeholders. This means that usability of records is a key issue in appraisal, which was also one of the conclusions from the third study (paper 3). In the same way, the y-axis indicates a direction that connects records capture to access; a movement which also connects the point of a theory-based appraisal decision to the practice of access. This connection is relevant especially in the digital office environment, and included in the Records Continuum Model, which provides for appraisal before records capture (McKemmish, 1997).

This development of the model introduces the appraisal activities, theoretical grounds and archival stakeholders involved, using archival theory and its connection to practice. The third study of my research project, presented in paper 3, concluded that digital archives should undertake the task of keeping records for as long as possible. The time aspect completes the figure with the z-axis, which carries the x and y-axis forward in time, with an idea of “the Archive” as the origin, the centre for appraisal competences, for the archival institution and for the storage location within or outside the records creator’s organization. The origin stands for the existence of the “archive” through time.

When working with the model, I had the following outset; a) the case is appraisal of digital records; b) the characteristics of digital records differ from paper records, which means that the parameters for assessment must include these characteristics; stakeholders in archives content should be identified, as they may affect the decision to create or not as well as considerations on
disposition or access; c) usability of digital records is a fundamental value and; d) reasons for appraisal decisions must be clearly documented and connected to regulatory documents. What interests me is the question of value and value assessment and to express archival value grounds in a sustainable manner. My suggestion is that value grounds are a combination of stakeholders’ interests or needs, epistemological grounds and assessment parameters (figure 3). These need to be filled with descriptions of the interests, theories and criteria for assessment of the contemporary time. To complete the model, the components of archival value and how this value is constructed are needed (figure 5). The term “usability” is used as a broad concept that includes traditional values for use, such as evidence, accountability and memory, and the possibility to process records from aggregated to molecular level.

Although the aim of the model is to express and illustrate ideas and fundamentals of records appraisal, it can also be used to describe and guide an appraisal process. The path of the process can be traced as it starts at assessment of value, moves to a decision to create or to capture a record and further on to dissemination and access for use. In the following I present and explain the records appraisal model.

5.3.2 Ideas and fundamentals of a records appraisal model for the digital office environment

Value assessment in records appraisal is tightly bound with its present time (Gilliand, 2014). The three identified grounds for assessment of value suggested above, should lead to a specific result that responds to the value for users, who are stakeholders in the archives. The parts of the appraisal model proposed in this thesis can be illustrated as the following questions and answers:

- Who are the stakeholders?
  - Answer: The creating organization, public sector agencies communities, corporations, enterprises, and individuals (for example citizens) in their evolving and changing situations and interests through time. This is the sum of society as a whole, the present as well as the future.

- Upon what grounds should appraisal rest?
  - Answer: An epistemological ground; archival theory, value theory, business intelligence (decision theory), system theory and others that can be relevant at the time for appraisal.
• What are the areas of parameters in which value criteria should be sought?

◊ Answer: in areas that support access, usability, theory and stakeholders’ interests; records properties, technological context, normative context (social and cultural context) and stakeholders’ interests (users/producers).

**Figure 3. Three parts included in the appraisal model and the goal of records appraisal**

![Diagram showing the appraisal model with three components: Stakeholders’ needs, Epistemological Assessment value grounds, and Assessment Parameters.](image)

The problem of identifying grounds for records appraisal, theoretically as well as in practice, is an important factor in the model. Appraisal practice cannot be discussed or performed without considering the why and the what, which means that theory connects to practice (Mortensen, 1999). Accordingly, theory is the basis for method and method is the basis for practice (Eastwood, 1994). The epistemological components are theoretical appraisal grounds in general and the capture component, as grounds for the decision that is behind each capture activity, whether aggregated at system level in system development or as an individual record. The practice component implements access and use. The borders are somewhat blurry, as capture is not only an activity and thus practice, but also a decision to act, based on theory. The time perspective is an important component in archives theory and practice, and an area of expertise for archivists. What is implicit in the model, and expressed in the components of archival value, is the impact of prevailing norms of the present time for appraisal. These are described in section 5.3.3 (figure 5).

Figure 4 shows the appraisal model. It includes the three components: stakeholders (creators and users); epistemology (theories); and assessment parameters. The records appraisal model is intended for digital records in information technology systems. The model stresses the relationship between theory and practice and places archival knowledge in the centre of appraisal.
knowledge, since appraisal knowledge consists of knowledge drawn from both theory and practice. Therefore, in mixed expert appraisal groups, I suggest that practitioners with archival competence should be put in the lead of the appraisal process by virtue of their specific competencies.

The proposed Digital Records Appraisal model is presented and explained below (figure 4). It is drawn up with the purpose of supporting adaptation of appraisal into the digital environment. It may be used as a tool for improving an appraisal process. It does not go against the two models of records formation presented in section 3.2.

Figure 4. The model of digital records appraisal

The path through the model leads off from Evaluate (Appraisal) via Capture and Access to possibility for Use, illustrated by the green thread. A consequence of this is that the first step of appraisal is performed before capture. The model for digital records appraisal includes the relationship between theory and practice, placing archival knowledge in the centre of appraisal knowledge both in theory and in practice.
The x-axis connects appraisal to the use of archival resources and the y-axis connects capture to access. Both axes are a means to reach the ultimate goal of appraisal: usability; even though use cannot be predicted. The z-axis illustrates time. The four quadrants formed by the x and y-axis are areas of appraisal parameters. The parameters are to be specified with criteria and described, since the specification of criteria changes and fluctuates over time. The archive represents competence and means to coordinate archives formation and govern records appraisal. It is situated in the origin of the x and y axis. The origin, or the archive is, at any moment, situated in the contemporary context of appraisal. The z-axis illustrates a time-continuum, on which the archive moves forward, bringing with it, the x ‘appraisal-use’ and y ‘capture – access’ axes forward through time, bringing the parameter areas along with them. The model also illustrates the necessity of theory for archival practice and how the two connect to each other in the practice of digital records appraisal.

The model illustrates a theoretical basis for assessment in records appraisal, intended to be sustainable over time. Each quadrant of parameters is completed with criteria according to prevailing norms, technology and theoretical stands of its contemporary context. The quadrant parameters are:

- **Information properties**, such as format structure, static, dynamic components, type, dependencies:
- **Technological context**, such as data security, hardware, platform, storage, costs, access, software;
- **Cultural/societal context**, such as norms, regulations, openness, authorities, ethics, countryside, urban environment, efficiency, private, school, politics, science, communication habits, corporate;
- **Stakeholders**, or creators/users, such as government, company, citizen, practitioner, pupil, adult, journalist, machine, academic, lobbyist.

For each parameter, criteria have to be set up. These criteria have a direct connection to prevalent norms and regulation and explained in relation to archival paradigms of the present time. These references to norms and paradigms have to be clearly articulated for future understanding “… it is not sufficient to set out methodologies and technics. There must be a principle ” (Hurley, 2005, p245)

The function of the value parameters is creating value in archives. They have no value in themselves, they work as tools for assessment of value. As concluded in paper 2, value is “merely a matter of use and usability in a time and space (continuum) perspective. Use and usability require authenticity, access and the
means to process”. The model and its parameters support use within the restraints of its own time. Future use is seen as unpredictable, except for the well-known archival experience, that records are used for other purposes than those which initiated creation. Contemporary theories and norms of each time are used to specify the parameters and decide on criteria. The list of appraisal parameters during the 20th century in section 3.4, drawn from Couture’s presentation (Couture, 2005), I see as useful illustrations combined with the examples of theoretical value domains listed below.

5.3.3 The creation of value in archives

Two aspects of interest in appraisal theory, for the creation of value in archives formation, are theories of values in archives and theoretical parameters for assessment of value in records. Theoretical parameters are illustrated in figure 4 and exemplified above. Appraisal theory includes different views and paradigms shifting over time, suggesting archival values and indicating ways for appraisal (Cook, 2004; Nilsson, 1976, 1983) (see section 3.4).

The official records of the public sector of today are mostly digital. The change in vocabulary that has been traced towards a general use of the term information can be seen in study (a) and in Borglund and Engvall’s discussion of open data (Borglund & Engvall, 2014; Klett, 2017). My conclusion is that the digital format and the possibilities it brings for processing data has influenced the discussion to include informational value as part of digital records appraisal. This development complicates appraisal. The need for clear definitions and understandings is crucial in the digitalized environment. A claim for value in records within the public sector is a resource that benefits society, thus strengthening economic growth, societal welfare and democratic development by digitalization and open data (Group of Eight & G7, 2013; Gulligsen, Persson-Stenborg, & Backlund, 2016).

Other claims of value are that archives play a role as collective memory of society and evidence of occurrences in the past (Couture, 2005). More recently identity and community memories are aspects discussed as values to create in archives (Cook, 2013; Foscarini, 2017). In Sweden, access, evidence and cultural heritage are identified in the Archives Act as values to be protected (Riksdag, 1990). Internationally there are two approaches to appraisal practice: to appraise for destruction and to appraise for preservation (Couture, 2005). In Sweden appraisal is for destruction, as preservation is the default, required by the Archives Act. The result is a reactive process, and appraisal is performed at the point of records or system redundancy.
I find that a common understanding of archival value and its dependencies, is essential for the governance of records appraisal. Archival theories about value can be found in norms and regulations and in contemporary archival discourse.

**Figure 5: Creation of archival value**

Figure 5 illustrates how the extrinsic value in record edifies (builds up) intrinsic value in archives, which in return extends (returns) value to records. Extrinsic value means that a single record does not have value in itself, it needs its context within the archive. This may depend on the understanding of the concept of a record. If a record is seen as a potential information carrier and not information, it would give the record value in itself, thus intrinsic value (Menne-Haritz, 2001). The archive has intrinsic value, which means it has value in itself, through its records content as a whole. At the same time an archive can have extrinsic value, if seen in a context of archives, for example in a net of digital archives. This comprises provenance, context and structure. Archivists create value through their methods and the methods for records
appraisal is one of them (Brothman, 1991). Records appraisal is based on epistemology and archival theories and governed by norms and regulations. Archival values are embodied by theory, but also restricted through the prevailing paradigms of each time. In a similar way, the total of norms and regulations that govern appraisal embody archival values at the same time as they restrict or demarcate definitions of value.

Archival theories about value can be found in norms and regulations and in contemporary archival discourse. In a minor overview made in 2016, I categorised the views and propositions of archival theorists. My intention was to explore ideas on what builds archival value and how value is created.

The list exemplifies what may be seen as theoretical domains and paradigms, its purpose is to illustrate value domains not to state theoretical area. Examples of value domains;

1. **Ideas about records and archives.** Archives are built by records, so concepts of records and of archives is fundamental and nurture the other theory domains in archival discourse.
2. **Ideas about benefits.** The domains most closely connected to concepts of records are those concerning benefits, stakeholders and time. They includes values of evidence, of history, concepts of “near and far”\(^1\) and knowledge of the present (self-knowledge).
3. **Ideas about memory construction** are also connected to concepts of records. This includes individual, corporate, societal and global memory construction. Part of the discourse seeks to stretch the idea beyond the record as recorded information, to include information in forms of symbols, rites or oral story telling.
4. **Ideas and knowledge about use,** reach out to the concept of usability and what it constitutes. This forms the basis of the concept of “archive as a resource” for businesses, individuals and for society and includes economics, since “everything cannot be retained for the long-term” and “records destruction benefits archival access”\(^2\).
5. **Ideas about relations,** concern creators, users and objects. This domain intertwined with other scientific disciplines, such as psychology, social science or ethnology.

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\(^1\)“Near and far, side by side” is an expression from Foucault cited in a text about document analysis (Hartland, 2005, p86) that may be useful in records appraisal

\(^2\)These are mentioned in regulatory documents as motives for appraisal and destruction of records. (Stockholm, 2009, p2; Riksarkivet, 1999, p7)
6. Ideas about the value of time perspective, thought of as a special domain and is the responsibility of archival science, and archival practice

7. Concepts of archival value is an overarching domain, since memory, relations, benefits and use are what build up value. “Primary and secondary value” (Schellenberg 1956) has been thought of as a concept, but in the light of theory domains, it is merely a matter of use and usability in a time and space perspective.

6 Conclusions

6.1 The research and its outcomes

This thesis focuses on two areas; the value and usability of digital records and the construction of a model for digital records appraisal that will be sustainable throughout changes in the normative, theoretical and technical environment. It is concentrated on problems related to appraisal of official records in a digitalized office environment in Sweden. The problems identified were connected to digitalization in society and e-governance in the public sector (Gulligsen et al., 2016; Persson & Goldkuhl, 2010) and prevalent paper thinking in the archival sector including digital records appraisal (Fredriksson, 2003; Kallberg, 2013; Rydén, 2014). The studies revealed areas for improvement in the Swedish public sector: i) the use of terminology in governance of appraisal and disposal; ii) the distribution of responsibilities for digital records appraisal and disposal processes, including responsibilities for digital records in systems and networks; and iii) strategic planning for methodological progress.

The selection of content for digital archives is currently based upon what is appreciated as being a part of the organizational archive – in this case what constitutes an official record (SFS, 1949:105). In the Swedish public sector any record may get the status as official as there are three prerequisites; received, created and captured as part of a case, or retained (Riksdag, 1990).

These problems identified in the Swedish environment are transferrable to other countries, since digitalization is global and public sector archives are formed in all countries with a bureaucracy. The overarching research question for this thesis is:

3 Manifested by the Janus face as the symbol of Swedish National Archives
How can digital records appraisal strategies ensure sustainable selection of digital records to create archival value and meet requirements of usability?

This question is followed by sub questions that came out of the research strategy and focus on three areas explored in three studies (a, b and c) that are presented in the papers included in this thesis. The three studies explore the state of the art of records appraisal and disposal and present ideas for future paths in digital records appraisal. The sub questions explored in studies (a), (b) and (c), respectively, are:

- How can records related terms used in steering documents for records appraisal be interpreted? and
- How are they used?

And

- How do appraisal theory, normative regulations and appraisal practice meet the aims of value in digital archives?

And

- How can records appraisal adapt to the digital environment and provide content to digital archives that are usable for access and reprocessing?

My research in the first study concludes that there is a clear need for the archival sector to be critical and revise the use of terminology in documents that communicate fundamentals, such as how to scope records appraisal or how to identify the important values in records. It is important to be consistent in the use of core terminology in regulatory documents. A tendency towards change in vocabulary is found, which can be a necessary development for reasons connected to digitalization, when whole or parts of records are used and boundaries between archives become increasingly blurry. This makes strategic communication about digital records appraisal pivotal. Using terms from jurisprudence can be necessary but should be supplemented by terms useful for the different tasks of digital records appraisal in its different phases.

The sub question explored in study (b) finds that it comes down to practice and the practitioners to interpret theory and regulations and to effectuate the appraisal tasks. As there is no directive on, or method for, following up appraisal results it is unknown to what degree the aims of appraisal are met. The Swedish way of doing appraisal is shown to entail risks due to a lack of appraisal competences in business operations that should be secured if they are to be consonant with the distribution of responsibilities. In addition, the study shows that the value goals in archives are not crystal clear in regulations and policy documents, which allows for various views that need to be transparent both in the execution of appraisal and retention decisions and in
guidelines. This is an aspect that is taken in my appraisal model presented in section 5.3.

The sub question in study (c) is answered by a suggestion for a five-step strategy for change towards adapting to the digital environment of the public sector. One important issue for archivists is to rethink their role as keepers. I agree with Terry Cook’s notice, which although more than 20 years have passed seems even more relevant today:

“...how can archivists be post-modernist and post-custodial when, in the popular stereotype, they along with museum and art gallery curators are probably perceived as the most custodial, the most care-taking, the most preservationist, of all professionals in the modern world. Archivists are “keepers.” We look after records places under our care. We rescue things when no one else needs them. We lovingly restore and conserve them. We preserve them in our vaults forever. Our own literature and professional mentalité, at least until very recently, reinforces these images. Yet my thesis, simply stated is that archivists can no longer afford to be, custodians in an electronic world” (Cook, 1994).

The three studies all support a proposal for the formation of cooperative communities of stakeholders in archives formation, both professionals and others, as a method for development and distribution of knowledge and guidance in digital records appraisal in support of managerial governance. Trying out an adjusted kind of Communities of Practice was suggested as an example. This proposal may be a fruitful path considering the different interests and the necessary involvement of a range of expert competences in the appraisal task. Necessary, because of the complexity of theory, norms, regulations, technology, appraisal parameters and stakeholders needs in an elusive present and future. If tried, this method would have to be conducted in the interest of archives formation and to be explored and presented as an adaption to the prevailing managerial environment of the public sector.

6.2 Suggested actions for implementing the research outcomes

In summary the conclusions of this thesis, support the following suggestions for action in answer to the overriding research question:

- Develop methods for digital records appraisal and archives formation.
- Test the appraisal model presented in section 6.2 and develop it in part or as a whole:
  - Identify, specify and describe the relevant criteria in each parameter quadrant in the model;
Identify and document prevailing paradigms as grounds for value areas.

• Clarify the role and responsibility of archives in digitalization, in this thesis suggested to be ownership of an area of expertise and provision of expert advice, and the role of the archives as a public institution; and,

• Implement a strategy for the development of digital records appraisal:
  ○ Acknowledge the acts of creation and capture as the first appraisal acts and support business processes with archival competences
  ○ Promote the prime archival task being maintenance and preservation of as much as possible for as long as possible;
  ○ State that the aim and objective of public archives, institutions and agencies is use of archives for any purpose, such as evidence, memory, knowledge and innovation – or solely for the sake of getting information;
  ○ Test a view of provenance defined in line with Penn’s principle of archival value (Penn, 2014), where the sum of its parts are not the same as the whole, to fit co-creation and shared systems.

Finally, the digital transformation of society may include that the appraisal and disposal task transforms into assessment of archival values to capture, from the selection of records of long-term value of today.

6.3 Suggestions for further research

Finally, areas for future research raised by the outcomes of my research are:

1. The records appraisal model presented in this thesis to be further explored, developed and empirically tested within the public sector digital records environment.

2. As the process of records appraisal and disposal is a decision-making process, to explore the possibilities of automating part of the process using artificial intelligence, for example, by mapping prevailing archival paradigms and precedent decisions.

3. Exploration of accessibility and usability of records and archives, irrespective of time, related to the concept of records being current independently of when they were created, which may be found in a merger of past and present records.
5. Another area to explore is how to produce and communicate regulations and guidelines to all personnel concerned with any form of records appraisal.

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