Closer together or further apart?
Public administration and archives in the digital age

Ann-Sofie Klareld

Principal supervisor: Erik Borglund
Co-supervisor: Karen Anderson

Department of Information Systems and Technology
Thesis for Doctoral degree in Computer and System Sciences
Mid Sweden University
Sundsvall, 19 October 2017
Closer together or further apart? *Public administration and archives in the digital age*

© Ann-Sofie Klareld, 2017-09-18
Printed by Mid Sweden University, Sundsvall
ISSN: 1652-893X

Faculty of Science, Technology and Media
Department of Information Systems and Technology
Mid Sweden University, Holmgatan 10
Phone: +46 (0)10 142 80 00
Mid Sweden University Doctoral/Licentiate Thesis 269
To Liv
Acknowledgements

Funding and collaborative partners are crucial to promote purposeful research. I would like to thank the County Administrative Board in Västernorrland and Härnösand Municipality for funding the research project Good Information Governance (GoInfo) together with Mid Sweden University, and the Swedish Transport Administration for co-funding the research project Efficient Digital Information Management (EDIM). I am grateful to the Public Agencies’ Network Västernorrland and the National Archives of Sweden for participating in, and contributing to GoInfo; and to the Swedish Transport Administration for participating in, and contributing to EDIM. A special thanks to Annalena Olsson at the National Archives, Stefan Berggren at Härnösand Municipality, and Daniel Bergström at the Swedish Transport Administration for your support and contributions.

A creative and inspiring work environment is worth its weight in gold, why I am very grateful for all my colleagues at the Department of Information Technology, especially my ‘neighbors’, the PhD students on the 5th floor – Christine, Claes and Leif. I also want to say a special thank you to my colleagues from the former Department of Archives and Computer Science in Härnösand whom I go to know during my first three years as a PhD candidate: Karen Anderson, Erik Borglund, Tove Engvall, Martina Granholm, Håkan Gustafsson, Erica Hellmer, Elisabeth Klett, Lars Lundin, Larsa Nicklasson, Göran Samuelsson, Håkan Sundberg, Lisa Velander, Maria Kallberg and Anneli Sundqvist. And of course an extra special thanks to my supervisors Karen and Erik who have supported and guided me throughout the process to complete the thesis, and Göran, project leader of GoInfo and EDIM. I also owe a lot of gratitude to Lena-Maria Öberg for reviewing my licentiate thesis, Gillian Oliver for reviewing my doctoral thesis, Pekka Henttonen for constructive criticism of my licentiate thesis, and the anonymous reviewers who have helped me improve my papers.

Privately, I am deeply grateful for my husband Johan, my sisters Tina and Jenny, my parents Harriette and Per, my family, extended family, and friends. In short: all of the invaluable individuals that I am blessed to have in my life!
# Table of contents

Abstract ................................................................................................................................. ix  

List of papers .................................................................................................................... x  

Preface ................................................................................................................................ xi  

Recordkeeping in the digital era – a brief outline ............................................................. xi  

Exemplifying account ........................................................................................................ xiii  

Introduction ......................................................................................................................... 1  

What is an archive? ............................................................................................................. 3  

Disposition .......................................................................................................................... 6  

Scope and objective ............................................................................................................ 7  

Research problem ............................................................................................................. 7  

The need to cooperate ....................................................................................................... 9  

Limitations .......................................................................................................................... 11  

GolInfo ............................................................................................................................... 11  

EDIM ................................................................................................................................. 12  

Further limitations ............................................................................................................. 13  

Research context and concepts used .............................................................................. 14  

Concepts and definitions ................................................................................................. 14  

Public archives in Sweden ................................................................................................. 18  

Archival authorities .......................................................................................................... 22  

E-archives .......................................................................................................................... 24  

Theoretical background ................................................................................................... 26  

Archival science ............................................................................................................... 26  

Postmodernism and poststructuralism ........................................................................... 29  

Societal implications of recordkeeping .......................................................................... 32  

Recordkeeping in the public administration .................................................................. 33  

Digital archives .................................................................................................................. 38  

Research design ................................................................................................................ 43  

Research methods ............................................................................................................ 44  

Action research ............................................................................................................... 47
Concept analysis ...................................................................................................................... 48
Discourse analysis .................................................................................................................. 49
Literary warrant analysis ....................................................................................................... 49
Critical theory ......................................................................................................................... 50
Phenomenography ................................................................................................................ 51
The records continuum as a theoretical structure ............................................................... 51

Research process .................................................................................................................... 52
Step 1 ...................................................................................................................................... 55
Step 2 ...................................................................................................................................... 57
Step 3 ...................................................................................................................................... 59
Step 4 ...................................................................................................................................... 60
Step 5 ...................................................................................................................................... 62
Step 6 ...................................................................................................................................... 63
Step 7 ...................................................................................................................................... 64
Personal reflections on the research process ........................................................................ 66

Results & analysis .................................................................................................................. 68
Paper I ..................................................................................................................................... 68
Paper II .................................................................................................................................... 69
Paper III ................................................................................................................................... 71
Paper IV ................................................................................................................................... 72
Paper V .................................................................................................................................... 73
Paper VI .................................................................................................................................... 74

Discussion ................................................................................................................................ 76
Concluding remarks and suggestions for future research ..................................................... 82
References ................................................................................................................................ 85
Abstract

The research presented in this thesis is about recordkeeping in the public sector, focusing especially on the relationship between the public administration and its archives, and selected aspects affecting the way this relationship is developing in the digital era. Two research questions are addressed: RQ1: What are ‘archives’ and ‘recordkeeping’ in the digital context and the developing e-government? RQ2: What are the indications of current and future challenges regarding the cooperation between public administration and archives? Six studies resulting in six papers form the basis of the thesis. Each study explores a unique aspect of how current developments, discussions, and decisions affect contemporary understanding and practices regarding archives and recordkeeping. Public records are authoritative information resources, crucial in the everyday lives of citizens. Public recordkeeping develops continuously alongside administrative practices, technological achievements, and political goals. Examples include the development of shared services within the public sector and the involvement of the private sector in public infrastructure projects through outsourcing. These processes are currently affected both by digital technologies, which offer new possibilities to create, use, and preserve records, and by e-government, characterized by the combination of information and communication technologies with organizational change to improve public services and democratic participation. In these processes, existing practices are reviewed and revised, and the concepts of ‘archives’ and ‘recordkeeping’ redefined. The research was pursued using an interpretive approach. The research methods used were concept analysis; discourse analysis; literary warrant analysis; phenomenography; critical theory; and the records continuum model as a theoretical structure. The results shows that common usage of the terms ‘archive’ and ‘recordkeeping’ is fluid and changing, which can make decision-making challenging and affect the relationship between archives and administration. Efforts to develop recordkeeping strategies may be hampered by factors related to the different ways in which the nature and role of archives and recordkeeping are perceived, including differing understandings of related concepts; varying discourses on what an archive (or e-archive) is or should be, and different ways of interpreting legal frameworks and their significance.

Keywords: archives, digital work processes, discourse, outsourcing, public sector agencies, recordkeeping, records continuum model, Sweden
**List of papers**

This thesis is mainly based on the following papers, herein referred to by their Roman numerals:


**Paper VI** Klareld, A. (2017) “Recordkeeping in an outsourcing public agency”. Accepted for publication in *Records management journal*
Preface

Dear Reader, I hope you will find my thesis worthwhile! It is the result of four years of studying Archival Science at postgraduate level and is written to earn its author a doctoral degree, with the intent to simultaneously make a contribution to the research field, and inspire reflection. Scholarly work is sometimes described as lonesome, and yes, it certainly requires its fair share of silent contemplation. However, all insights presented in the thesis are achieved through interaction with other scholars, both in person and through engaging with their written work. In a way it is not a finalized product, but rather an interjection in an ongoing discussion.

The preface offers a brief introduction to records and recordkeeping in general, and provides an exemplifying account of how current changes may affect administrative practices in the public sector.

Recordkeeping in the digital era – a brief outline

The focus of the thesis is recordkeeping at public agencies, more specifically the relationship between the public administration and its archives, and certain aspects of how this relationship is developing in the digital era. Records have been used for millennia in various forms. Examples include clay tokens used to count goods in early agricultural communities from 8000 to 3000 B.C.E. (Mitchell, 1999); khipu, knotted-string devices used for bureaucratic recording and communication in the Inca Empire (Urton & Brezine, 2005); and Scandinavian rune stones, described by the Swedish National Heritage Board as “(...) the oldest preserved original documents in Swedish and an important link to ancient times” (Källström, 2012). More recently, technological development has made it possible to create digital records.

The physical form of a record affects how it is used, handled and preserved: clay tokens were kept in sealed globular clay envelopes (Hirst, 2016); khipus were transported and stored with the primary cord rolled into a spiral (Brezine & Urton, 2009); rune stones were placed in the landscape, usually near roadsides, waterways, or tingsteads (Swedish National Heritage Board, 2013). The measures for how to handle and preserve digital records are currently under development. This can be perceived as challenging:
“Do you feel like you take a step back in time when you come to work on a Monday morning? Recently you were Instagramming from dinner with friends (...) looking for reviews of laundry machines online. But on the job it is time to wrestle with outdated reporting systems that do not talk to each other and time consuming processes that have to go through a range of different instances before a single decision can be made. And now, on whose hard drive was that Excel-file with the numbers for the presentation at the monthly meeting?” (O’Mahony & Wiklund, 2016, this author’s translation).

The citation is retrieved from an article in a magazine dedicated to leadership. The authors identify one of the major challenges with implementing fully digital work processes is that employee’s ‘digital competence’ generally is much more well developed when it comes to using e-services in their everyday life than it is at work. The article also says that personnel on the managerial level have a key role to play in leading the way through the changes needed. Deciding on appropriate measures to create, manage, use, and preserve records is important in the private as well as in the public sector, yet can be seen as more multifold in the context of the latter, due to the specific rules and regulations that apply, and the goals of e-Government, which should also be taken into account. It has been argued that people in general tend to have poor understanding of the authoritative nature of archives and records, despite their significance in our everyday lives (McKemmish & Upward, 1993). In this sense, records can be described as largely ‘invisible’, and what good recordkeeping entails may be something that only a few experts can explain. Although the concepts of ‘record’ and ‘archive’ are quite common, their implications are not always clear. Related concepts such as data, documents, and information are often used interchangeably, or in similar contexts (Borglund & Engvall, 2014). Despite this, recordkeeping constitutes an important part of several professions.

1 Digital competence has been defined as “the confident, critical and creative use of ICT to achieve goals related to work, employability, learning, leisure, inclusion and/or participation in society” (Van Den Brande, 2016, p. 2)

2 “The use of information and communication technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies” (Commission of the European Communities, 2003)
Exemplifying account

During the course of writing this thesis, a number of persons were interviewed on their thoughts about the development of digital recordkeeping in the public sector. One example – recorded, transcribed, translated, and processed to fit the written format – is reproduced below. It captures some common conceptions about why we keep archives, describes what it means in the daily work of the interviewee, and outlines some current concerns. It also touches on the societal implications of public recordkeeping.

Today we are situated in a computerized reality. But all that has happened up until now, well a lot of it sits in the heads of people, alternatively in a binder somewhere, and then it is very hard to find. This can mean that we will have to pay a second time for something that has already been solved. Just because we do not have papers to support it. As an example, not long ago a new owner of a property with a bus stop on it demanded that it be moved. I got in touch with a retired colleague of mine who confirmed that an agreement had been established when the bus stop was built. So then the process of finding this record began. “Archiveology”, you can say. In this case I found the agreement, it had been transferred to the National Archives. So the property owner still has to have that bus stop outside his house. Otherwise it could have come to a juridical process. So the records are not only for information they also have a value as evidence. Without records, more matters would end up in court, costing time and effort for the agency.

It sounds like you consult the archives regularly?

Yes, I do. So far this year I have contacted the National Archives regarding about 10 matters. Occasionally I get in touch with retired colleagues just to know if it is worthwhile to try and find a particular record. If we can’t find the records we need, then it can mean that we have to make new calculations and so on. Direct agreements do not cease until they are terminated. An agreement concerning the right of way created in 1935 is still valid today. If a new road is built, then that agreement has to be replaced with a new one. It can be tiresome to locate these records, and I am not sure if all colleagues are as persistent as I am. There are times when I feel like “Ah, should I give up on this?” But the taxpayer’s money, yours and mine, should be used in the best way possible. This includes not having to redo things if it can be avoided. There is a societal responsibility involved. The same goes for the records we create today – they should be preserved and available also in the future. I nag on colleagues and contractors about the importance of good recordkeeping. And I hope that it will
spread so that it will be easier to search for and find these things in the future. You should not use public money to redo and redo things just because there is no easily available and readable documentation.

Do you think that these things will improve in the future?

Yes, absolutely. First of all, the issue is now highlighted, and there are certain systems under construction that will hopefully be easier to use and with links connecting more systems with one another. You should not have to have detailed knowledge about every system, the systems should be there for me, so that I can do as good a job as possible for society. Instead of there being a lot of systems that I don’t understand, and as a consequence can’t use. The ideal would be to have this "XX"-system where you could access all information. Those that are constructing these systems are beginning more and more to understand the context of it all. An investment project, for example a bicycle lane, that process can be finished within less than a year. But it is then that the life of the product begins, and that can last for 50-70 years. During this time, and even after that, someone should be able to find out: when did we move forward here; what happened; did we encounter any problems; was the water source nearby, or whatever it might be, affected in any way; and so on.

This brief extract from an interview aimed to set stage for the focus of the thesis. Several interviewees expressed similar thoughts about the present state of things and had similar expectations for the future: public archives were generally seen as assets, albeit assets that were sometimes difficult to use; recordkeeping was perceived to undergo a lot of changes, in the best case toward more proactive, and user-friendly ways of working. Yet the development was perceived as moving forward at a slower pace than desired and it was seen as cumbersome to navigate between analogue and digital work processes.

The next section, Introduction, will discuss some basics in the current scholarly discourse on recordkeeping, paving the way for the presentation of Scope and objectives.
Introduction

The purpose of this section is to introduce some core aspects of what recordkeeping may entail, and broadly position the focus of the thesis in relation to other scholarly literature in the discipline.

All the studies in the thesis are based on an epistemological view of knowledge. The aim is to explore and problematize the perceived ‘reality’, and thereby uncover and understand tensions beneath the surface that may affect ongoing developments. In other words, the research concerns the concept of truth, and how current ‘truths’ are constructed, rather than on the Truth per se. Recordkeeping is seen as “(...) a process and a mediated social and cultural practice” (Ketelaar, 2016, p. 260). The purported fixity of records can be discussed. Duranti has questioned if there are any ‘originals’ in the electronic environment, since: “(...) it is not possible to preserve an electronic record or even a copy of an electronic record. It is only possible to preserve the ability to reproduce an electronic record (...)” (Duranti, 2001, pp. 52-53).

The nature of digital records as something hard to grasp is a strong motive to focus research on the meaning of ‘archives’ and ‘recordkeeping’ in the digital context and the developing e-government. The activation of a record has been likened with a dancer performing a choreographed show “Just as the digital record seems to disappear without a trace from the screen – leading to the ontological question, where and what is the record? – so the performance seems to die when the curtain falls” (Ketelaar, 2016, p. 254).

Some of the records we encounter in our everyday lives (financial records, medical records, and historical records, just to name a few) constitute the basic building blocks of society. Records are often vital in interpersonal relations: passports establish identity, contracts regulate responsibilities, certificates verify competence, financial records determine whether or not you can have a credit card, and so on. Records have a powerful influence due to their function as evidence and their ability to constitute a difference of status (for example a marriage certificate). The archives of public agencies hold an especially important position in being common societal resources. Public recordkeeping practices are currently under revision alongside the development of digital work processes and e-government. How much the average civil servant should be expected to know about the processes of digital recordkeeping is debatable. In his essay Bureaucracy, Max Weber wrote:
"The fully developed bureaucratic apparatus compares with other organizations exactly as does the machine with the nonmechanical modes of production. Precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs – these are raised to the optimum point in the strictly bureaucratic administration (...)” (Weber, Roth, & Wittich, 1978, p. 973).

Few would argue that ‘knowledge of the files’ is not an important part of a well-functioning bureaucracy: public recordkeeping is strongly associated with democracy, and thus is something that all employees should have at least rudimentary knowledge about. But the kind of knowledge required is not self-evident: is it necessary to understand the underlying principles, or does it suffice to know how to use the business system(s) with which one works?

The goals and interests of public agencies and archival institutions are growing closer in several aspects, for example as regards the need to adapt recordkeeping practices to the context of e-government, the demands to provide open data, and the need to preserve the integrity of digital records over time. But although recordkeeping to facilitate these goals is an ambition, there are obstacles that need to be overcome. Transforming recordkeeping practices entails technical, legal, and social considerations. Additionally, different change processes coincide, such as the move from a paper-based toward a digital administration; from hierarchically structured business organizations toward increasingly ‘flat’ and networked ones; from a time of strict boundaries between public and private businesses toward more complex entanglements, just to name a few. Given this complexity, whether the existing administrative, legal and theoretical frameworks are fit-for-purpose in the digital context is debatable.

In Sweden, public recordkeeping is based on the principles of government transparency and openness towards citizens. These principles have a long history in the Swedish context. Given the similarities between continuum thinking, as developed by Australian scholars (McKemmish, Piggott, Reed, & Upward, 2005; Upward, 1996, 1997), and the Swedish concept of the archive, the Swedish public sector provides a suitable context for research also from an international perspective.
What is an archive?

The concept of the archive can incorporate a variety of meanings depending on the context (Crockett, 2016). Archives are commonly perceived as “(...) older papers or computer files that have been consigned to secondary storage” (Shepherd & Yeo, 2003, p. 5), yet may also be seen as “(...) repositories of interesting stuff, documents and artifacts, all of human history, all of human memory and knowledge, and simply as one more source of entertainment (...)” (Cox, 2002, p. 20). In short, there is a wide scope of potential interpretations. During the last 15 years the concept of the archive has received a growing multidisciplinary interest. This has been called “the archival turn”. Ketelaar has argued that the movement can be distinguished as progressing from archives as things toward archives as a process, and from archives as they are toward archives as that which is viewed as an archive (Ketelaar, 2016). According to Breakell “(...) the notion of the archive has become at once more familiar and less fixed (...) In the public imagination, archives seem to be associated with control, order and stasis; or imagined as dusty basements, treasure troves of dramatic stories and truths untold” (Breakell, 2011, p. 23). These words illuminate one of the paradoxes in the relationship between public administration and archives: on the one hand, public archives represent transparency and openness, order and predictability; on the other hand, they are described as dormant resources with unknown potential.

In the original sense, archives were less of historical artefacts, and more closely tied to the present, being “(...) records kept to support the rights and obligations of organizations and individuals” (Shepherd & Yeo, 2003, p. 1). This is still a major function of recordkeeping, albeit one that is not always in the foreground. In 1993 McKemmish and Upward argued that though most people had “(...) at least a rudimentary understanding of information as an allocative resource”, the Australian society in general did not comprehend its authoritative nature, and “(...) its role in governing our relationships over space and time” (McKemmish & Upward, 1993). This statement rings true also in the context of the present thesis, which is the contemporary public administration in Sweden. Studying differing conceptions about what central terms such as archives and recordkeeping entail is significant since how these terms are commonly understood will affect decisions made in relation to them. The main standpoint taken in this thesis is that the ways in which people perceive archives and recordkeeping are essential for understanding the future development.
Archives can serve bureaucratic as well as cultural purposes. Buchanan has argued that the ‘double roles’ of recordkeeping become more intertwined in the digital environment, since it becomes harder to make a clear distinction between the responsibility to construct systems, and the responsibility for maintenance of the records created in the systems (Buchanan, 2011). It may even be counterproductive to differentiate too much between closely related areas of responsibility. According to Convery: “In a digital environment, professional separation along the such vague conceptual lines as ‘records’, ‘information’ and ‘archives’ is not just impractical, it can lead to a digital dark age in which vast amounts of digital information end up unmanaged, inaccessible and decontextualized (…)” (Convery, 2011, p. 208). As public agencies adjust their recordkeeping to the digital environment, differing views among information professionals risk becoming problematic when trying to work in collaboration: “Information technologists, for example, tend to see archives as passive, purely custodial functions for obsolete information” (Cox, 2002, p. 32). However, the information in an archive is neither outdated nor static, by definition: “In some cases, the concept of a ‘final’ version is barely applicable: building plans and technical drawings, for example, often undergo a process of almost constant revision as the building or plant is itself modified” (Shepherd & Yeo, 2003, p. 109). This contrasts with a traditional view of the concept of a record as fixed and static. Brothman has argued that:

“Current schemes of records management hinge on the belief that records necessarily reach a final stage of evolution, final disposition: they are forever “captured” in their singular state, in their changeless, hard-stamped date, place, and meaning. (…) The identity of each of the successive stages (states) of record-keeping – creation, classification, capture, arrangement and description, maintenance, preservation, and so on – also hinges on the anticipation of an ending, on the belief in a moment of closure and completeness, in which records as entities reach resolution, arrive at some final destination”

(Brothman, 2006, pp. 245-246).

The notion of the archive as a finalized, and at that unbiased, product, can be seen as part of a more traditional view of archives. According to Jenkinson, archives were created as a consequence of an organization’s business, and represent the objective truth, the archives “(…) state no opinion, voice no conjecture, they are simply written memorials, authenticated by the fact of their official preservation, of events which actually occurred (…)” (Jenkinson
The relationship between archives and administration seems to have been unproblematic to Jenkinson: he simply saw that the creating organization should select which records that should be preserved, while archivists and archival institutions should protect the integrity of the records through unbroken custody. In his methodology, “(...) archivists are relegated to voiceless custodians. The archive is presented as a naturally occurring phenomenon that archivists inherit” (Hill & Lane, 2011, p. 4). In contrast to Jenkinson, Schellenberg argued that appraisal should be done by archivists, and introduced the concepts of ‘primary’ and ‘secondary’ value (Schellenberg, 1956, reprinted 1998). The distinction between different values of an archive can be discussed. Richards has described the view of the archive in Victorian England as “(...) a sort of vast railway switch yard capable of being controlled by the right signals and switches if only they could be found” (Richards, 1993, p. 74). This metaphor is just as applicable today. Society’s information resources are often described as having dormant potential, and if the ‘right switches’ could be found, public archives could improve the efficiency in public administration, and strengthen democracy. In their quest to find these ‘switches’ and develop recordkeeping to its full potential, decision makers in the public sector are looking at the issue from different perspectives and with differing preunderstandings. Their viewpoints and outlooks of current and future challenges will affect how the relationship between public administration and archives develop. In the context studied in this thesis, which is the Swedish public sector, there has traditionally been a less clear boundary between records managers and archivists than is the case in many other countries, yet good recordkeeping is not necessarily perceived as vital for the ‘core business’ by public agencies. Instead it is often seen as something that the law requires for reasons of transparency but that would not be prioritized otherwise.

In sum, an ‘archive’ can be seen to include only records set aside for preservation, or it can be thought of as all records (regardless of age or format) that an organization manages; archival issues can be perceived as something that archivists and registrars are responsible for, a matter of concern for the IT department, or an issue which is to be addressed at all levels of an organization; archival authorities can be perceived as an expert function available to give advice on current recordkeeping issues, or as an agency primarily focused on cultural heritage and preservation with little or no significance for the daily business. In the light of these differing conceptions on archives there is also room for interpretation regarding what ‘archives
management’ means and includes: if the ‘archive’ solely includes ‘inactive’ records, the ‘archives management’ will primarily be focused on preservation and use of those records. If the ‘archive’ instead includes all records, the ‘archives management’ will embrace a wider area of concern, from records creation onwards.

Disposition
The thesis is disposed as follows. The first part presents the scope and objective; the research problem; and limitations. The second part introduces and defines core concepts used, and describes the research context, which is the Swedish public administration. The third part presents the theoretical background: it discusses archival science and the societal implications of recordkeeping in the public administration. Together, these three parts intend to provide the reader with the ‘frame’ of the thesis. The fourth part outlines the research design, and introduces the research methods used. The fifth part describes the research process, which have resulted in the studies upon which the thesis is based. In the sixth part, the results of the studies are presented and synthesized, as per their relevance for the overarching research questions. The seventh part discusses the implications of the results. In the final part, the conclusions are presented and suggestions are made for further research.
Scope and objective

Digital recordkeeping is a challenge for public agencies all over the world. International standards have been developed, yet their practical implementation requires consideration of national and organizational conditions. Theories and practices vary, as do legal and administrative frameworks. What the main archival concerns are, and how they should be addressed, is therefore open to discussion. The complexity is enhanced by the potentially new meanings which the concepts of archives and recordkeeping may have in the digital context. The thesis focuses on the current development of digital work processes and what consequences this has on recordkeeping in the public administration. The studies included aim to contribute knowledge about some of the challenges facing public agencies in their efforts to improve the creation, management, use, and preservation of public records. The overarching research questions are:

- What are ‘archives’ and ‘recordkeeping’ in the digital context and the developing e-government?
- What are the indications of current and future challenges regarding cooperation between public administration and archives?

All six studies were conducted in Sweden, mainly at national government administrative bodies. One of the studies was undertaken in the municipal administration. The results intends to be of interest to the private sector as well, since public agencies increasingly rely on products and services purchased from private companies. The results also intends to be of international interest: the effects of technical developments and new ways of working on archival issues can be recognized in many other countries.

Research problem

Digital work process and their various consequences have been called a paradigm shift (see for example (Cook, 1997; Hill, 2011; Sahlén, 2016). Though that is not a unanimous viewpoint, it is a fact that individuals, agencies, and governments are currently trying to understand and develop their recordkeeping in a new environment, where records are created digitally. This causes a need to re-think, re-interpret, and re-invent concepts and
procedures. Civil servants are metaphorically navigating in partly unknown territory when faced with having to make decisions regarding digital recordkeeping. Their outlook and understanding of what considerations should be taken into account, and which resources are needed, may differ significantly from the perspective of archivists or recordkeeping professionals, as well as from that of archival authorities. Identifying the main problems is problematic and which solutions should be prioritized is open to question. Current development is influenced by existing practices as well as expectations for the future. According to Convery, changes in technology affect power relations between information professionals and individual users (Convery, 2011). It also affects the relations between the public administration and the archives. This thesis looks closely at some of the current efforts being made and discusses how the relationship between public administration and archives is developing. It also identifies some of the indications of current and future challenges.

Common usage of the terms ‘record’ and ‘archive’ is fluid and changing, which can make decision-making challenging. This in turn will affect what is preserved. In the words of Ketelaar: “Archives are not a static artifact imbued with the record creator’s voice alone, but a dynamic process involving an infinite number of stakeholders over time and space” (Ketelaar, 2012, p. 19). When related to the above citation, the research methods used in this thesis: concept analysis; discourse theory; literary warrant analysis; critical theory; phenomenography; and the records continuum model as a theoretical structure, can be described as contributing to identifying and interpreting some of the ‘voices’ currently affecting recordkeeping development in the public administration. Nesmith has argued that studies of recordkeeping gain from using different perspectives, and that an opening out of “familiar archival concepts, functions, and purposes” has led to a widening of the scope of relevance:

“(…) rather than a single appropriate context, there are various contextualities which are relevant to archival work. This expanded notion of contextuality leads to at least two questions: 1) What are its dimensions and characteristics? and 2) How may its features be incorporated into archival work? (Nesmith, 2005, p. 260)

According to Nesmith the answers to these two questions can be approached by looking at archival traditions of the past, and by trying to make out what
the future may bring. This thesis aims to combine existing theories with new approaches to understand a few of the contexts that are currently affecting the development of recordkeeping practices.

The need to cooperate

Cooperation is often at the core when discussing recordkeeping in the public administration, and has been highlighted as a matter of great significance in the digital world. A few examples are presented here in chronological order. Claes Gränström, who was National Archivist of Sweden and a key intellectual contributor to archival science in Sweden was among the earliest to identify this need:

“To be able to solve some of the problems, destruction, permanence, description, etc., that meet the archivists now, should require that they actively participate in the development of new systems” (Gränström 1979, p. 61, this author’s translation)

However, this way of working was not realized in practice, and almost 30 years later, a similar ambition was expressed by the National Archives:

“The ambition of the National Archives is to participate already from the beginning in the system development process when the public agencies design their IT systems and in this way cater for the archival demands of the systems” (Riksarkivet, 2006, p. 8, this author’s translation)

This outlook is not only a Swedish phenomenon. According to Joanne Evans there is an increasing need to take active part in the development:

“In a world awash with information I believe we need recordkeeping professionals more than ever to ensuring [sic] authenticity, reliability, integrity, accountability. (...) We need to refigure, redesign and rework – be part of IT innovation rather than being left behind by it (Evans, 2013).

As exemplified above, the connection between public administration and archives has long been identified as important to the realization of well-functioning recordkeeping, including planning, creation, capture, use, preservation, and re-use. There has apparently been a general agreement on
the issue, but despite the continuous development of both technology and legal frameworks, problems still remains. Sundqvist and Svärd have noted:

“(…) many organizations still grapple with the implementation of good information and records management practices. A lot of knowledge has been produced within the records management community that should have mitigated these problems by now with all the technical advancements present, but attaining good information and records management is still a challenge in most organizations. Apparently, there must be other, less tangible, factors that impact on information and records management” (Sundqvist & Svärd, 2016, p. 9)

One of these ‘less tangible factors’ is the ways in which civil servants and decision makers understand the nature and significance of recordkeeping. It has been argued that the relations between public administration and archives should be strengthened, and cooperation increased, to meet the requirements of the digital environment. Upward et al. argue that proactive approaches are needed in the digital environment: “(…)**our nanosecond archives will have to be more intelligently formed**” (Upward et al., forthcoming). According to Caron and Brown, collaboration is an important success factor:

“There is a growing consensus that the public memory challenges of the digital age need to be met by collaborative strategy and research; that potential solutions and interventions will not succeed through independent unilateral actions, but can emerge through institutional and occupational convergences. (…) We are beginning to understand that the construction and constitution of the civic goods of public memory are a collective, social responsibility requiring broad participation across all sectors” (Caron & Brown, 2011, p. 20)

Public agencies and archival functions (internal archive services as well as archival authorities) are significant stakeholders in decisions regarding recordkeeping. Since they are currently taking part in major change processes, there is a need to understand what obstacles they may have to overcome on the way toward well-functioning recordkeeping that supports the goals of e-government. Ideally, the current, as well as the historical and regulatory aspects should be taken into account.
Having access to records has been described as being closely connected to having power (see for example Harris, 2011; Ketelaar, 2005). This is illustrated by the example in the preface: the interviewee has long experience of working at the public agency as well as access to a network of colleagues, both retired and still working. If, despite this, he experiences difficulties in locating what he needs to perform his tasks, it is safe to assume that any citizen will also face great problems when searching for a similar record. Thus, although these records are public, they are not accessible in the way that the legal framework requires, and consequently do not contribute to facilitating transparency.

Limitations
The research for this thesis was conducted within two research projects: GoInfo and EDIM. The time, scope and objectives of these projects imposed some basic limitations. Both projects were conducted at Cedif, which conducts research within archives and information science with a special focus on business information. Cedif is a subgroup of FoDi, Forum for digitalization, (formerly the Information Systems Research Group) at Mid Sweden University.

GoInfo
Good Information Governance (GoInfo) was a two-year research and development project with the goal of contributing to improving the conditions for good information governance in the digital environment. The project was funded by the County Board Västernorrland (Avdelningen för Arkiv- och datavetenskap, 2012).

The subproject of GoInfo in which the studies presented here were conducted focused specifically on research and development related to the Public Agencies’ Network, a network of state public agencies in the Västernorrland region in Sweden. Although the network was a regional initiative, the participating public agencies were all affected by national legislation, politics and e-government development. Because these factors have a profound effect on public agencies in the entire country, the perspective was extended to also involve developments taking place on a national level.
The practical problems facing the Public Agencies’ Network included a variety of interrelated technical, practical, organizational and communicational issues. These are discussed further in the section ‘Research process’. GoInfo provided the participating agencies with a forum to discuss relevant issues, arrange joint activities, and develop solutions. The practitioners involved wished to increase their knowledge and obtain useful theoretical and practical tools that would improve records management in their respective businesses. The representatives however had limited possibilities to bring the results forward into their respective agencies. Though regrettable, it also became an interesting aspect of the research as it became apparent through the process that one problem was the lack of communication between the recordkeeping professionals and the managerial staff.

**EDIM**

An Efficient Digital Information Management (EDIM) was a similar two-year research project, in which this researcher participated for one and a half years. This project was funded by the Swedish Transport Administration. The goal of EDIM was to study the major challenges that arise when integrating digital information management with physical infrastructure.

EDIM had been in progress for six months when this researcher joined the project. The last two studies included in the thesis were conducted within a subproject of EDIM that focused on emerging conditions and strategic approaches in the steering processes that affected recordkeeping at the Swedish Transport Administration as it transitions to become a pure outsourcing organization. Two research questions of this subproject were: RQ1: What are the implications for recordkeeping of the new role of the Swedish Transport Administration as a pure outsourcing organization? RQ2: What changes and measures are needed in recordkeeping to support the role of managerial and control processes at the Swedish Transport Administration? Other research questions were pursued by other researchers within EDIM. Choosing these two research questions gave the opportunity to contribute to the project as well as continue to address the overarching research questions of the thesis.

The activities of the two research projects, and their impact on the studies included in the thesis, are presented in the section ‘Research process’.
Further limitations

All studies were conducted using contemporary Sweden as the case. The aim was to capture some key aspects of the current developments. The development is in many ways affected by the shift from paper records to digital records, but also of changes of work procedures. The research material used was created during 2010-2015. The material was limited to this time period because the intention was to study an excision of the current developments in a state of major changes. A temporal extension could have provided further insights into the course of events leading up to the present state of affairs. This was not within the scope of this thesis, but future research can provide fuller knowledge.

All research material was in Swedish. Selected parts were translated into English and reproduced in the papers. Possible translation errors were considered and mitigated as far as possible through advice from the supervisors. The difficulties to capture all of the nuances of a recorded conversation in written format were lessened through careful consideration when writing the selected quotes.

Swedish legislation was used as a point of reference throughout the studies to discuss and understand how existing conditions, proposed changes and implemented decisions affect recordkeeping in the public administration. The aim was not in the first hand to criticize existing principles, nor to limit the results to apply solely to Sweden, but to discuss, using Sweden as an example, some of the current recordkeeping challenges facing public administration and archives globally. The Swedish legal framework shows significant similarities with the principles of the continuum approach to recordkeeping, something that is explored in more detail in Paper VI.
Research context and concepts used

This section introduces the research context and the core concepts used. Concepts, conceptions, and conceptualizations are important in the thesis because all studies focus on how the understanding of recordkeeping contribute to forming ongoing change processes. A concept is an abstract idea, or a general notion (Stevenson & Lindberg, 2010a), which is understood by a term, particularly a predicate. According to Blackburn, the term ‘idea’ “… was formerly used in the same way, but is avoided because of its associations with subjective mental imagery, which may be irrelevant to the possession of a concept” (Blackburn, 2008). A conception is the way in which something is perceived or regarded (Stevenson & Lindberg, 2010b). To have a conception means to perceive something and interpret it, make connections between the terms we use to think and communicate, and the outside environment to which those terms refer. A conceptualization is the action or process of forming a concept or idea of something (Stevenson & Lindberg, 2011). When studying concepts, conceptions, and conceptualizations, it is important to remember that different views often stem from differing traditions and practices (Stapleton, 1983), which is why the legal framework and archival contexts are explained briefly, in a somewhat repetitive manner, in the papers included in the thesis.

Concepts and definitions

Appraisal is about selection and has been described as one of the core tasks of archivists. Duranti has defined appraisal as “(...) the process of establishing the value of information, qualifying that value, and determining the length of time for which it needs to be preserved” (Duranti, 1994, p. 329). According to Couture appraisal is “(...) the act of judging the primary and secondary value of records and establishing the length of time during which they retain this value, within a context that respects the essential link between a given institution (or person) and the records they created in the course of their activities” (Couture, 2005, p. 84). Appraisal can be made at different times. It has been argued that in the digital environment it needs to be done at or before the time of creation to fulfil its purpose (Cunningham, 2011a).

Archive is a core concept of the thesis, why the concept of the archive is discussed in the Introduction. It is commonly understood to mean “(...) those records that have been selected for on-going retention” (Bettington, Eberhard,
This view was present among some of the persons interviewed in the included studies. However, according to the Swedish Archives Act §3, public archives are: “(...) formed by the public records of the agency’s activities” (SFS, 1990:782, this author’s translation). This applies regardless of age or format and thus it is a much wider concept. In this thesis the definition in the Swedish Archives Act is used, unless otherwise stated.

_Destruction_, according to the archival principles of the Swedish public sector, includes transferring records to another medium if this leads to loss of information, loss of potential compilations, loss of searchability, or loss of possibilities to determine the authenticity of the information (Riksarkivet, 1999).

_A diarium_ in Sweden is traditionally a registry where incoming and outgoing correspondence is organized by manually applying metadata such as date, case identification, and sequence number. Currently, the diarium is often digital and sometimes allows for automatic registration when it is connected to an e-service.

_E-government_ is defined in the thesis according to the EU’s official definition which reads: “the use of information and communication technologies in public administrations combined with organizational change and new skills in order to improve public services and democratic processes and strengthen support to public policies” (Commission of the European Communities, 2003).

_Information_ has been described as a concept with multiple meanings which “(...) can be associated with several explanations, depending on the level of abstraction adopted and the cluster of requirements and desiderata orientating a theory” (Floridi, 2015). Today the word information is used everywhere – information technology, information society, information overload, and so on. Knox has stated that there are two camps in the discourse regarding the term information: “(...) those who identify information as a resource and those who identify information as a processual approach enacted by individuals” (Knox, 2007), and that this impacts the process of formulating information strategies (Knox, 2014). It is a popular notion that we currently live in an ‘information society’ due to the societal impact and value of creating and using information, a view that can be criticized. Frank Webster
has problematized the concept in terms of technological, economic, occupational, spatial, and cultural aspects (Webster, 2009). Richards has argued that Victorian England was one of the first information societies in history, and that the formation of archives made it possible to create order and knowledge: “The archive was not a building, nor even a collection of texts but the collectively imagined junction of all that was known and knowable, a fantastic representation of an epistemological master pattern (...)” (Richards, 1993, p. 104). Upward et. al. discuss Giddens’ concepts of allocative and authoritative information, where the first refers to material, material production, and artefacts created; and the second refers to time-space organization, bodily production/reproduction, and life-chance organization (Upward, Reed, Oliver, & Evans, forthcoming). In this thesis the focus is archival information: ”Preserved information arising in, for and through an organization’s activities or reaching the organization based on the effect of its activities” (Kjölstad, 1999, as cited in Sundqvist, 2011a, p. 11, this author’s translation).

Information governance was in the GoInfo project seen as activities that aims “(...) to provide the business with reliable, authentic, relevant, and complete information” (Avdelningen för Arkiv- och datavetenskap, 2012, p. 7, this author’s translation). This requires proper mandates and responsibilities. Support of this view can be found in the OAIS model, according to which an Open Archival Information System is: “(...) an organization, which may be part of a larger organization, of people and systems, that has accepted the responsibility to preserve information and make it available for a Designated Community” (Consultative Committee for Space Data Systems, 2012).

Postcustodialism is “The idea that archivists will no longer physically acquire and maintain records, but that they will provide management oversight for records that will remain in the custody of the record creators. The postcustodial theory shifts the role of the archivists from a custodian of inactive records in a centralized repository to the role of a manager of records that are distributed in the offices where the records are created and used” (Pearce-Moses & Baty, 2005). Convery has argued that a paradigm shift is under way, a shift ‘from custody to facilitation’, that information professionals need to ‘catch up’ with the technological development, and encourage others to get involved: “Rather than being in control, information professionals need to let go of the custodial imperative and entrust
responsibility to the actual records’ creator and user (…)” (Convery, 2011, p. 202). The initial draft of the first part of a two-part standard for archival description named Records in Contexts (RiC) highlights the emergence of collaborative editing in the networked digital environment and remote storage services as reasons to reconsider the notions of ownership and custody: “(…) provenance is much more complex than the long-established understanding of fonds: a fonds does not exist in isolation, but within layers of interconnected contexts, past, present, and future” (RIC 2016, p. 13).

*Public administration* refers to the management of public assets, including operations at municipal, county / regional and state level (Nationalencyklopedin, 2017).

*Records* have been described as “the primary objects of archival investigation” (McKemmish, Gilliland, & Lau, 2016, p. 85). Records contain information but they are more than information. What this ‘more’ is can, however, be debated, as can the distinction between records and information. According to the introduction to *Preservation of the Integrity of Electronic Records*, which reports the findings of the UBC project, conducted between 1994 and 1997:

“In the automated office, some documents are created simply to disseminate information, some are required for reference, some result from automatic recording of observations, and others are the products of actions and decisions of organizations. Not all data, information, and documents are records, but, equally, it is not always easy to identify which among all the data, information, and documents are records and therefore require special measures of control” (Duranti, Eastwood, & MacNeil, 2002, p. 3)

In this thesis ‘record’ is defined according to ISO 15489-1:2001 which says: “information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business” (Swedish Standards Institute, 2001). Evidence is a key word, and not only in the legal sense of the word: “Records provide evidence that can be used in any situation where proof of a particular activity is required” (Shepherd & Yeo, 2003).
Public record is broadly defined in The Swedish Freedom of the Press Act §3 as an official document regardless of format: “any written or pictorial matter or recording which may be read, listened to, or otherwise comprehended only using technical aids” (SFS, 1949:105). The concept of public record as used in the thesis implies all records, including those that have not been classified as official or secret. According to the Swedish legislation this is something that should be done in each separate case when a record is requested to be disclosed. This means a public record comprises what has been translated into English by the Swedish government as official document.

Recordkeeping can be seen as “(...) a form of witnessing and memory making, a particular way of evidencing and memorializing our individual and collective lives (...)” (McKemmish 2005, p. 3). In this thesis the concept includes the entire continuum, from creation to pluralization. According to McKemmish, the records continuum comprises “(...) the unifying purposes shared by all recordkeeping professionals” (McKemmish, 1997).

Traceability is viewed in the thesis as a characteristic of those information systems which “(...) concerns creating traces that make it possible to understand information for as long as it is required” (Öberg, 2011). Traceability of public information is legally regulated in Sweden (SFS, 1990:782, 1991:446, 2009:400).

Public archives in Sweden

Tyacke has argued that "Sound records management is the bedrock of accountability (...)” (Tyacke, 2002, p. 22). In an article published recently in the Washington Post, Sweden is described as “a global model for official transparency and accountability”:

“Its official statistics are some of the most complete and readily accessible in the world. Since 1766, Swedish law on freedom of the press has included a principle of public access (Offentlighetsprincipen), which grants public access to all government documents upon request unless they fall under secrecy restrictions. This law is the oldest piece of freedom of information legislation in the world” (Eck & Fariss, 2017).
One important aim of this thesis is to discuss in what way this tradition may continue on into the digital age. Public agencies, archival functions, and authorities are currently finding new ways to relate and assign recordkeeping responsibilities. Though there are certainly ambitions to increase cooperation, regionally as well as nationally, there are also obstacles in the way. Research about the nature of these obstacles becomes relevant also in an international perspective: What are the challenges for a country that wants to stand out as a role model of good public recordkeeping in the digital age? Understanding the implications of ongoing developments and the obstacles that need to be overcome are the focus of the studies included in this thesis. An underlying assumption made throughout is that current change processes affect practices, and might also (in the long run) affect principles, for public recordkeeping. Although there is a general tendency to highlight the technological aspects of digital recordkeeping, the social issues are just as important. According to former Swedish National Archivist Björn Jordell, the technical challenges are secondary. He has instead pointed to other difficulties, namely ourselves: “(...) management and staff, leaders and professionals. It is a question of culture and psychology, self-perception and professional identity – far more difficult to deal with than to overcome technical obstacles” (Klareld, 2015d).

The Swedish tradition to emphasize the link between public administration and recordkeeping, has been said to stand out internationally. Jörwall et al. used Germany as a contrasting example, due to the separation between “(...) two phases of the peregrination of the archival record from creation to final archive, the active phase at the archives creator, and the passive phase at the archive (...) The German tradition has assumed that the archive does not arise until the records are delivered to the archival institution” (Jörwall, Lönnroth, & Nordström, 2012, p. 75, this author’s translation). Jörwall et al. also highlighted France as an example being different from Sweden. The French tradition clearly distinguishes between three ‘ages’ of the archives: archives vivantes, archives intermédiaires and archives définitives, where the ‘archive in the middle’ preserves records considered to be of minor value to both the current administration (primary value) and the archival institution (secondary, or historical, value) (Jörwall et al., 2012, p. 36). Different as the archival traditions may be, factors such as the technical development, the expansion of e-government, political ambitions, the division of labor between different professions, and new ways of working, affect recordkeeping in any country. Therefore, the Swedish example can be seen as illustrating a universal challenge.
At the beginning of the twentieth century the Swedish archival system was reformed and modernized. The principle of provenance was introduced and detailed rules regarding classification, registration, cataloguing, destruction and management of public records were issued. Current regulations are formally format independent, but to a large extent developed during this time and in a paper administration. There is often a division of labor between registrars and archivists, where the former are responsible for managing current records, and the latter manages records at the end of the records management process. “Allmänna arkivschema,” a “general archive schedule” for arranging records in the archive, was formerly used throughout the public administration. It is currently being phased out because of its rigid structure. The new process-based archival description is more flexible and requires more consideration from the creating agency. It has been argued that the traditional Swedish system works best in a relatively stable organization, and that the relationship between the records creator and the archive is becoming increasingly complex (Danielson & Crozier, 2004). Similar observations have been made outside Sweden as well. Foscarini et al. have claimed that although there are a number of standards and models of digital recordkeeping, it is in practice that these show their actual usability: “When tested against real-world situations, existing models and standards only appear to work in relation to types of organizations that resemble traditional bureaucracies” (Foscarini, Oliver, Ilerbaig, & Kumrei, 2014).

The Archives Act is a framework law and consequently needs to be implemented in a way that is appropriate for each respective agency separately, thus an overview of all information resources becomes vital. However, this has repeatedly been considered missing (Geijer, Lenberg, & Lövblad, 2013; Riksarkivet, 2010; Statens servicecenter, 2015). Public records should be managed consistently regardless of when they are created, and where they are stored; and all public agencies are fully responsible for their records management from creation until formal transfer to an archival authority. There are also requirements which apply in certain ‘stages’ of the recordkeeping process: public records should be registered as soon as they arrive or are created (SFS, 2009:400), when a case is closed it is to be separated from ongoing cases (SFS, 1991:446). These requirements are a way of ensuring that it is possible to understand how the case has been handled and on what grounds a certain decision was based. The Swedish concept of the archive has

20
been described as ‘holistic’ since, formally, “(...) records management is understood as a dimension of the archival function” (Kallberg 2013, p. 84; Svärd 2014, p. 161). This view is however not always reflected in practice at public agencies.

A collaborative approach has long been considered an ideal: the archival authorities have issued rules and regulations, and through guidance and inspection ensured that the public agencies achieved satisfactory recordkeeping. In the early 1980s Nilsson emphasized that making archival institutions responsible for supervision and development would be particularly important in a society where information is seen as a vital resource: "(...) in an information dependent society archival services cannot in the long run limit their activities to the care and provision of records" (Nilsson, 1983, p. 111, this author’s translation). There is no time limit for the transfer of records from the creating agency to the archival authority. Instead this is a matter for negotiation. In a paper environment the phases of the ‘active’, ‘semi active’, and ‘archival’ records are related to physical location and relocation. The National Archives have recommended that: “(...) the archival authorities should function as archive repositories for older material and such material that for other reasons should be cared for by an institution with special expertise. It should in the first hand be up to the archival authorities to decide when deliveries should be made” (Riksarkivet, 2013, this author’s translation). Current developments point to the State Service Center as the agency which will be made responsible for records that public agencies need to transfer from their business systems but that for different reasons are not regarded as ready for ‘final archiving’ at the National Archives. Cost and efficiency reasons have been brought up as arguments for why this solution is to be preferred over each agency implementing their own e-archive (Socialdepartementet, 2011). However, an interim report highlighted that the public agencies wanting to use the service must put resources into investigating and preparing the information for transfer to the e-archive (Statens servicecenter, 2015). It recently became known that the procurement process for the State Service Center’s national e-archive service was cancelled because none of the prospective suppliers could meet the requirements. It is expected to resume as soon as possible, but no later than November 2017 (Säfvenberg, 2017).
Archival authorities

There is more than one type of archival authority in Sweden. The National Archives supervises state public agencies to ensure that they live up to their responsibilities, and the regional, county municipal, and municipal archival authorities have a similar role toward agencies under their jurisdiction. The National Archives is one of the oldest public agencies in Sweden, officially founded in 1618 as part of the Royal Chancellery. Its responsibilities were extended at the end of the 1800s to include archival issues at governmental authorities. It became an independent agency in 1878. The National Archives is organizationally placed under the Ministry of Culture. Its role as the national archival institution includes ensuring that records are preserved as part of the national cultural heritage, to contribute to governmental development, and to give advice on recordkeeping issues. Public agencies are to contact the National Archives before building or making changes to their archival premises. No corresponding contact is needed preceding acquiring or making changes to an information system, though it could be seen as an expected extension of the existing procedures. Approval or certification of systems has been described as a complicated and costly process (Riksarkivet, 2011, p. 15). According to the Archive Ordinance the archives of public authorities should be inspected regularly (SFS, 1991:446). Given the current staffing level, this means once every five years. The Archives Act gives the archival authority the mandate to take over archives from agencies that mismanage their archives (SFS, 1990:782), a sanction that is rarely, if ever, used, and at the time of writing has never been used for digital records.

Danielson and Crozier have argued that Swedish archival authorities (in comparison with those in other countries), ever since the beginning of the 1900s, have had a powerful role in relation to the public administration, which has resulted in unusually detailed rules for public recordkeeping. Danielson and Crozier says this stands out internationally: “This sort of active intervention in archive creation, and the application of the provenance principle as an instrument in organizing and planning the growth of archives, would probably seem alien in many other countries” (Danielson & Crozier, 2004, p. 163). Nevertheless, it has been suggested that currently the role of the National Archives should be strengthened and their instructions extended:

“The National Archives should have a clearer mandate to pursue issues relating to government development in the areas of e-archiving and e-diarium which would contribute both to a
better coordination in the field and to ensure long-term supply of information in the public sector (...) an investigation should address the role and situation of all archival authorities” (Sweden eDelegation, 2011:27, p. 26, this author’s translation).

There have been several initiatives and attempts to develop and reorganize the responsibilities for recordkeeping in the public sector. In 2000 the government decided to appoint a special investigator with the task to review certain archival issues, which resulted in the report Archives for all, now and in the future (Kulturdepartementet, 2002:78). The report became the basis for a proposition on archival issues, in which the government gave the Parliament suggestions and assessments for future work within the archival area. The proposition recommended that the archival authorities should have an active role in relation to the public administration: “Supervision is not only inspection but equally advice, contact visits, support, training, etc. primarily in relation to public agencies creating archives” (Sweden. Regeringen, 2004, p. 17, this author’s translation). Implementing and maintaining good recordkeeping in their core businesses of public agencies has been said to pave the way for successful long-term preservation (Riksarkivet, 2014b). Though there is no designated authority responsible for coordinating case management issues, some agencies have certain mandates that affect records management. Examples include the Attorney General’s Office, which has a supervisory role to ensure that cases are efficiently managed and do not remain ‘open’, or unfinished, for too long; and the Data Inspectorate, a state public agency with special responsibility for ensuring that the integrity of sensitive information is managed correctly according to the Personal Data Act (SFS, 1998:204). This is part of the Swedish implementation of the Data Protection Directive (European Parliament and the Council, 1995).

How the role of the National Archives is connected to digital recordkeeping and e-government is not self-evident. In the Digital agenda, a national strategy document issued by the Government Offices of Sweden in 2011, the National Archives is described as an authority with responsibility foremost for cultural heritage and digitization of older records (Sweden. Näringsdepartmenetet, 2011). However, a report authored by the National Archives argued for the need to revise its role, due to the changes that e-government brings: “(...) the National Archives’ and other agencies’ roles as resources for the emerging e-government should be reviewed to ensure continuity in future work on issues
related to e-archives and e-diarium” (Riksarkivet, 2011, p. 3, this author’s translation). E-government has been described as something that has great potential impact on the whole of society and thus should not be regarded as an internal matter at public agencies (SOU 2009:86, p 12). Sweden is a member of the EU and e-government development is to a large extent influenced by pan-European initiatives, for example the PSI-directive (European Parliament and the Council, 2003) which is implemented as a law in Sweden (SFS, 2010:566). It has been suggested that the National Archives should be given the task to implement an interface through which records of all state public agencies will be searchable (PSI-utredningen, 2014). This would require the National Archives to have closer contact and insights into the information assets of each public agency.

E-archives

Digital archives, or e-archives are currently under development but as yet have been implemented by only a few public agencies. Initiatives on the national as well as municipal level are in progress. The national e-archive planned to be implemented through the State Service Center also aims to facilitate public information management and “(...) not only allow for technical preservation of information, but an important purpose is also that the information should be used or re-used” (Statens servicecenter, 2015, p. 6, this author’s translation). The State Service Center is an agency under the Ministry of Social Affairs. It was created in 2012 and is responsible for administrative services to governmental agencies (2012:208).

The eGovernment Delegation, a committee under the Financial Inspectorate from 2009-2015, was responsible for coordinating e-government development. It consisted of representatives from the largest and most dataintensive public agencies. Their mandate was to contribute to cooperation and promoting consensus between the state, counties, and municipalities on strategically important e-government issues, and also collaborate with private trade and industry (Finansdepartementet, 2009). Among the most important issues identified were e-archives. Some of their responsibilities have now been taken over by another agency, the Postal and Telecommunications Board. Several authors have argued that well-functioning recordkeeping is a prerequisite for fully realizing the opportunities of the digital environment (E-Delegationen, 2010:62; IT-standardiseringsutredningen, 2007:47; Riksarkivet, 2011). Despite this, archival issues often seem to have a low priority; “An overarching plan
for the organizational work involved in digital preservation is rare” (Runardotter, Mörtberg, & Mirijamdotter, 2011, p. 76). Swedish freedom of information legislation has long accentuated the connection between democracy and citizen’s right to access public records. Despite their recognized value for a functioning administration and the balance of power between government and citizens, public archives are sometimes less prioritized than related areas (such as technical development and communication) and many archival issues remain unsolved.

A report written in 2006 by the National Archives said the archival authority strove to cater for archival requirements by assisting public agencies already at the beginning of their system development processes (Riksarkivet, 2006). However, four years later a survey showed that only 5 % of the public agencies had a strategy for taking care of their e-records and although 21 % of them had some form of system for preservation, none of the systems had an export function that enabled transfer to another system or to an e-archive (Riksarkivet, 2011). At the time of writing, digital recordkeeping and archives management is still a notable practical problem for public agencies.
Theoretical background

In what Cunningham has called a “landmark address” at the 1980 annual meeting of the Society of American Archivists, State Archivist of Wisconsin, F. Gerald Ham, argued for the need of “greater archival involvement in the process of information creation and management” (Cunningham, 2011b). Some 30 years Cunningham asked why “(...) after so many years of addressing the challenge of electronic recordkeeping, so few organizations are doing a good job of making and keeping the born digital essential evidence of their decisions and activities” (Cunningham, 2011a). Cooperation and good recordkeeping is still a problem for many public agencies. The findings presented in the licentiate thesis (Klareld, 2015a) showed that it was difficult for public agencies to prioritize and make decisions regarding recordkeeping. This was seen both on a national level and at individual public agencies. Although there was clearly an awareness that there were recordkeeping problems that needed to be solved, there was also a lack of clarity regarding what the actual problems were, how they should be addressed, and by whom (Ann-Sofie Klareld, 2015a). This uncertainty may hamper the recordkeeping, and may also cause problems for organizations that need to formulate requirements for contractors regarding information delivery. This section aims to contribute with different perspectives on the issues in focus of the research.

Archival science

The thesis aims to make a contribution to archival science, defined at Mid Sweden University as: “The scientific study of archival information and the emergence, management organization and utilization of archives, as well as its impact on and importance to organizations, individuals and society” (Avdelningen för Arkiv- och datavetenskap, 2012). Traditionally, research in the field is pursued from the perspective of the archive as an institution and focused on best practice, management and enabling technologies. During the last 25 years the research front has expanded and become “(...) responsive to the complexity and changing boundaries and ideas of the world in which archival and recordkeeping activities are situated” (McKemnish & Gilliland, 2013). Archival science includes theory, methodology, and practice. The ‘archival paradigm’ comprises the disciplinary and professional aspects of

---

3 Three of the papers in this thesis have previously been published in the licentiate thesis Adapting Official Archives Management to the Context of E-government.
archival science; “a set of assumptions, principles, and practices that are common to the archival community and are a model for its activities and outlook” (Gilliland-Swetland, 2000, p. 7).

The research presented in the thesis builds on, and relates to, the work of other scholars, both within archival science and other fields. Archival and recordkeeping studies have been described as “a pluralized research paradigm” (McKemmish, Gilliland, & Lau, 2016, p. 18) and an “archival multiverse”, where according to Gilliland “plurality is one of the hallmarks” (Gilliland, 2016). The research methods and theories used are examples of this plurality. The multidisciplinary nature of archival science and its development through a close connection between practice and theory can be seen as both advantageous and problematic. Bearman has argued that it risks obstructing the progress of knowledge: “(...) archivists have elevated pragmatic responses to the nature of physical things to the level of ideology” (Bearman, 1996). Cook, on the other hand, has argued that “(...) theory and practice are too often viewed as archival polarities, rather than being complementary” (Cook 2009, p. xviii). This thesis is based on the conviction that theory and practice can enrich each other and that existing principles can be transferrable to the digital context, if appropriate with adaptations.

There are two major established methodologies in the archival world: the life cycle approach and the records continuum approach. Models are useful because they reduce the complex reality to something we can grasp and understand. No theoretical model can show the full image of the reality it aims to explain. Models can, however, be used as theoretical lenses to comprehend different aspects of archives management. The Records Continuum Mode (RCM) is not intended to be implemented in practice, but is useful for understanding the complexity of recordkeeping. The life cycle model is practically useful, for example when related to mandates and responsibilities, but shows the archives management as a linear process (which might be less practically applicable in the digital environment). Both models are used in the thesis as analytical tools. The life cycle approach assumes that recordkeeping is the result of objective business activities and follows a predictable timeline, while the RCM views it as “(...) a continually interacting and evolving set of contingent activities with individual, institutional, and societal aspects” (McKemmish & Gilliland, 2013, p. 93). Recordkeeping is often described as organic, naturally occurring phenomenon which can become problematic if it obscures the possibilities to affect and change existing practices: “The life
cycle model aims to describe records as if they behave in accordance with a biological imperative, a set of elementary laws of biological development. (…) Record-keeping has fashioned itself in accordance with this life story, with this narrative archetype” (Brothman, 2006, p. 244). The RCM is not a linear model: several stages can happen at once. It has been described a “(…) as a more progressive way of dealing with the management of the entire information/records continuum” (Svärd 2014, p. 161).

Another model, which has impacted archives management in recent years, is the framework OAIS (Open Archival Information Systems) model, according to which an archive consists of an organization of persons and systems which have accepted the responsibility to preserve information and make it available to a designated community. The OAIS model is not used explicitly in the studies, but has provided warrant for focusing on ways of handling changes in work procedures, since it highlights the leadership function as an important part of archives management (Consultative Committee for Space Data Systems, 2012). Scholars in the field have argued that recordkeeping needs to be influenced by respected institutions. In the late 1990’s Upward argued:

“To be effective monitors of action, archival institutions will need to be recognized by others as the institutions most capable of providing guidance and control in relation to the integration of the archiving processes involved in document management, records capture, the organization of corporate memory and the networking of archival systems” (Upward, 1997, p. 21).

Hurley has argued that accountability demands clearly defined roles (who is accountable and to whom), clearly defined functions (what are you accountable for?), clear criteria on how performance is measured, clear ways of monitoring compliance and clear sanction possibilities. He has identified ten roles which archivists ought to live up to: ordainer, preceptor, mentor, facilitator, provider, enabler, monitor, watch-dog, enforcer and auditor. He is however pessimistic regarding whether recordkeeping lives up to the criteria, due to lack of clarity about the role of archivists: “There is not even agreement amongst ourselves, let alone in the society in which we function, that we have such a role” (Hurley, 2004). But although there currently seems to be a consensus within the field of archival science that archival institutions should be given clear responsibilities and sufficient mandates in relation to public agencies, it is not clear what this means in practice. Dodge has described the responsibilities of archivists as contested territory:
“(…) the technical procedures that we employ; the parameters of our location as knowledge workers within the larger context of the humanities and social sciences; our commitment, if any, to some notion of collective memory and communal heritage; and the direction in which our profession is moving vis-à-vis the allied but thus far separate professions of historian, information specialist, and records manager” (Dodge, 2002, p. 17).

**Postmodernism and poststructuralism**

Postmodernism and poststructuralism are closely connected. Both have influenced the research design of the studies included in the present thesis. Postmodernism has had a major impact on archival thinking during the last 50 years (Hill, 2011, p. xvii). Though it is a ‘slippery concept’ (Hill & Lane, 2011, p. 7), it is useful because it represents questioning the notion of truth as an absolute constant, and instead emphasizes the existence of many, context bound, ‘truths’. It marks a shift from seeing progress as a straight line of development, in the way of the historical Enlightenment period. To state it briefly, postmodernism introduces a notion of fragmentation and instability, where the archive is not a static and stable construct, but rather “(…) a fluid concept which changes according to the interactions of archivists and users” (Hill & Lane, 2011, p. 9). This is in marked contrast with the more traditional, Jenkinsonian, view according to which archivists should act as an objective, neutral, custodian. One can say that postmodernism replaces Jenkinson’s ‘Truth’ with ‘a truth’ (one of many), and sees archivists as active participants in a process. According to Cox “Postmodernism perhaps possesses its greatest significance for understanding the symbolic role of archives in society (…)” (Cox, 2011, p. 219). Nesmith has discussed the need to revise archival concepts and practices in light of the ‘postmodern shift’ arguing that this reorientation and rethink of archival work as an important problem, but that it is still in its ‘conceptual infancy’:

“(…) even more underdeveloped over all, particularly in its most recent postmodern framing, is discussion of how key archival concepts might be rearticulated and archival work might be done (or changed) by incorporating rearticulated concepts and greater knowledge of the history of records and archives into archival thought and action” (Nesmith, 2005, p. 260).
The research of the present thesis relates to postmodernism through its focus on concepts and understanding of existing and developing concepts and practices within the changing framework(s) of public administration. An assumption made in all studies included in the thesis is that our ideas and the physical world together form the conditions of ‘reality’: that agencies, technologies, and administrations are constructions. According to Hacking, these constructions can be called social since their meaning is what matters, but they nevertheless are material and “(…) in their sheer materiality make substantial differences to people” (Hacking, 1999, p. 10). The ways in which records and archives are perceived and valued determine the efforts and resources provided to manage them. The thesis is based upon an epistemological view of knowledge, very much in line with the postmodern way of thinking. Thus, the object of the research is the way in which reality is perceived, rather than ‘reality’ per se. When the concepts of the ‘archive’ and ‘recordkeeping’ are discussed, they are seen in the light of their context.

The postmodern outlook may be seen as particularly challenging in relation to public archives, that ideally should be ‘of the people, by the people, for the people’ (Evans, 2007; Harris, 2011). All public archives are created by an administration whose powers far succeed the individual citizens under its jurisdiction. The freedom as an individual is in a very concrete way established and circumscribed by records such as national registration; property agreements; and tax bills. From a postmodern perspective, these records represent the way society is currently organized, opening up for interpretations about ‘right or wrong’ that extends infinitely. This is why archives are always ‘in a state of becoming’. A major challenge, then, becomes the maintenance of a sense of stability and fulfilled expectations: all citizens should be treated equally; the outcome of a matter should be based on solid ground and carried out lawfully, at the same time as recognizing the relativity permeating all human activity while remaining open to corrections or adaptations.

Postmodernism has been described as “a break from modernity’s facile allegiance to, on the one hand, social, political, and technological progress, and, on the other hand, scientific authority, objectivity, and rigor” (Jones, 2013, p. 24). There are significant variations within the ‘poststructural field’ (Herz & Thomas, 2013). The theoretical tools used in this thesis that are commonly associated with postmodernism are discourse theory and critical theory. A
political dimension is always present in relation to public archives. This can be studied by “(...) observing more closely sites – or scenes – of archive formation, or, to use a different terminology, sites of recordmaking” (Harris, 2011, p. 112). The ‘sites of recordmaking’ studied in this thesis are all within the Swedish public administration. Political goals are an important aspect of the development studied. Decisions such as to invest in a national e-archive; conduct pre-studies; and increase outsourcing; and streamlining the public administration can affect recordkeeping in ways that may not be obvious at the outset. When studying the consequences for recordkeeping with implementing an outsourcing policy, the perceived consequences are in focus. Studying these is particularly relevant because they are likely to affect how the policy will be carried out. The assumption made is that what people perceive as true and real helps to manifest, or produce, their reality. This production of a reality is largely made possible by the use of language.

Saussure, the founder of structuralism, saw language as consisting of two parts: ‘langue’ and ‘parole’, langue being the abstract system of grammar, rules and codes needed to be able to communicate, and parole being the manifestation of langue, i.e. actual utterances and sentences (Saussure, 1970). Saussure believed langue to be a social, culturally dependent system, one which could be studied with scientific precision similar to that of natural science. Poststructuralism emerged as both a development of, and at the same time a critique against, Saussure’s theories. It has been described as “a multifaceted intellectual movement” originating from continental philosophy and literary criticism in France in the 1960s (Jones, 2013, p. 23). Dillon argues that poststructuralism refers to a diverse body of work and thought that “cannot be captured in a summary definition” (Dillon, 2000, p. 2).

The poststructuralist way of reasoning has arguably “(...) drawn attention to the forces that constrain and authorize interpretation (Duff, Monks-Leeson, & Galey, 2012). According to Harris, scholars and commentators from a range of countries, disciplines and epistemological frameworks, have “(...) revealed how the exercise of political power hinges on control of information” (Harris, 2011, p. 108). The research presented in this thesis is related to power and meaning-making in that it examines different individuals’ and agencies’ perspectives on the change processes currently happening in Sweden. Foucault is one of the scholars who have been called poststructuralist and his writings have informed and inspired the studies and results of the present thesis. Power is a keyword in Foucault’s writings and is also present in the
relationship between public administration and archives. In many cases the exercise of power depends on records. The archive can be seen as “(…) a technology of rule, an apparatus producing and reproducing forms of subjection” (Harris, 2011, p. 109). The choice to preserve specific records and destroy others affects what the ‘official truth’ will be.

Societal implications of recordkeeping

According to McKemmish, archives are vital components of society: “There is no area of human activity not shaped in the most fundamental ways by the archival storage of information and no continuing form of culture or community is possible without it” (McKemmish, 2005a, p. xi). Records are frequently used as evidence. (For example, how else would you prove that you are the owner of your car, or that you are married, or that you attended a specific school?) Despite this, public archives are often primarily associated with cultural heritage and not recognized as vital in peoples’ everyday lives. Different persons and professions may understand and value archives differently. Most people, even those who have never visited an archival institution or used their right to access public records, have a mental image of what an archive is and how it may be used. By studying these mental images, new insights can be made about how people relate to a specific phenomenon.

In their report Informationsarbete i verksamhetens tjänst (Information work in the service of the business), Engvall and Samuelsson aimed to find similarities and differences between domains that function as support to the core business at TRA. One of their conclusions was: “(…) the problem is that the aspects for cultural heritage and the right of citizens to transparency is not enough of a driving force for the business. Quality, economy, and benefits to the business are regarded as more important perspectives” (Engvall & Samuelsson, 2015, this author's translation). Lack of collaboration between records professionals, IT workers, and managers has also been identified as a major challenge internationally: “A lot of archival angst generated by the digital era relates more to professional status and authority than the basic nature of archival work (…)” (Cox, 2011, p. 217).

The function of a record often depends on its status as evidence⁴, which in turn depends on legal and administrative circumstances. Archives can be seen as part of the construction of social identity: if no record can be found about

---

⁴ Records can of course also have informational, aesthetical and historical value but the evidential value has a prominent position in what makes a record a record.
your name, social security number, citizenship, you do not “exist” in the eyes of the public administration. One example of a record with essential consequences for the individual is the passport. To obtain a passport, which proves that you are a citizen, you need to show that you are registered as a citizen by the state in question. Citizenship, is in Sweden described as “a legal relationship between citizens and the state that confers rights and obligations on both parties” (SFS, 2001:82, my translation). A refugee seeking asylum can become a citizen by registration and through this enjoy the associated privileges of being a citizen. This change of status can only happen through the creation of a record. Another example of records with weighty consequences are different forms of property agreements. Sundqvist has argued that archives have the power to extend the influence of actions beyond one’s immediate vicinity: Records are tools, which extend the human capacity to act, to cause change (...) to exceed the limits of time and space” (Sundqvist, 2011b, p. 281). Hacking has discussed how ideas become part of social settings, emphasizing the significance of context and classification, and saying that in an indirect way “(...) people themselves are affected by the classification - and, if you like, the individual herself is socially constructed as a certain kind of person” (Hacking, 1999, p. 11).

Digital recordkeeping can be seen as “(...) a case of contradictions between technological promises and legal barriers” (Riksarkivet, 2001, this author’s translation). Balance is required between the interests of business efficiency and that of democratic empowerment. Swedish citizens are to be able to access public records wherever they may reside, and regardless of which agency ‘owns’ it. Records are to be usable and reusable also to actors outside the ‘administrative chain’. This is in line with the e-government goal to promote (re)usability. Existing procedures may require adaptations to suit the conditions of current goals and technology. Private companies and other agencies are should be able to access and use official information, which has been described as “(...) a resource that should be reusable by different stakeholders in the short and long term” (Sweden. Näringsdepartementet, 2014).

**Recordkeeping in the public administration**

The Greek word for archive, arché, also means governmental power, which is an indication of the close connection that exists between archives and public administration. Public archives are generally created and controlled by some
form of central administration (Ketelaar, 2005, p. 292), and have been described as a factor that, depending on quality and accessibility, can affect democratic participation (National Experts Group on Archives of the EU Member States and EU institutions and organs, 2005). Access to public records is seen in many countries as a way to inspire confidence among the citizens in that the public administration functions as preferred (Gränström, 2002). Promoting and extending the use of public records has been described as one of the cornerstones of democratic ruling: “Access to public archives is a right. In a political system which respects democratic values, this right should apply to all users regardless of their nationality, status or function” (Council of Europe Committee of Ministers, 2000). Wilson has described the record as “the very foundation of civil order” of great importance to societal continuity (Wilson, 2012). Yet, the political will to allocate resources for recordkeeping is often lacking. One can claim that archival and recordkeeping functions should act both on behalf of the citizens and on behalf of the public administration. This ‘double role’ gives these functions a special position. According to Cunningham archivists are accountable to the wider community and should “(…) always be ready to take advantage of changing circumstances that may permit their archives to serve more pluralistic, socially inclusive and democracy empowering roles” (Cunningham, 2005, p. 48). Schellenberg similarly emphasized the importance of sufficient mandates, saying that the archival authority “(…) should be given a place in the governmental hierarchy that will enable it to deal effectively with all other agencies of the government” (Schellenberg, 1956, reprinted 1998, p. 121). In the digital environment, planning for preservation before records are created is often seen as a necessity, why the responsibilities of the archival institutions may need to be extended. McKemmish has described the responsibilities of archival institutions as “(…) building and managing frameworks and systems which assure the preservation and accessibility of accurate, complete, reliable, and authentic records and archives (...)” (McKemmish, 2005b, p. 19).

An important part of recordkeeping in any context is appraisal. In the public administration the appraisal should be made with regard to both the needs of the organization in which the records originated, and with regard to the wider community. Schellenberg distinguished between different types of value (primary and secondary). Shepherd and Yeo have made a related categorization of three types of purposes for using records: business; accountability; and cultural (Shepherd & Yeo, 2003). The recordkeeping framework in Sweden similarly highlights the need of the business, of citizens
and of future researchers as important. Records should be appraised in their administrative context. Different theories exist about how to ensure that the context is maintained: *structural analysis* means to begin with an analysis of the functions and administrative body of the creator since the structure is seen as directly linked to the value of the records; *functional analysis* means to begin with analyzing the processes in which the records are created and used; and *diplomatic criticism* means to “(…) determine, on the basis of the creator’s functions and activities, whether a record should exist, and if this is the case, must then help the creator to redesign the system to enable it to create records (…)” (Duranti, 2011, p. 72). The different types of analyses imply different relationships between the creator (in the case studied here a public agency) and the archive. An ideal of e-government is to make public information usable and re-usable in innovative ways outside the realm of public administration. How this vision can be balanced with the requirements of personal integrity and information security is an issue which has no easy solution. Ensuring unbroken custody by transferring records from the creating agency to an archival authority is a traditional strategy for maintaining the authenticity of records (Iacovino, 2005). Jenkinson argued that the responsibilities of archival institutions were to ensure unbroken custody of records that the creator had decided to preserve. Schellenberg argued that the archives should firstly consider the needs of future users. This can however be hard, if not to say impossible, to determine beforehand.

Eastwood has described public archival institutions as “accountability agencies” and argued that they need autonomy from other governmental agencies to fulfill their purpose (Eastwood, 2002). At the same time, there is a need for cooperation and trust. Public agencies and archival functions can be seen a stakeholders with partly differing outlooks and priorities. According to Crockett raising awareness is vital: “One of the most important aspects of records management is to persuade stakeholders of the need to manage records. We need to be able to justify records management throughout the organization” (Crockett, 2016, p. 34). Such justification may be needed because recordkeeping can serve multiple purposes. It is not always clear to the creating agency why they should spend time and resources on information they do not see much use for: “Agencies may keep legacy systems limping along for a certain period of time (…) but it is not their core

---

5 Note that although Jenkinson emphasized duty to the record and Schellenberg stressed usability, neither of them denied the importance of the other activity (Stapleton, 1983, pp. 77-78).
business to ensure the long-term preservation of records that have broader societal or historical value but little or no legal/administrative value” (Cunningham, 2011b, p. 183).

One way to illustrate the division of responsibilities between the creating agency and the archival institution is the ‘archival threshold’, according to Duranti “(…) the space where the officer of the public authority takes charge of the documents, identifies them by their provenance and class, associates them intellectually with those that belong in the same aggregation, and forwards them to the inside space” (Duranti, 1996). How the archival threshold is organized, as a physical or a formal limit, has consequences for the interrelations between archives and administration: the line can be drawn at different stages in the information flow; and the threshold can be seen as a formal or a physical barrier. The Swedish concept of the archive as a general rule puts the formal ‘threshold’ at the point of creation or receipt. This is when public records usually become ‘archival’. This is illustrated in Figure 1 as the first threshold (1). However, records belonging to the same case can also be viewed as ‘archival’ at the second threshold (2), when a case is closed and the records transferred to a more permanent form of preservation than the originating business system(s). A third way of seeing the threshold (3) is that records become archival at the point of transfer to an archival institution for long-term preservation.

![Figure 1. Various views of the ‘archival threshold’](image-url)
Jenkinson’s view of archives as neutral and unbiased has been criticized for representing an ‘unreflective positivism’ (Cunningham, 2011b, p. 180). It is still the case that when people consult an archive they are often looking for the ‘truth’ in the ‘primary source’. However, the same record can be seen as an objective source of knowledge, a tendentious document, or an historical artifact, depending on context and interpretations. As previously mentioned, postmodernism has confronted the view of an objective reality. In other words, the context defines what the archive represents (Foucault, 1993). Public agencies often have the monopoly on managing certain official registries, and issue specific certificates. The practices concerning archives and recordkeeping can be described as ‘micro power’: “(...) not the product of a structure, but of untold dispersals, including, through the work of “discourse” the linguistic regulation of the possible and the impossible” (Jones, 2013, citing Sharp, Routledge, Philo, and Paddison 2000). Groebner has argued that public administration is a way of constructing a ‘bureaucratic world’ (Groebner, 2009). This type of construction, as understood in the present thesis, should neither be seen as more or less ‘true’ or valid than any other, but it is seen as an influential way of exercising power. With the words of Schwartz and Cook “Archives are social constructs. Their origins lie in the information needs and social values of the rulers, governments, businesses, associations, and individuals who establish and maintain them” (Schwartz & Cook, 2002, p. 3). Duranti, in what has been called a ‘neo-Jenkinsonian approach’ (Hill & Lane, 2011) has argued that records that have ‘crossed the archival threshold’ per definition are authentic, and should be preserved by an archives independent from the creating organization (Duranti, 1996). This thesis sees the power of public records as largely depending on their perceived trustworthiness, including accuracy and traceability. In this way it is more in line with Harris. He has explored power relations based on the transition from apartheid to democracy, and said that archives only give a very limited view of the reality they are meant to represent since they are both shaped by, and shape, the processes that create them. He therefore argues that archivists are political actors and take part in power relations: “The harsh reality is that the shape (and the shaping) of recordmaking is determined by the relations of power” (Harris, 2007, p. 5). Power relationships are present in the research material used in the thesis – the interviewees and participants had different positions at their respective agency, and varying knowledge about recordkeeping; reports and other texts studied had originated from agencies with different leverage on the matters at hand.
Digital archives

According to the book *Keeping Archives*, published by the Australian Society of Archives in 2008 (Bettington, Eberhard, Loo, & Smith, 2008), archives can have a seductive scent. A picture of a shelf with leather binders stained by time and use is accompanied by the text: “Records like this – the look, feel and smell – are enough to tempt many into the profession”. In other words, aging papers are thought to have a similar effect on some people that flowers have on bees. Digital archives do not have this intriguing patina, in fact, they might not have a smell at all, not even a ‘look’, or ‘feel’. The nature of the digital record means that the prerequisites for preserving public records have changed. Duranti has differentiated between ‘stored record’: the linked digital components needed to reproduce the record; and ‘manifested record’: the visualization or materialization of the record in a form that can be presented to a person or system (Duranti, 2011, p. 74). When we access a digital archive we do not come in direct contact with the records, but with an image on a screen, representing the record. Convery has argued that this may change the role of the archives: “(…) the physical place of archives disappearing into the ether and archives might well soon lose their traditional mandate as keepers of society’s memory to the accidental permanence of a widely accessible world wide web” (Convery, 2011, p. 194).

According to Upward et al. “The era of the postcustodial archive has arrived without adequate archival control mechanisms. Archivists and records managers have not been in the game and no-one has filled the breach, so the frontier of change can only grow wilder” (Upward et al., forthcoming). In 1993 Bearman and Hedstrom argued that electronic records had created a need for ‘steering’ instead of ‘rowing’ in archives management. The steering approach would include to “(…) increase monitoring and oversight by the archival agency while assigning responsibility to agencies for achieving adequately documented functions and programs” (Bearman & Hedstrom, 1993, pp. 89-91). The authors gave several examples of tactics that archival institutions might consider to succeed with a ‘steering’ approach, including legal rules and sanctions, regulations, monitoring and investigation.

Despite the differences between the formats, existing analogue images follow into the digital world: you do not have to go further than the ‘desktop’ of your computer, with the ‘files’ and the ‘paper bin’ to notice it. Such images risk clouding the potential of digital recordkeeping, for example if archives are seen as ‘dusty papers’ rather than ‘information assets’. Digital formats
provide new possibilities, which should be taken into account when planning for, discussing and deciding on measures for public archives management. Several authors have argued that digital records increase the need for proactive recordkeeping (Kallberg, 2013; McKemmish, 2005a; Riksarkivet, 2006) and that there is a need for closer collaboration between archives and administration. With the words of Cunningham:

“The time has come for government agencies to make and manage good digital records – records that are linked to their business context, where assessments of retention needs can be made efficiently and effectively at or before the time of creation, not years later (if at all)” (Cunningham, 2011a, p. 24).

According to Convery, digital preservation and access is a cultural as much as a technical issue in that recordkeeping practices are challenged both by the format of the records, and even more by the ways in which society and individuals are using, accessing, and consuming information. This causes a need for in information professionals to rethink their role: “Information professionals have too long focused on information as object and now need to revisit information as cultural practice in a collaborative environment” (Convery, 2011, p. 193). As a contrast to Convery, who advocates radical change, it is also possible to argue that there is no clear-cut boundary separating the "paper era" from the "digital era". Richard Pearce-Moses has argued that there is a point in seeking knowledge in traditional theories: "Much of archival knowledge transfers directly to the digital era, and established principles give us insight into solutions" (Pearce-Moses, 2007, p. 21). The present thesis recognizes that there is a need to make significant changes to the practices developed in the analogue environment, but that existing theories should not be dismissed without first having considered their current relevance. Archival theory can also be relevant in other contexts. On example is the emerging e-government. E-government development stands for using the combination of information technology, organizational changes and new skills in public administration to improve the quality of public services, reinforce the democratic processes, and support community objectives. Research in the field of e-government include topics such as “(…) hardware and software technology, e-government adoption and diffusion, e-government policy, e-government planning and management, e-government applications, and e-government impacts” (International Journal of Electronic Government Research (IJEGR), 2015). Archival and recordkeeping issues could be naturally included within this area of research due to the strong focus
on trustworthy information and the connections to democracy. Despite this, recordkeeping has received little interest among researchers in the field of e-government (Sholl, 2013, p. 7). The present thesis aims to show the relevance and value of such research. Two of the included papers have been published in contexts that have connection to e-government: Paper III was published in *Electronic Government. EGOV 2015. Lecture Notes in Computer Science* and Paper V was published in *International Journal of Public Information Systems*.

The principles of provenance and original order were formalized in European government bureaucracies and assumed a “(...) cumulative nature of archives and their organic and ongoing relationship to the authority and activities by which they were created” (Gilliland, 2016, p. 38). This way of thinking assume one creator and a fixed order of the records. Although the principles have always been problematic, since there can be multiple creators and there can be different orders, it is in the digital environment that they have increasingly been brought into question. Archiving principles have often presupposed a custodian or a gatekeeper, giving or limiting access to records in an archive (McKemmish, 2005a). According to Jansson & Lindgren, e-Services can be seen as ‘intended gatekeepers’ or ‘unintended gatekeepers’. *Intended gatekeepers* stand for intentionally limited access, for example to protect privacy. *Unintended gatekeepers* mean limited access that is created unintentionally, for example due to poor design and lack of information (Jansson & Lindgren, 2012). Meijer has used the word *safeguards* in a comparable way to describe “socio-technical recordkeeping systems”, such as techniques, procedures, methods, and organizing which, in combination with ethical values, creates the conditions for trustworthy public archives. Meijer concludes that “(...) norms values and cognitive scripts regarding recordkeeping in public organizations should be acknowledged as an integral element of organizational recordkeeping systems” (Meijer, 2003, p. 290).

According to Lubar, “Archives reflect not just technologies (...) but also the changes in culture that accompany changing technology” (Lubar, 1999, p. 12). Runardotter et al have even argued that eservice development affects the role of the archivist as a mediator between an archive and its users: “The dominant discourse in national policies has in many ways already replaced archivists with technologies. Hence, IT has replaced archivists as carrier of evidence of organizational transactions and the societal memory” (Runardotter et al., 2011, p. 75). This is a big claim that ought to be discussed further and it is not
in the scope of this thesis to do so. However, the results presented here confirm that discourses affect the way that recordkeeping is developing. A challenge related to the transition from a paper based to a digital public administration is the fundamentally different nature of records and the means to control them. Cook has used the term ‘archives without walls’ to describe what the change from ‘custodialism’ to ‘postcustodialism’ implies (Cook, 2007, p. 430). However, Duranti as stressed the importance of maintaining a “(...) central official place of preservation under a distinct jurisdiction (...)” (Duranti, 2007, p. 465). What the archive, place-bound or not, will entail is still developing. In the words of Lane and Hill “The architecture of the new archives is still to be determined and is the stuff of imagination” (Hill & Lane, 2011). Other challenges that scholars currently address include how to enhance the semantic interoperability of archival description (Gartner, 2015); how archives can connect their collections to related data sources through the use of Semantic Web technologies (Gracy, 2015). According to Upward the factors to take into account when dealing with digital archives are multifaceted:

“(...) the complexification of ownership, possession, guardianship and control within our legal system. Even possession can be broken down into physical possession and constructed possession. We also have to face the potential within our technology for ownership, possession, custody or control to be exercised jointly by the archives, the organisation creating the records, and auditing agencies. The complexity requires a new look at our way of allocating authorities and responsibilities.” (Upward, 1996, p. 273)

This gives a wider scope of concern than the more traditional cultural memory institution Pearce-Moses refers to when discussing the changes needed: “(...) society entrusts archivists with preserving the cultural record and our documentary heritage. If we fail to adapt to the digital era, we will necessarily fail that mandate” (Pearce-Moses, 2007, p. 16). Caron and Brown have discussed how the role of information professionals changes alongside the current and continuing development of how to preserve information resources and knowledge, introducing the concept of the documentary moment, typically called appraisal or acquisition, which in the digital age becomes ‘instantaneous, participatory, and collaborative’. They argue that traditionally:
“(…) archivists have been able to wait – sometimes for very long periods of time – until after information has been created or produced before applying methodologies, typologies, and criteria to determine its potential status and value as a component of public memory”, which is why it has “conceptually been formulated from the perspective of hindsight” (Caron & Brown, 2011, pp. 5-6)

The perspective of hindsight still colors the way people think about recordkeeping, which becomes a major challenge when trying to develop both the practical and the theoretical baselines in the digital environment.
Research design

The present thesis is based on an epistemological, rather than an ontological, view of knowledge. *Epistemology*, the theory of knowledge, is about the origin, nature, and validity of science and its relation to reality. To put it briefly, epistemology addresses the questions: what is it possible to know, and how can we know it? The answers to these questions lay the foundation for the choice of theoretical and methodological frameworks a researcher makes. Problem solving and strategically planning the route of the research is a key part of the research process, which is why philosophical and epistemological considerations are of great importance (Sohlberg, 2013). There are two main epistemological traditions: empiricism and rationalism (Jakobsson, 2011). According to empiricism, knowledge derives from what our senses tell us, while rationalism emphasizes reason as the primary source of knowledge. The epistemological framework of the present thesis lies within the *interpretive* framework, where the focus is to understand from interpretation. There are different approaches within the interpretive field. The one used here is the ethnographic approach (Given & Gale, 2008). In all six studies included in the thesis, the researcher took the role of an observer. The results derive from personal interpretations, made using established research methods. These will be described in the following section. The aim has been to explore and problematize the perceived ‘reality’, and thereby uncover and understand tensions beneath the surface that may affect ongoing developments. The object of interest is reality as it is being shaped and circumscribed in specific social settings. Existing knowledge in the form of theories and legal and administrative frameworks paired with observations made while conducting the research have provided the basics from which new insights were pursued. Evans & Rouche have argued that exploring the interaction between theory and practice is a crucial part of archival systems research “(...) especially in the pursuit of requirements for digital recordkeeping within ever-evolving technological frameworks” (Evans & Rouche, 2004, p. 334).

This researchers’ preconception about the research field originated primarily from self-perceived experience from working with public recordkeeping in Sweden. That the research was situated in a context familiar to the researcher naturally had its advantages, yet can also be seen as problematic. As a former employee at national as well as municipal public authorities, the researcher had previous knowledge about some of the recordkeeping issues that can arise in practice. This, combined with theoretical competence, provided a
compound outlook, and gave the ability to meet the practitioners involved in each research project with basic understanding about their situation. This made it easier to connect and gain confidence. However, every researcher needs to be aware of previous understandings. Unprejudiced perception is neither socially/culturally, nor physiologically/cognitively possible (Johansson, 2011). One way to illustrate this is that a precondition for orienting oneself in the world is a mental ‘map’ in which we situate things, phenomena and people in relation to previous observations (Olsson, 2014). Preconceptions might increase the risk of failing to ask certain questions or drawing premature conclusions. This risk has been mitigated through discussions with other researchers at seminars, and more informal contacts.

The epistemological positioning implies that archives and recordkeeping are seen as parts of the societal system, and consequently need to be studied in relation to the context in which they occur. Records that are regarded as ‘public records’, or ‘official information’ are privileged over other sources of information. From this perspective, archives are neither ‘natural’ nor ‘neutral’. Archives as a phenomenon are closely linked to knowledge, and control. The development of digital work processes and e-government are also part of the context, and adds to the complexity since it provides possibilities to fashion new forms of administrative control and manipulation.

**Research methods**

Methodology, the framework of methods and procedures by which we can study and gain knowledge about the world, should be chosen with respect to epistemological assumptions and research question(s). The theoretical base of the present thesis sees records and archives as part of the societal system, thus the context defines what the archive represents. Qualitative research methods were used in all studies, with the intention to analyze and describe the characteristics of different phenomena, rather than their quantitative occurrence (Jakobsson, 2011). Six studies were conducted to approach the overarching research questions. In this section the specific methods used to conduct each study are presented briefly, together with reflections on their contribution to the thesis as a whole. The following section, Research process, provides a more detailed account for how each method was applied. Table 1 outlines the methods which were applied and how they were used.
All studies took place during a period of four years and were strongly influenced by problems and issues raised at workshops, meetings and study visits which were planned and completed within the two research projects Good Information Governance (GoInfo) and Efficient Digital Information Management (EDIM). The two research projects are presented in the section Research process. The studies were conducted iteratively, thus Studies II and III were in part motivated by previous findings, and so forth.

Table 1. Overview of research methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Definition</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action research</td>
<td>&quot;(…) the action research method involves the close collaboration of both researchers and practitioners&quot; (Baskerville &amp; Wood Harper, 1996, p. 2).</td>
<td>GoInfo used parts of the action research approach to pursue the project goals. This gave the opportunity to intervene in a way similar to that found in action research, collect data and find inspiration for the design of the studies. Some of the activities this researcher participated in led to results outside the scope of this thesis. Despite these influences, none of the studies presented here were able to follow the number of stages necessary to claim to be the result of action research.</td>
</tr>
<tr>
<td>Concept analysis</td>
<td>&quot;(…) an activity where concepts, their characteristics and relations to other concepts are clarified&quot; (Nupponen, 2010).</td>
<td>The first study explored the implications of the concept of the ‘middle archive’ as it occurred in plans and suggestions related to public recordkeeping.</td>
</tr>
<tr>
<td>Discourse analysis</td>
<td>&quot;(…) the process of analyzing signifying practices as discoursive forms&quot; (Howarth, 2000).</td>
<td>The second study analyzed a panel discussion on e-archives to understand how the participants understood the role of the archive and of recordkeeping in their respective organizations.</td>
</tr>
</tbody>
</table>

6 Concepts are mental constructions which help us create order and meaning and make it possible to communicate with others (Friberg, 2012).
7 Discourses are historically specific systems of meaning which form the identities of subjects and objects (Foucault, 2002).
<table>
<thead>
<tr>
<th>Literary warrant analysis</th>
<th>“Analysis of the literary warrant for professional practice establishes the ‘mandates’ for best practice, and identifies its conceptual and theoretical frames of reference” (Gilliland &amp; McKemmish, 2004).</th>
<th>Literary warrant means identifying justification or authorization in sources such as laws, standards and best practices. This research method was used in the third study to identify warrant in the existing legal framework, and to analyze, in combination with the second dimension of the records continuum model, a government decision and a related report on how to develop a national e-archive.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical theory</td>
<td>“The essence of critical theory lies in its interest in the ways people think and act and how social circumstances influence those thoughts and actions” (Porter, 2003).</td>
<td>This research method was used in the fourth study to analyze illustrations and descriptions of the concept of the ‘e-archive’ in three pre-study reports from the municipal sector, with a specific focus on how the concept was influenced by practices created in the paper administration.</td>
</tr>
<tr>
<td>Phenomenographic analysis</td>
<td>Phenomenography is a research approach aimed at the study of variation of human experiences of phenomena in the world (Limberg, 2008), by “(…) describing the different conceptions of a phenomenon which are present amongst groups of individuals in a particular context” (Bruce, 1997).</td>
<td>This approach was used in the fifth study to analyze interviews aimed to understand how employees at the Swedish Transport Administration viewed the implications of outsourcing for recordkeeping at the agency.</td>
</tr>
</tbody>
</table>

8 The literary warrant for professional practice consists of authoritative sources, which are recognized and valued by practitioners. Such authoritative sources may be found in the law, codes of ethics, standards, the professional and scholarly literature, and literary texts (A. Gilliland & McKemmish, 2004).
The Records Continuum Model was designed as “(...) a dynamic and active tool, a means to assess and understand recordkeeping and also to improve it” (Cumming, 2010, p. 48). The Records Continuum Model was used in the sixth and final study as a structure for analyzing a public agency working according to a client-contractor model. The choice of method was made with the intention to understand the overarching problems for recordkeeping in this context.

### Action research

The GoInfo project used action research as the overarching methodology, which is why a brief account for the basic components of action research is provided here. An action research project is usually composed of five phases, which are carried out iteratively: **Diagnosing**: to jointly identify problems and causes and formulate a working hypothesis concerning the research phenomenon which is then used in the subsequent phases; **Action planning**: specifying interventions that may improve the situation; **Action taking**: to implement the interventions that have been identified in the planning phase; **Evaluating**: to implement the interventions that have been identified in the planning phase; and **Specifying learning**: to continuously record and summarize the lessons of action research (Lindgren, Henfridsson, & Schultze, 2004). Although none of the studies included in the thesis was conducted as an action research study, and this researcher does not claim to be an action researcher, the action research approach informed and inspired the data collection and thus influenced the result. Action research is suitable for making theory and practice become enriched by each other through mutual exchange and joint work. This requires responsiveness toward the unique business and information cultures of the participating organizations. This thesis recognizes the differences between theory and practice, yet argues that it is important to bring them together. This approach is supported by Gorman and Clayton, who have stated that when pursued in a straightforward and unpretentious way, research can make a significant difference to the work of information professionals (Gorman & Clayton, 2004, p. xv).

The action researcher has dual tasks: problem solving and research. The first one intends to bring about improvements in practice by changing a problematic situation, and the second one involves creating new theoretical knowledge and insights as a result of implemented activities. A fruitful collaboration between researchers and "problem owners" is essential to make...
an action research project succeed (McKay & Marshall, 2001). This requires clear agreements between the parties and continuous discussions about roles, expectations and responsibilities, since: “The main concern in collaborative practice research is to establish well-functioning relations between research and practice. This is, however, far from easy to achieve” (Mathiassen, 2002, p. 329). One risk is that the researcher enters the role of a consultant. Avison et al. have recommended that control structures concerning initiation, determination of authority, and formalization, should be decided jointly by researchers and practitioners early on in an action research project: “Without an explicit understanding of the current and past project control structures, either the researcher or the practitioner (or both) can unknowingly lose control and thereby mismanage the project” (Avison, Baskerville, & Myers, 2001). GoInfo was implemented by practitioners and researchers together, through discussions and action planning. The project leader had formal responsibility to control and manage the overall structure and budget of the project. The control of the time and efforts of the participants from the Public Agencies’ Network was however less clear and more informal. This led to some difficulties related to action warrants. There was no letter of agreement between the researchers and the Public Agencies’ Network, other than the project grant decision which said that the University and the Public Agencies’ Network should work together on issues concerning information governance (Länsstyrelsen Västernorrland, 2012). There were also some events affecting the project that could not have been controlled – during the project one of the participating practitioners went on parental leave and two changed their jobs, leaving one of the agencies without a representative since it proved difficult to find a replacement. The GoInfo project used parts of the action research approach to complete the project goals. The partial implementation of action research in the project, including context, roles, area of research concerns, problems, control, intervention, and documentation & recording, is presented in the section Research process.

**Concept analysis**

Study I began with an exploratory approach, which is suitable when attempting to undertake a study of a new topic of which little is known (Phillips & Pugh, 2005). An initial data collection at three public agencies showed that a complex of legal, professional and administrative issues combined with technological changes had led to discussions about how to create and preserve public records. Actual implementations were yet to fall
into place. One of the problems highlighted was lack of clarity regarding a concept that had recently begun to be used: the concept of the ‘middle archive’. Concept analysis was used firstly to explore how the ‘middle archive’ had been defined and secondly to analyze how plans and suggestions connected with the concept related to existing archival theory and practice. Texts were chosen from three different actors: the National Archives (Riksarkivet, 2010), the Sambruk project (Sambruk, 2011a), and the eARD project (Riksarkivet, 2014a). All discussed how public recordkeeping could be adapted to the context of e-government and argued that a ‘middle archive’ would facilitate information management in the public sector.

**Discourse analysis**

Swedish public agencies are fully responsible for their records (creation, preservation, and use) until formal transfer to an archival authority. The official responsibility lies with the Director General at each agency. However, the practitioners participating in GoInfo did not know the intentions of the leadership in their respective organizations. It was therefore considered an important issue to gain knowledge about. A study about decision makers’ views and visions was deemed relevant. Searching for information on the Public Agencies’ Networks’ web page, a video recording from 2011 of a panel discussion on archival issues was found and considered suitable to use as research material. Discourse analysis was chosen as the appropriate research method since it is useful for understanding ways of reasoning about specific areas and has been described as a good choice of method for studying "(...) how our knowledge of what ‘is’, is made or constructed socially and linguistically" (Wreder, 2007, p. 50, this author’s translation). Discourse analysis can be used in different ways depending on the purpose, the theoretical level and the scientific basis (Börjesson & Palmblad, 2007). The choice to use an existing recording rather than to assemble a focus group was that the choice of speakers and their willingness to participate in the event were seen as important elements of the discourse.

**Literary warrant analysis**

Study I indicated that plans and suggestions connected with the concept of the ‘middle archive’ did not necessarily relate explicitly to existing legal, administrative and theoretical frameworks, and Study II showed that decision-makers responsible for recordkeeping had differing ideas, regarding both the needs that public archives ought to fulfil and measures that were
needed to accomplish these. Some of the participants expected solutions to their recordkeeping problems to come from outside their organizations (the National Archives, the eARD project and commercial service providers were mentioned). Common repositories are a rather new phenomenon in Sweden. The formal mandates and responsibilities for public recordkeeping are focused solely upon the creating agency and the archival authority. Therefore the third study aimed to gain an understanding of the intentions behind the government’s decision to implement a national e-archive service, also referred to as a ‘middle archive’ (Näringsdepartementet [Ministry of Industry], 2014). Investment in a national e-archive had previously been motivated with reasons of reduced costs and increased efficiency (Aspenfjäll, 2013). The study aimed to find out if a national e-archive service implemented according to the decision would be likely to live up to the expectations of facilitating public agencies’ recordkeeping and archives management in an e-government context. The government decision and an interim report were used as research material, the second dimension of the records continuum model, ‘capture’, was used as a theoretical lens, and literary warrant analysis was applied to understand the relationship of the planned e-archive to existing legal and administrative frameworks. ‘Capture’ was chosen as the perspective because registration is the responsibility of the creating agency and part of a proactive approach to public recordkeeping, yet had not been problematized in the plans or discussions previously studied.

**Critical theory**

It can be difficult to re-imagine recordkeeping in the digital environment, since preconceptions, norms and practices developed in a paper-based administration color and limit perceptions of what an archive is. The choice to use critical theory in the fourth study stemmed from a PhD course which highlighted possibilities of more critical engagement with the research material. Critical theory was used as a lens to reveal how we understand archives in general, and digital archives in particular. The paper used a discursive approach, focusing on openings and closures of concepts surrounding the idea of archives expressed in three municipal pre-study reports on ‘e-archives’. The analysis used the three basic principles towards which the public administration should work: (i) a holistic concept of the archive, (ii) a proactive approach to records management, and (iii) striving to integrate the archiving process with the goals and opportunities of e-government.
**Phenomenography**

The fifth study was the first one conducted within the second research project, EDIM. The intention was to build on the results of the previous studies, and at the same time explore the particular context of the Swedish Transport Administration, an agency on its way to becoming a ‘pure outsourcing organization’. Traditionally, public records have been handled and preserved by each creating or receiving agency separately and the existing legal framework in Sweden is still based on this principle. However, recent developments – digital technologies paired with new ways of working – create a more dispersed and complex body of archives. What this means for practical records management is open to discussion. The fifth paper used phenomenography to explore the potential consequences of implementing the outsourcing policy, by focusing on issues actualized and seen as important by employees. The aim was to understand how recordkeeping might be affected. Phenomenography aims to capture variation in perceptions and describe the range of possible interpretations on a particular topic. Semi-structured interviews were conducted with 15 representatives from the agency. The interviews were recorded and transcribed verbatim, as part of the analysis.

**The records continuum as a theoretical structure**

In the sixth and final study, the RCM was used as a theoretical structure to identify issues of importance when public agencies outsource part of their business. The aim was to provide practical help to practitioners by offering perspectives that would be of use in their business development. The analysis also contributed theoretically, by addressing a wider complex of problems, exemplified by issues that employees and contractors in an investment project at the TRA experienced. Data was collected through participant observation – the researcher followed the process of building a bike lane in a small village in Sweden. Employees of TRA and contractors collaborated and their work generated records, some of which were public records that the TRA was responsible for preserving. Data was collected by attending 5 construction meetings, which can be described as a way of maintaining regular contacts between the outsourcing agency and the contractors, and interviewed 7 persons in total, of whom 3 were employees at the TRA and 4 were contractors/consultants hired by the agency.
Research process

The steps of the research process are described in this section in chronological order. The thesis is, as previously mentioned, the result of two research projects: GoInfo and EDIM. The first three studies conducted were based on a complex of problems that emerged during GoInfo and in collaboration with researchers and practitioners at the Public Agencies’ Network. The fourth study was not directly connected to either of the research projects, yet it contributed to answering the overarching research questions. The problem it addressed was relevant also in the contexts of both GoInfo and EDIM. The research for the final two papers was conducted as part of the EDIM project.

Table 1. Overview of the research process

<table>
<thead>
<tr>
<th>Step</th>
<th>Data collection</th>
<th>Design &amp; contribution</th>
</tr>
</thead>
</table>
| **Step 1** | Initial data collection, including:  
  - a study visit at three public agencies;  
  - a workshop on e-archives;  
  - a survey of texts where the concept of the ‘middle archive’ occurred | The initial data collection aimed to identify issues of importance to the Public Agencies’ Network.  
  The research proposal presented a preliminary research focus, which was later developed iteratively. Study I explored the implications of the concept of the ‘middle archive’, which had been discussed as a possible means to organize recordkeeping at the agencies. The study resulted in Paper I. |
| - writing a research proposal;  
- conducting Study I;  
- writing Paper I | A research proposal was written and approved by the supervisors. |  
| **Step 2** | Continued data collection and activities, including:  
  - a seminar on e-archives;  
  - a workshop on issues the participants wished to communicate to the Directors General at their  
| - conducting Study II;  
- writing Paper II | The result of Paper I showed there to be different ways of defining the concept of the ‘middle archive’, each with different implications for recordkeeping. Since questions had been raised by the practitioners participating in GoInfo concerning how best to implement e-archiving, the project arranged a seminar with |
respective agencies; a memorandum and a presentation intended for the Directors General, communicated at a Steering Committee meeting.

A video recording from a panel discussion on e-archives, in which representatives at managerial level of three agencies within the Public Agencies’ Network participated, was used as research data in Study II.

**Step 3**  
- conducting Study III  
- writing Paper III

Further data collection in the form of official documentation regarding a national e-archive.

The result of Study II showed there to be differing understandings and visions among decision makers concerning recordkeeping. Study III extended the perspective to the national level. It focused on the government decision to implement a national e-archive, specifically the connections between ‘capture’ and archiving, which is significant in relation to a proactive approach. The study resulted in Paper III.

**Step 4**  
- completing the licentiate thesis  
- writing a project report

The licentiate thesis, called *Adapting Official Archives Management to the Context of E-government*, was defended at a seminar June 11th 2015.

The first part of the research education resulted in the completion of a licentiate thesis (Ann-Sofie Klareld, 2015a) and a project report (Anderson et al., 2016) written in Swedish.
<table>
<thead>
<tr>
<th><strong>Step 5</strong></th>
<th>The fourth study was conducted during the course Critical Theory in Information Systems, using research data in the form of three pre-study reports from the municipal sector. The fourth paper was written together with Professor Katarina Lindblad-Gidlund.</th>
<th>The fourth study was designed with the intention to continue exploring the issues found important in the previous studies, using critical theory as the research approach. The study resulted in paper IV.</th>
</tr>
</thead>
</table>
| - conducting Study IV  
- writing paper IV | **Step 6** | The research proposal for the continuation of the research education was completed in conjunction with collecting data in the form of 15 interviews for the fifth study. The proposal was approved by the supervisors. | The fifth study was designed with the intention to provide insight into the context of the Swedish Transport Administration, and seek the necessary correlations with previous studies to make all fit together in the thesis. The study contributed to answering the overarching research question by exploring how the decision to become a pure outsourcing organization might affect recordkeeping and the various measures staff thought would be needed after the organizational change. The fifth study resulted in Paper V. |
| - writing a new research proposal  
- conducting Study V  
- writing paper V | **Step 7** | Data for the sixth study was collected through participation at construction meetings, access to the project portal, and interviews with staff working to build a bike lane in a small village. | The study contributed to the overarching research question by focusing on how to tackle the existing challenges of recordkeeping in the investment process. Using outsourcing means that the state no longer produces physical infrastructure, but acts as policymaker, system administrator, and client. This has repercussions for recordkeeping and poses new demands on how to promote proactivity. |
| - conducting Study VI  
- writing paper VI | --- | --- | --- |
The cover paper uses data from all the steps and studies, in addition to academic literature, primarily from the field of archival science. Its purpose is to account for the research process, demonstrate how each study is connected to the overarching research questions, and provide a summarizing analysis of the result of the thesis in its entirety. The draft cover paper was reviewed at a seminar the 29th of May 2017 where a reviewer made comments and suggestions for improvement. The results of each paper are presented in the following sections, and implications of the results for the overall research objectives are discussed in the Results and analysis.

Step 1
The goal of GoInfo was “to define and support the development of good information management in the region to promote an efficient, reliable and long-term digital information management both in the public and private sectors” (Avdelningen för Arkiv- och datavetenskap, 2012, p. 7). The sub project of which this thesis is a result was To plan and govern information flows (Avdelningen för Arkiv- och datavetenskap, 2012). It included the project leader, this researcher, and participants from the Public Agencies’ Network – a network which at the time consisted of 16 public agencies in the Västernorrland region in Sweden. The public agencies in the network were collaborating within the areas of human resources, education, IT, and administration to improve their efficiency and lower their costs. The network had also previously had the ambition to collaborate on recordkeeping. Four archivists and two IT-architects represented the Public Agencies’ Network in the research project. Two managers and one coordinator were involved to some extent, as well as a representative from the National Archives who had worked with the Public Agencies’ Network in an earlier development project.

To achieve the project goal and contribute to the sub-project, certain problem-solving capabilities were required: firstly, experience of the Public Agencies’ Network and access to research data; secondly, theoretical knowledge about the legal and administrative frameworks and archival theory; and thirdly, reflective and analytical skills. The first requirement was needed to understand the needs and challenges of the Public Agencies’ Network; the second requirement was needed to connect to the wider context to which the issues of the Public Agencies’ Network related; and the third requirement was needed when planning the activities and interpreting the results. There had been some previous discussions among a number of the agencies in the Public
Agencies’ Network about cooperation on recordkeeping issues. It had however been perceived as problematic since it was unclear what concrete efforts would be needed, and how the different needs, requests, strategies and priorities of respective participating agencies would be handled.

The researcher visited three public agencies, all part of the Public Agencies’ Network, with the intent to collect research data and obtain an initial image of questions and perceived problems. This, together with discussions at joint meetings, resulted in an overview of problem areas. Examples of issues discussed include: who was responsible for ensuring traceability and preservation of records created in integrated business systems; which function(s) at respective agencies should be responsible for recordkeeping issues being included when systems and services were obtained or updated; what the role of the National Archives were, in relation to the public agencies; what the plans and priorities of the Directors General concerning recordkeeping were; and what criteria should an e-archive meet. Prior experience and understandings of the research context made it easy to connect with the practitioners and comprehend their accounts of questions and concerns facing their respective businesses. The main problem seemed to be the lack of overview of digital recordkeeping. At one of the agencies there was a division of labor between two archivists, where one was mainly responsible for issues related to archiving and the other one mainly responsible for issues related to registration. Neither of them was contacted when the agency was about to perform a major system renewal. This was one example of how a collaborative approach to recordkeeping was not implemented in practice.

A research proposal was written and reviewed by members of the Cedif research group at a GoInfo meeting. The research focus was deemed relevant from a practical as well as theoretical perspective. The nature of the problem and the problem context was further explored through a workshop where the participants discussed issues related to the implementation of an e-archive. Questions and issues raised by the participants warranted the focus of the first study. Early in the project the concept of the ‘middle archive’ was discussed. Although it was a concept everyone had heard of, it was unclear what it meant. Two of the main questions were whether a ‘middle archive’ could solve any of the current problems related to recordkeeping at the public agencies, and how the mandates and responsibilities for a ‘middle archive’ could be organized. When searching for definitions, it became clear that there were
different interpretations of the meaning of the concept. Concept analysis was therefore chosen as an appropriate approach for looking more closely at three of the definitions found, which had been developed by actors with strong influence on public recordkeeping: the National Archives, the Sambruk project\(^9\) and the eARD project\(^{10}\). Each author had defined the concept differently and highlighted different aspects as being important. The first study resulted in the paper “The ‘Middle Archive’ Exploring the Practical and Theoretical Implications of a New Concept in Sweden”, published in *Records Management Journal*, vol. 25(2) pp. 149-165 (Ann-Sofie Klareld, 2015c).

Step 2
Following the initial exploration phase, the joint project activities continued. GoInfo evolved continuously through collaboration between academics and practitioners. Meetings, workshops, seminars, and study visits were organized by the researchers after discussions with the participants. Joint actions were planned by researchers and practitioners together. Activities included:

- Meetings and discussions about common questions and focus areas;
- A workshop focusing on comparing different e-archive solutions;
- A seminar with invited speakers from two public agencies outside the Public Agencies’ Network;
- Further development and specifications of focus areas;
- A workshop focusing on creating a joint communication to the Steering Committee of the network;
- A meeting with the coordinating team at the network;
- A study visit at a public agency outside the Public Agencies’ Network with experience of e-archives development.

---

\(^9\) Sambruk (the Swedish Association of Municipalities for Joint Development of e-Services), is a cooperation initiative with the overall purpose to “(...) create a foundation for an effective development programme, comprising both the technical and functional aspects of e-services, as well as the need for re-engineering of the municipalities’ internal business processes” (Föreningen Sambruk, 2008).

\(^{10}\) eARD was a project initiated by the eGovernment Delegation, a committee under the Ministry of Industry, and implemented by the National Archives from 2011-2014. The aim was to develop common specifications for transferring information between business systems and earchives. The vision of the project was “It should be easy to retrieve, reuse, and transfer information held by public agencies to the archive regardless of where and how the information is stored” (Riksarkivet, 2014a).
The meetings, the seminar, and the study visit were documented through note taking. Workshops were documented through collecting notes which were compiled in a results document. Visits and interviews at the agencies were documented in a report. All documentation were shared between the practitioners and researchers in the project and all were encouraged to comment if anything was missing or misunderstood.

It became clear that the practitioners felt that they had insufficient knowledge about plans the leadership of the agencies in the Public Agencies’ Network might have regarding the future development and possible cooperation in the area of recordkeeping. It is rare that an archivist at a public agency commands a budget of their own, thus priorities are dependent on decisions made at a managerial level. A communication put together by the project highlighted the main issues of concern and suggested a way to move forward. The communication was made in a twofold way: firstly, a briefly held memorandum was sent to the Steering Committee; secondly, the project leader of GoInfo gave a presentation, which was followed by a discussion at a meeting with the Steering Committee. The response came as a surprise – it was said that although Public Agencies’ Network had previously aimed to collaborate on recordkeeping issues, those plans were now put on ice. This was of course a disappointment to the researchers in the project and even more so to the practitioners. The Public Agencies’ Network had invested time and effort in the research project by participating, yet there was no clear stance about anticipated outcomes, or what should be prioritized. Although these circumstances hampered the value of the project for the practitioners involved, it provided research material and justification for the choice of focusing the research of this thesis on collaboration and the relationship between public administration and archives. The response from the Steering Committee together with the result of Study I motivated research regarding decision makers’ outlooks on recordkeeping. Study II focused on a panel discussion about e-archives. A video recording made in 2011 was used as research material and discourse analysis was applied as the research method. The panel discussion had taken place at a large fair for the public sector, the Quality Fair, held annually since 1989. The panel discussion had the title Repository of the future and the introduction read: “Representatives and stakeholders discuss the advantages and opportunities of a national e-archive”. The panel discussion was chosen as research material firstly because it would not have been possible to gain access to a focus group of interviewees at that high managerial level; secondly because the panel was put together by those
arranging the discussion, and this choice can be seen as part of the discourse (who should speak, whose opinion is interesting); thirdly because the panel discussion was arranged as an official conversation and showed the intentions that were present at the time. The second study resulted in the paper “Isn’t it information assets we’re really talking about?” A discourse analysis of a panel discussion on earchives”, which was published in Archives and Records The Journal of the Archives and Records Association, vol. 36: 2, pp. 167-178. (Ann-Sofie Klareld, 2015b).

**Step 3**

Issues that had arisen from Paper I and Paper II were addressed simultaneously in the third study: the formal and practical mandates and responsibilities for a ‘middle archive’ solution were not made clear in the definitions and reports studied in Paper I; the panel discussion in Paper II showed there to be differing opinions regarding the recordkeeping goals and responsibilities of public agencies. Swedish legislation makes public agencies responsible for their records from the point of creation or receipt. Records should be appraised and organized before transfer to an archival authority. These demands were not clearly highlighted in the material studied. The third study aimed to find out how the government decision (Näringsdepartementet [Ministry of Industry], 2014) to develop a national ‘e-archive’ related to the aspect of proactivity. There had been discussions among the practitioners participating in GoInfo regarding the future development of public recordkeeping on the national level and how this related to the business at their respective agencies. That some systems were updated automatically on a regular basis had been raised as a problem at one of the agencies, since this made it impossible to recreate sent invoices and thereby prove that they had been sent to the right address and with the correct amount. In some cases, information that a record has been dispatched was saved, but the record itself was not preserved and the receiver had the only (paper) copy. The study focused specifically on ‘capture’ since this is the responsibility of the creating agency and part of a proactive approach to archives management.

According to the plans, the national e-archive would be developed in cooperation between the State Service Center and the National Archives. An interim report had recently been published (Statens servicecenter, 2015). It included suggestions about how to implement the decision in practice and deliberations regarding what ought to be prioritized. It was thus considered
appropriate to use the decision and the report as research material. At this stage the GoInfo project activities were continuing, yet not at the same frequency as before, which was an effect of the unrewarding response from the Steering Committee. The last action organized was a study visit at a public agency that had successfully implemented an e-archive in their organization. The third study resulted in Paper III: “Proactivity postponed? ‘Capturing’ records created in the context of e-government – a literary warrant analysis of the plans for a national earchive service”, was presented at the EGOV/ePart Conference in Thessaloniki, Greece, and published in Tambouris E. et al. (eds) Electronic Government. EGOV 2015. Lecture Notes in Computer Science, vol 9248 (Ann-Sofie Klareld, 2015). GoInfo was completed by writing a report (Anderson et al., 2016) and writing the cover paper for the licentiate thesis Adapting Official Archives Management to the Context of E-Government (Ann-Sofie Klareld, 2015a).

During the two years of the GoInfo Project this researcher was given the opportunity to participate at international research meetings and conferences. These included ICA Annual conference 2013, Accountability, transparency and access to information in Brussels; InterPARES Trust European Team research workshops in Brussels, Stockholm, and Girona; the Archival Research and Education Institute (AERI) at the University of Pittsburgh in 2014 and at the University of Maryland, College Park in 2015; and the Network of Northwest European Archival Educators and Trainers (NAET) doctoral workshop at the Archivschule Marburg in August 2015. These experiences provided valuable insights, opportunities to present research to others and get feedback, helped to build a network outside Sweden, and gave experience of international research environments.

Step 4

The fourth step of the research process was taken in connection with a Mid Sweden University PhD course called Critical Information Systems, completed as part of the research education component of the doctoral studies. The course was not explicitly attached to any of the research projects, although the funding of GoInfo supported the full first two years of the PhD education. The course gave an opportunity to broaden the perspective and extend the scope of the thesis to include the municipal level of the public administration. A critical perspective was applied to conduct a study about the concept of the ‘e-archive’. Three pre-study reports from the municipal
sector (Mossberg, 2013; Rönnqvist, 2013; Thunberg, 2014) were chosen as research material. The focus of the fourth study had clear connections to issues discussed within GoInfo: definitions and implications of certain concepts in use had been considered unclear by the participants, for example ‘e-archive’, ‘system for preservation’, ‘archive system’, ‘system for long term information supply’, and ‘middle archive’. All of these were perceived to generally imply systems especially developed for archiving, but it was discussed whether records in business systems could also be included. One of the participants was especially critical of the tendency to view e-archives as separate systems by definition, and said he would also like to discuss the possibility of seeing ‘e-archiving’ as a function linked to, or integrated in, existing systems. In 2009 one of the agencies had been given a reprimand by the Data Inspectorate, demanding that closed cases and ongoing cases be separated\(^\text{11}\). This led to the implementation of a database to which records on closed cases were transferred. It had been discussed whether this database could be developed into an ‘e-archive’, or if it would be acceptable that a case was marked as ‘closed’ in the originating business system without the records belonging to this case having to be transferred elsewhere; if the records then from this point on should be preserved in formats suitable for long term preservation or if this could be done at a later stage.

The intention was to compare and discuss, light of the complex of problems related to ‘e-archives’, how the concept of the e-archive was defined and explained. A survey showed that several pre-study reports on e-archives had been written in recent years, and that in some of these the concept was not only defined but also illustrated. This dimension was identified as important in relation to the overarching research question. In the process of deciding how an ‘e-archive’ should be implemented, there is often a need to explicate the concept to decision-makers who have limited initial knowledge about recordkeeping and archival matters. How the ‘e-archive’ is depicted will contribute to create a ‘mental image’ of the concept. This may in turn affect how the relationship between the public administration and the archival function is shaped. The fourth study resulted in the paper “Rethinking Archives as Digital: The Consequences of ‘Paper Minds’ in Illustrations and Definitions of ‘EArchives’”, published in Archivaria issue 83, Spring 2017.

\(^\text{11}\) The Archives Ordinance says that when a public agency has finished administering a case, it is to be closed and separated from active cases (SFS, 1991:446)
Step 5

After successfully defending the licentiate thesis on the 11th of June 2015, the PhD education and research continued within the project an Efficient Digital Information Management (EDIM). The project had progressed for six months and research questions had been predefined in an agreement with the funding agency, the Swedish Transport Administration (TRA). Two of the predefined research questions pursued by EDIM were chosen from the agreement to guide the continuation of the PhD studies, since pursuing these would contribute to the aim of the research project, and at the same time contribute to the overarching focus of the thesis. The research questions formulated by the project were: RQ1: What are the implications for recordkeeping of the new role of the Swedish Transport Administration as a pure outsourcing organization? RQ2: What changes and measures are needed in recordkeeping to support the role of managerial and control processes at the Swedish Transport Administration?

TRA is a state public agency created in 2010 through a merging of primarily the national Rail Administration and the national Road Administration. Before the creation of TRA, a review of the public agencies in the transport area had been made. It was initiated by the government in 2008 with the purpose of improving the efficiency in the performance/implementation of the transport politics (SOU 2008:128; SOU 2009:24; SOU 2009:31). Information had been brought up as being important for steering and decision making:

“Agencies possess different control means and instruments to achieve the goals of the government and the parliament in different business areas. One of the means the agencies have is information. (…) Information is in many cases an important part of the public agencies’ business and often works as a complement to other means of control”

(Trafikverksutredningen, 2008:128, p. 41, this author’s translation).

Another report said that making sufficient information available to both buyers and sellers would stimulate the market. The public agencies should therefore be able to collect, process, and value information. These activities were described as being in need of improvement: “The information problem is seldom insignificant. Obtaining information is always associated with costs, not least in the form of time spent. Information in itself is a collective utility
with positive external effects” (SOU 2009:31, s. 46). To obtain an initial image of recordkeeping issues at the agency, an interview was undertaken with EDIM’s contact person, an archivist with good insight into the organization. The result became a background description of the current situation and an estimation of three potential problem areas: 1) the allocation of responsibilities; 2) information governance; and 3) information ownership. The background description was communicated to the interviewee as a way of verifying that it correctly recounted the main issues from his perspective. Because this was the opinion of only one person, more research material was needed.

The core business of TRA is to plan, build, and maintain national infrastructure. The agency continuously develop and make changes to their business. Processes under way at the time of the research included implementing BIM\textsuperscript{12}, adapting to the increasing digitalization, and becoming a pure outsourcing organization (Utredningen om järnvägens organisation, 2015:42). Although these were separate issues, they influence each other and affect recordkeeping. As an agency whose primary task is to order and procure the creation and maintenance of national infrastructure, their recordkeeping faces specific challenges, i.e. the need for continuous capture of records that are of enduring importance, but which are not static.

Step 6

The initial data collection indicated that there was some ambiguity regarding responsibilities for developing the internal recordkeeping. It was also unclear who should develop the guidelines and contract requirements for future contractors. The contact person interviewed said it was difficult to find persons within the organization of the agency who had formal responsibility for, and knowledge about, recordkeeping issues. He also said that there were likely to be differing opinions regarding how the outsourcing policy impacted recordkeeping. This motivated the design of the fifth study, which aimed to identify the differing perspectives among staff at the managerial level. Phenomenography was identified as a suitable research approach since it had been developed as a means to interpret variations and understand qualitative variation in conceptions among a group of individuals. One phenomenon\textsuperscript{12}

\textsuperscript{12} Building information modeling (BIM) is a process involving the generation and management of digital representations of buildings and infrastructure.
(outsourcing) can be perceived to affect another phenomenon (recordkeeping). The connections people make between these phenomena are likely to affect the changes or developments they find appropriate to work towards. Connections can be found between poststructuralism and phenomenography. According to Reece, the epistemologies of the two approaches are diverse, yet there are parallels. Poststructuralism gives access to individual knowledge, colored by discourse and other circumstances (such as time, place, and situation). Phenomenography gives access to collective knowledge, by identifying variation in perceptions of a group of interviewees (Reece, 2015).

A ‘snowballing’ data collection method was used. This is a qualitative research approach that is suitable when starting from a base of limited knowledge. A major change that had been identified by the first interviewee as affecting the existing recordkeeping and archives management was the increased use of outsourcing, which is why the study focused on the perceived connections between recordkeeping and outsourcing. The study had the character of exploratory research, which has been described by Phillips and Pugh as suitable when attempting to undertake a study of a new topic about which little is known (Phillips & Pugh, 2005, p. 51). Semi-structured interviews (Gillham, 2008) were chosen, at first limited to only one question, with the intention of letting the interviewee describe the problem from their own point of view. A total of 15 interviews were conducted. The result of the fifth study became the fifth paper, “The information has moved away from home” Conceptions about how an outsourcing policy affects public records management, published in International Journal of Public Information Systems (Klareld, 2016).

**Step 7**

Roads and railways require regular maintenance, and their related records will remain ‘active’ and be of value for a long time. As the responsible agency, TRA must ensure that they collect and preserve the right records, whether these are created internally or by contractors:

"The Transport Administration’s new role as a pure outsourcing organization entails demands on being clear in setting demands on information. Reporting from external actors has to be improved. A better understanding of the value of the information, a clarification of the role as client and better
Because TRA is responsible for national infrastructure, a large proportion of their records are related to physical constructions. The object of information governance at TRA had been described as “records in the form of documents and data that have been captured or created within the framework of an organization’s business (…) and also the work documents of the public agency” (Engvall & Samuelsson, 2015, this author’s translation). These documents can be created by contractors, which pose new demands as regards awareness and control of information. “The Swedish Transport Administration thereby becomes a claimant instead of executor of the information management and need to develop routines to make sure the legal demands can be adhered to” (Engvall & Samuelsson, 2015, this author’s translation). Since multiple contractors can be involved in a project, it is important for TRA to capture and maintain control of the information generated in building and maintenance processes, and be able to preserve records for as long as needed. Documentation about roads and railways, such as maps and drawings, are often used as the starting point to build new routes and plan maintenance.

When an organization transitions to outsourcing, external actors will create a higher proportion of information. This makes information management more complex. The agency undertakes large projects that in many cases run for several years. Before a project is finished, information should be delivered to TRA and preserved for as long as required. Delivery had been described as problematic. The Swedish rules and recommendations regarding public recordkeeping assume that each agency controls their own recordkeeping. However, public agencies increasingly rely on outsourcing to execute their core business. This entails organizational changes, a need to adapt the recordkeeping to the new conditions. Records should ideally be ‘captured’ as close as possible to the event they document. As a public agency, TRA is responsible for preserving the records created in their business, regardless of whether they are conducted in-house or if contractors are used. But as they, like many other agencies, are lacking both an overview of their information management, and a clear understanding of the main principles of efficient recordkeeping.
Long-term preservation requires ongoing attention. It is not enough to keep the records within their original application, other than as an interim solution (Shepherd & Yeo, 2003). This may not be possible when records are created within a contractor’s business systems and must be transferred to TRA. Similar concerns, about how manual and automated case management related to each other and how to implement new systems and perform annual audits had been raised by the participants of GoInfo. A connected problem was deciding who was responsible for ensuring preservation across several different systems. This made it difficult to communicate with contractors, which in turn risk negatively affecting the archives. Another issue was that all people working with recordkeeping did not regard their job as records managers, and sometimes had a conception or understanding of an archive that differs from the formal, legal, or theoretical view. As found in study II, there are various images and metaphors regarding what an archive and a record is, and how they should be handled to fulfill their purpose. A small investment project was chosen as appropriate for collecting research material for the sixth study. The choice of a smaller project was made with the intention to follow it from start to finish and to study the cooperation regarding recordkeeping between the public agency and the private companies. The result of the sixth study became the paper “Recordkeeping in an outsourcing public agency”, accepted for publication in Records Management Journal.

Personal reflections on the research process

Writing an academic thesis is - whatever impression the finished product might give - far from coherent and straightforward. Continuous re-routing, re-assessment and re-analysis is more the rule than the exception (Börjesson & Palmblad, 2007). Being a PhD student is a job and at the same time an education; one is an employee and also a student. Research projects are often designed as research- and development projects, meaning that the goal is to generate theoretically valid, as well as practically useful, knowledge.

My role as a researcher and a PhD student was strongly influenced by previous education and work experience, which included a MA in Ethnology, a BA in Archival Science, and various positions as archivist and registrar for several years, mainly at public agencies. This provided a broad preunderstanding of the field, however my role in the two research projects was solely that of a researcher, unlike the ‘insiders’ in the Public Agencies’
Network. As with all doctoral candidates, I started with a limited field of view regarding research. Completing courses, networking with national and international scholars, making some mistakes along the way, all had a profound influence on the research process and results. The choices of research focus, theories and methods would possibly have been different if they were made by an experienced researcher. It took quite some time to understand firstly what was to be done, and secondly how to do it. Starting to navigate in this new environment it was valuable to get a lot of help from supervisors and colleagues. It was also helpful to read about other people’s encounters with the academic world, for example “Thesis: on becoming a researcher” (2003) and “How to get a PhD” (Phillips & Pugh, 2010).

While every doctoral candidate has their unique story, there seem to be some similar questions which most people ask. For example: *On which criteria will I be assessed?* Being a researcher requires far more independence than being a student. It isn’t certain that all work will ‘pay off’ in the form of ECTS and it is part of the education to learn by one’s mistakes. *What does it take to become a successful academic?* Gaining insight on this matter is a socialization process which includes reading what others have written, listening to what others are saying and most importantly, reflecting on this and forming one’s own opinion. *How much work is reasonable?* Getting the position as a PhD student was a dream come true. To immerse myself in archival science was a unique opportunity. It proved quite a challenge to find the right balance between work and time off, which was one of the lessons I had to learn.
Results & analysis

The aim of this thesis was addressed through six studies. Each study resulted in a paper. The results of the papers are presented here with reflections on their contribution to answering the overarching research questions:

- What are ‘archives’ and ‘recordkeeping’ in the digital context and the developing e-government?
- What are the indications of current and future challenges regarding cooperation between public administration and archives?

Paper I

The first paper, “The ‘middle archive’ Exploring the practical and theoretical implications of a new concept in Sweden” (Ann-Sofie Klareld, 2015c), addressed two research questions: RQ1: How does the concept of the ‘middle archive’ relate to existing archival theory and practice? RQ2: Is the concept comparable to any of the three types of digital repository discussed by Millar? (Millar, 2010). The findings indicated that the concept could be interpreted in different ways, each with its unique implications for collaboration. Two of the three definitions described the ‘middle archive’ function as part of the organization of the creating agency, and one left the possibility open for the archival authority to be the owner of the ‘middle archive’. In either case, the service could be provided by an external service provider, which would require that the customer agency ensured that sufficient resources were allocated to procurement and agreements. The plans to develop a ‘middle archive’ were initiated as a consequence of the need to manage ‘semi active’ information which public agencies needed to transfer from the originating system to a digital repository. It also related to the e-government goals to improve business efficiency and reduce costs. The arguments about how and why a ‘middle archive’ should be implemented were mainly based on the needs of public agencies and archival authorities in the transfer situation, and less related to the needs of citizens and researchers. The issue of ensuring the preservation of context was not raised, although transfer of records from a business system to a digital repository potentially risks obstructing the understanding of how the records were used at the creating agency. Such loss of context and traceability can be effectively the same as destruction (Riksarkivet, 1999) and risks hampering reusability. ‘Semi active’ public records have, in the paper-based administration, usually been kept at the
creating agency. Formally and legally there are two responsible agencies: the creating agency and the archival authority. However, the implications of the ‘middle archive’, as shown in Figure 2, were that the archives management would be constructed in relation to ‘active’, ‘semi active’, and ‘archival’ records.

Figure 2. Organizational placement of the ‘middle archive’

Comparing the definitions and analyzing each in the light of the originating context provided knowledge about the similarities and differences between the plans of the National Archives (Riksarkivet, 2010), the Sambruk project (Sambruk, 2011b) and the eARD project (Riksarkivet eARD, 2013). According to the analysis, the ‘middle archive’ could be organizationally situated either at the creating agency or at the archival authority, but was largely described and illustrated as existing somewhere in between. This is something rather new, since Swedish legal and administrative principles does not distinguish between records and archives and the formal division of responsibilities only includes the creating agency and the archival authority, which have the same basic responsibilities for public records.

Paper II

The result of the second paper, “‘Isn’t it information assets we’re really talking about?’ A discourse analysis of a panel discussion on e-archives”, indicated that archives captured in digital recordkeeping systems could be understood in different ways by different individuals, and that differing discourses had different implications for how the relationship between public
administration and archives should be structured. The discussion provided an example of how the different actors (public agencies and archival authorities) were trying to find new ways of relating to each other, by discussing their respective roles and responsibilities in relation to recordkeeping. All participants argued that the cooperation between public administration and archival authorities should be intensified, and that this was largely as a consequence of the development of digital work processes. The need for continuous collaborative efforts by the creating agencies as part of a proactive approach was not self-evident. Although the participants talked about the purposes their archives could potentially serve, it was unclear what concrete efforts would be required to realize these. In this particular case, the representatives from public agencies seemed to expect that solutions to their perceived problems regarding recordkeeping would largely be developed outside their respective organizations, either by national projects or by the archival authority, and then delivered to the agencies when ready to apply, not as a matter of internal adaptation or reorganization, but as instructions that would be created outside the agency. The representative from the National Archives instead expected ongoing cooperation and development among public agencies with similar needs, and emphasized the necessity of each adapting any solution to their respective business.

The result showed different ways in which the concepts of ‘archives’ and ‘recordkeeping’ could be understood and interpreted. In the case of the panel discussion this came to light in the form of three different discourses, which in the analysis were named ‘the Mine’; ‘the Common Good’; and ‘the Toolbox’. Though each discourse brought up collaboration as being important, the concrete implications of proactivity and how to collaborate were very different and pointed to plans and visions that could on the one hand be complementary but that could also have the effect that different actors (individuals as well as agencies) would ‘talk past’ each other, since their understanding and visions were too far apart. The issues discussed by the panel can be seen as part of a broader discourse on public recordkeeping and the connections between archives and administration. Several e-government related goals were discussed: interoperability, sharing and using information, improving business efficiency, reducing costs, facilitating citizens’ right to access public records, and improving public services. As the quotation used in the title shows, it was not self-evident that an ‘archive’ is an asset, yet sharing information between agencies was described as a goal and as something that would improve business efficiency.
Paper III

Paper III, “Proactivity postponed? ‘Capturing’ records created in the context of e-government – a literary warrant analysis of the plans for a national e-archive service”, aimed to answer the research question: Do the current plans for how to develop a national e-archive service support the holistic concept of the archive? The national e-archive, as described by the plan that was studied, could be interpreted as a form of ‘middle archive’. The government had decided that it would be created through cooperation between a state public agency and an archival authority, namely the State Service Center (SSC) and the National Archives. The SSC is a public agency established in 2012 under the Ministry of Finance, that offers shared services related to payroll administration, financial management and e-commerce to other public agencies. As part of their role in the cooperation, the archival authority was made responsible for specifying the legal demands which needed to be considered, acting as an expert in the field. The SSC was made responsible for the implementation and for contact and agreements with future clients (other state public agencies). A number of agencies had been selected and appointed to pilot the service once it was in place. Their responsibilities included to make benefit analyses, specify their respective requirements to the SSC, and plan for benefit realization before connection to the e-archive. The e-archive was described as a way of saving costs, increasing efficiency, and contributing to interoperability (Statens servicecenter, 2015). The National Archives had previously argued that cooperation would be beneficial since “With common business support agencies need not devote resources to build their own solutions” (Riksarkivet, 2011, p. 3, this author's translation). This is one example of a quote that may be interpreted to deploy recordkeeping as being somewhat outside the scope of the core business of most public agencies. This conception was also noted in the panel discussion previously studied (Ann-Sofie Klareld, 2015b), in that case supporting the expectation that solutions for preserving of public records would be created by other actors and then offered to the public agency as a product or service. Such development could point to a change in the existing relationship between public administration and archives: traditionally, each agency implements recordkeeping solutions on their own, and transferal to the archival authority is made without intermediaries. According to the interim report, six of the seven agencies that were chosen to pilot the e-archive service once it was in place lacked a strategy for preservation when last inspected by the National Archives. These would need to put more effort into their digital recordkeeping in order to be able to effectively access records in the e-archive. This implies a definite need to plan
for access and preservation long before the actual transfer. The interim report discussed the possibility of developing a service for case and document management simultaneously with the e-archive, and stated that such a service would be very valuable: “The vision is a complete support for managing different types of governmental information during its active life in the same way the e-archive service will be able to provide support for archiving and making available in principle all types of public information” (Statens servicecenter, 2015, p. 37, this author’s translation). It was however concluded that, although clearly warranted in the legislation, this would be outside the scope of the national e-archive project: in sum, despite existing regulations supporting this form of proactivity, ‘capture’ was not emphasized as a precursor for using, sharing and preserving public records in the national e-archive. On the one hand the public agencies could expect support and relief from the National Archives and the SSC when it came to preservation, but on the other hand, there was a lot that they need to deal with on their own prior to using the e-archive in the form that was suggested in the report.

Paper IV

The fourth paper, “Rethinking Archives as Digital: The Consequences of ‘Paper Minds’ in Illustrations and Definitions of ‘E-Archives”, was coauthored with Katarina Lindblad-Gidlund, professor at Mid Sweden University. My contribution was approximately 80 % and Professor LindbladGidlund contributed about 20 %. My specific contribution was planning and completion: selecting the topic of the study, collecting the research data, choosing the research method, analyze the data, and writing the first draft. This version was subject to a second reading by the second author, who then offered to contribute to the paper with a more explicit perspective on digital aspects, theoretical perspectives, and additional analysis and conclusions. The manuscript was subject to review before acceptance. I made the revisions and where needed asked for clarifications from the second author.

The fourth study analyzed the description and illustration of digital archives, in Sweden often called ‘e-archives’, in three pre-study reports (Mossberg, 2013; Rönnqvist, 2013; Thunberg, 2014), which were all written in 2013. Two research questions were addressed in the paper. RQ1: What norms and elements of the analogue concept of the archive might travel into the discourse of digital archives? RQ2: How might these norms and elements affect the plans for creating digital archives? All of the studies thus far (I-III) had
indicated that what a digital archive (‘e-archive’ or ‘middle archive’) is, or should be, was still under discussion, and that a common, formal, definition was currently lacking. The result of the fourth study showed the same lack of clarity in the municipal sector. The way of describing and illustrating the concept of the ‘e-archive’ differed in the three pre-study reports, which made it likely to become an issue that needed to be resolved before initiating any form of cooperation. Cooperation with other municipalities was going to be a prerequisite for many smaller municipalities that lack the resources to create this type of service or solution on their own. The ambition to collaborate on recordkeeping was present in all three pre-study reports, yet seemed to be hampered by influences from existing (paper based) practices, in combination with the previously identified lack of commonly defined concepts, such as ‘e-archive’, ‘middle archive’, and ‘system for preservation’ (Ann-Sofie Klareld, 2015c). The existing, legal, concept of the archive was present in all pre-study reports in that they all referred to the Archives Act (SFS, 1990:782). Yet the lack of common principles for how to adhere to the legal requirements when using digital work processes indicated that the illustrations and descriptions may instead constrain the idea of archives in the digital context and make it difficult to cooperate. In sum, there were problematic differences concerning what could be categorized as an ‘e-archive’ and how recordkeeping responsibilities in relation to the ‘e-archive’ should be perceived.

**Paper V**

The fifth paper, “‘The information has moved away from home” Conceptions about how an outsourcing policy affects public records management”, was inspired by a call for a special issue on Policy Making and Public Information Systems in *International Journal of Public Information Systems*. This theme fitted well with the interests of EDIM and its focus on what effects outsourcing might have for public recordkeeping. The aim of the study was to explore the potential consequences of implementing an outsourcing policy at a public agency, by focusing on issues actualized and seen as important by employees. The limited number of interviewees (15) could of course only give a hint of the range of possible interpretations, yet the results showed that even among this relatively small sample there was considerable variation in views about how the effects of outsourcing could be seen to affect recordkeeping, and what implementation and auditing measures would be required. Seven issues were identified as relevant in the context studied: information governance; knowledge transfer; the role of a public agency; organizational boundaries; ownership and responsibility; requirements; and tools / business systems. A
collaborative approach was unanimously seen as desirable, but as generally not implemented in practice. Several issues that were brought up had not, according to the interviewees, been discussed prior to the decision to increase the outsourcing, but seemed to have been overlooked by the senior management at the agency. One commonly expressed notion was that the relationship and collaboration with the archival function could be better. One of the interviewees expressed the opinion that recordkeeping tended to be seen as an ‘administrative burden’ that primarily had to do with the need to live up to the freedom of information legislation, but which was not obviously related to the core business of the agency. Some of the problems brought up seemed to be more connected with the transition from paper-based to digital administration and the need to adapt the recordkeeping to digital work processes, than to the organizational approach of increased outsourcing. The result confirmed that a policy is not ready immediately it has been decided, it must be discussed and followed up since all of its consequences might not be apparent from the start.

Paper VI
The sixth paper, “Recordkeeping challenges in an outsourcing public agency” has been accepted for publication in Records Management Journal. The paper addresses problems related to collaborative recordkeeping in the context of a client-contractor relationship between a public agency and their contractors, a context where principles and practices, as well as legal conditions, remain unclear. The theoretical contribution is the discussion of how the four dimensions of the Records Continuum Model (Upward, 2005) can be used as a structure for identifying which important aspects of recordkeeping may be affected by an outsourcing policy, and the practical and theoretical consequences. An investment project at a Swedish public agency with a far-reaching outsourcing policy was used as a case to exemplify the problem. The research question addressed in the paper was: What are the current impediments to creating, capturing, organizing, and pluralizing records produced by contractors to whom work has been outsourced? The RCM was applied to identify and discuss the recordkeeping challenges that may face a public agency that is outsourcing large parts of their business using a client-contractor model. The paper did not use the full complexity of the RCM. Instead, the four dimensions were used as a structure, mapped against the Swedish legal framework governing public recordkeeping. The RCM was found to correlate well with some of the most important aspects a public agency needs to consider, and where proactivity is a key aspect. In the case
studied, issues were raised about which of the records created were ‘incoming’ and which of them were ‘outgoing’ in relation to the public agency. As the legal framework is formulated today, there is no recognition of any form of ‘co-creation’. The result supported the argument that there is a need to introduce multiple-provenance in practice: that is, to enable description of the records from more than one reference point (Gilliland, 2016; Tranter & Hurley, 2013) Hurley has used the concept of ‘multiple provenance’ to discuss the implications of archives being created by more than one actor and argued that traditional archival approaches assume a single common provenance, but that there is a social dimension that extends the perspective beyond the writers/creators of records, an aspect he believed had received insufficient attention in archival studies. According to Hurley, methods allowing for multiple-provenance enable description of the records from more than one reference point, allowing for societal provenance to be documented (Tranter & Hurley, 2013). The result of the study indicated three connected problems in the outsourcing context. Firstly, the legal conditions for this type of collaboration were not clear. Secondly, different actors were involved in different processes, which sometimes intersect and the ‘same’ record could be part of more than one process. Thirdly, the rather fragmented archives made it difficult to get the “whole picture” of a phenomenon, for instance as in the case studied, the process of building a bicycle lane. Introducing multiple provenance as a concept could contribute to new insights about what ‘archives’ and ‘recordkeeping’ mean in the digital context and the developing e-government environment. It also has the potential to shed new light on the cooperation between public administration and archives, by recognizing the complexity through which archives are created. The existing legal and theoretical frameworks used in Sweden are based on a more simplified view in which each archive is connected with only one creator. The results of the research presented in the paper suggested that the Swedish legal framework for archives management needs further development or clarification as to how it should be interpreted in the outsourcing context.
Discussion

Public records are valuable societal resources, and it is the responsibility of public agencies and archival authorities to manage these resources properly. Currently, the technical and social structures surrounding public recordkeeping are undergoing a process of revision and reconstruction. It is easy to take the present state of things for granted, but not long ago reality was very different from today:

“The world of archives has changed significantly in the last 40 years when there were no computers, queries were answered by telephone and postal mail, reference services were provided during certain hours on specific days, finding aids were only available in printed form, and archivists dealt mostly with paper-based materials” (Cox, 2011, pp. 213-214).

In this process of adapting analogue principles and practices to the digital conditions, the role of the archives is not clear. Upward et al. say recordkeeping was more coherent and easier to understand in the paper era, but has now “(...) disappeared behind and beyond computer screens in an often chaotic frontier being extended by people with limited understanding of authoritative resource management. Its intuitive base has collapsed” (Upward et al., forthcoming, p. 26). The research presented in this thesis assume that ideas in combination with material conditions form a part of social reality (Hacking, 1999), which in turn affect how the future is shaped. Those responsible for recordkeeping affect the archives of the future through their priorities and business development efforts: decisions made today have long-term consequences. E-government and e-services require the ability to maintain trustworthy records. Though this has long been the core purpose of public recordkeeping, the practices serving this purpose in a paper administration might not be applicable for digital records, which is why strategies and resource allocation need revision. A major responsibility to guide and implement the changes needed naturally lies with archival authorities. However, these cannot act alone. Partly because they are not in a position to execute whichever measures they consider necessary but depend on decisions made by other governing agencies, partly because the realization of any rule or recommendation issued requires public agencies to carry them out in practice. This makes it important to understand how plans, discussions, and decisions may affect the relationship between public administration and archives. The results of the studies included in this present thesis indicate that
although there are clear ambitions of bringing the public administration and the archival functions closer together to make them work collaboratively with recordkeeping, realizing these ambitions are difficult. One of the obstacles has to do with perceptions. According to Convery, although records managers in general see themselves as closely linked to the business and are actively trying to influence decisions made, the reality is that “(...) information professions are often marginalized into support functions with little regard for their competitive potential. Information has been declared the fourth resource but its management is widely regarded as laborious, unglamorous, if necessary, evil” (Convery, 2011, p. 194). The studies included in the thesis confirms this view: recordkeeping has been described by interviewees as ‘an administrative burden’ (Interview 2015-11-20); ‘a swamp’ (Interview 2016-12-13); and in one pre-study as a ‘boring’ task for the staff, that could be mitigated with an “automated digital system for preservation” (Rönnqvist, 2013, p. 9). These conceptions indicate a view of recordkeeping and archives creation as something that is not immersed in the business of the organization, and contributes to its goals, but rather appears to be something to avoid if possible.

Nevertheless, recordkeeping is intertwined in the tasks and priorities in the business of public agencies. It is their responsibility to create reliable, durable archives that are cost effective and of use to the business as well as citizens and future researchers. However, values and conceptions can privilege certain aspects over others. Danish researchers recently compared three prominent value positions in public administration; administrative efficiency, service improvement and citizen engagement, and found a bias towards administrative efficiency: “E-Government strategies, investments, project selection, and implementations are influenced by value positions deeply enshrined in the traditions of public administration, which are in turn reflected in the everyday discourse of public managers” (Rose, Persson Stouby, & Heeager Tordrup, 2015, p. 35). Actors and stakeholders involved in recordkeeping practices and change processes, are doing something political (yet may not think of it in these terms). According to Ketelaar:

“The user and the archivist alike construct stories that establish who they are and who they are not, where they fit in and where they do not, who belongs to them and who does not. (…) Assigning meanings and values to archives—and thus constructing and reconstructing archival heritage—is a political act, an act of memory politics” (Ketelaar, 2012).
Changes in technology, societal values, and work procedures affect recordkeeping. That can mean that new questions need to be asked: “The inability to work with new situations using old theories promotes different conceptions of both the problem and possible solutions” (Ridener, 2009, p. 9). Public agencies are currently adapting to new ways of creating, managing and using digital records. Recordkeeping (re)construction happens in different ways: physically, through formats, technologies and infrastructures; organizationally, through routines, standards, roles and responsibilities; socially, through ideas, visions, and understandings. According to Harris, recordkeeping can be defined as “(…) that huge and messy realm in which we are conventionally called records’ creators, records’ managers, archivists, users, and so on, negotiate contest and narrate the contents, the contexts and the meanings of what is conventionally called ‘records’” (Harris, 2011, p. 121). ‘Messy’ is not a word people would normally associate with archives. One of the core doctrines of archival science is the principle of provenance, according to which “(…) the archivist should maintain the original order in which the records were created and kept” (Gilliland-Swetland, 2000). The Oxford dictionary defines order as “the arrangement or disposition of people or things in relation to each other according to a particular sequence, pattern, or method” and “a state in which everything is in correct or appropriate place”13. Original order can be understood as a discourse and thereby a means of exercising power. The original order is created by the originating organization. However, in the digital environment, alternative orders are easily created, temporarily or permanently. Digital records offer the possibility of creating a variety of original orders, as well as creating new orders if needed, for example with the intention of reuse.

Recordkeeping in the public administration should contribute to transparency and openness, at the same time as protecting sensitive information. Finding the balance between these ideals requires ongoing discussion and considerations of legal, technical, and social perspectives. As Richards has argued: “Like power, information does not exist in a vacuum (...) and can just as easily lend itself to open societies as closed ones” (Richards, 1993, p. 73).

13 As opposed to chaos: “complete disorder and confusion” (Angus Stevenson, 2010) “the primal void or state of uniform non-differentiation that precedes the creation of the world in most creation myths” (Leeming, 2005).
The role of the state archival authority in Sweden, the National Archives, includes monitoring the public agencies under its jurisdiction, conducting inspections and issuing regulations (Sweden. Kulturdepartementet, SFS 2009:1593). Yet the extent to which their mandate can be exercised in practice is debatable. Some of the persons interviewed in the studies included in the thesis said it was commonly felt that the National Archives did not have enough leverage to influence decisions made at specific agencies. This has previously been noted also outside Sweden. Harris has argued that there can be said to be a ‘silence’ from the archives in relation to public administration: “With few exceptions, even premier archival institutions find themselves straining to make their voices heard in higher level policy making and decision making” (Harris, 2011, p. 105). This may affect the archives of the future since the absence of taking action can be as powerful as action itself (Lukes, 2005), and may lead to situations where records cannot be transferred to archival custody. An example is the development of a digital archive by the National Archives Australia. Despite previously having asked for such a repository, very few agencies were interested in, or capable of, using the it once it was in place. According to Cunningham the problem was not a lack of digital records, but incapability of identifying which records should be transferred (Cunningham 2011). There is a risk that this is becoming the reality for public agencies worldwide, due to inadequate planning for long-term preservation of digital records. Work processes and digital business systems seems to have surpassed the development of recordkeeping systems, why both practical and theoretical development is needed. An important part of this is the (re)definition of core concepts. Differing discourses related to the problems and opportunities of digital recordkeeping, and different expectations on how it should be handled, are affecting how the relationship between public administration and archives is developing. The power of discourse lies in how they define and produce ‘reality’. In this statement lies an anti-essentialist stance: “(...) our worldviews and identities could have been different - through other boundaries and characteristics” (Börjesson & Palmblad, 2007, p. 8, this author’s translation). In other words, the characteristics ascribed to an ‘archive’ produces its traits and boundaries.

Digital work processes have had a profound influence on the way records are produced. In addition, the organizations producing the records are moving from being hierarchical, structurally fixed and stable over time towards being complex and constantly changing. The expectations of the general public to access information can be expected to increase in years to come. Public
recordkeeping should, ideally contribute to reusability, transparency and
democratic participation. This, in combination with technologies that offer
other means of managing archives than were previously possible, sets the
stage for a renewed relationship between archives and administration where
cooperation is the key. According to Heeks there is a clear correlation between
public agencies and their information systems. This creates the need to
address several issues simultaneously: “If information runs through
everything that government does, then changing anything in government
must mean changing information, which must mean changing information
systems” (Heeks, 1999, p. 17). Public recordkeeping is to a large extent
regulated legally, yet it is up to each agency to construct and manage their
records in ways appropriate for their specific business, and adapt their
routines to the technologies used. Which records are created and preserved
depend on legal, governmental, organizational, and personal considerations.
Perceptions of what recordkeeping is and how public records should be
managed affect plans, discussions and decisions made in relation to it.
‘Archives management’ is sometimes understood as an entirely separate
concept to ‘recordkeeping’, where the former is perceived as less relevant to
current administration: “Outside the archival discipline, particularly in
information technology usage, the notion of an archive has come to mean
‘older information’ that is no longer needed in business, but is still considered
to be of some value (…)” (Hofman, 2005, p. 132). This notion is still present
and became evident, for example, when EDIM presented its results to
practitioners at the Swedish Transport Administration, and an IT professional
asked if information really could be considered relevant for archivists, leading
to a discussion about where the archival mandates begin and end. Since the
meaning of the concept of the archive remain unclear, it is not surprising that
new concepts such as ‘e-archive’ or ‘middle archive’ become difficult to define.
In the digital context it can become especially hard to grasp. The findings of
the thesis suggest that when there are uncertainties regarding core concepts,
the use of technology and the purposes of public archives, there is a risk that
the mandates and responsibilities may be obscured. In the digital
environment and the context of e-government, the management and use of a
record is less likely to follow a predictable timeline within a single
organization, as the lifecycle model suggests. Instead, the goal is that records
should be continuously accessible to and reusable by actors external to the
originating context. The question is, how should archives and administration
work together to achieve it? The Records Continuum Model is a way of
describing the different aspects of recordkeeping, and presumes proactive
recordkeeping throughout the ‘information flow’. The allocation of mandates and responsibilities for public recordkeeping presupposes that public agencies ensure they have the knowledge and capacity to manage their records proactively. Yet it is unclear how this should be operationalized. For example, at a first glance, the archiving process as presented in relation to the concept of the ‘middle archive’ very much resembles existing procedures. Yet it is not ‘cases’ from the public administration that will be archived in the ‘middle archive’, but ‘information’ or ‘records’ from business systems. It is said that in the ‘middle archive’ the records remain accessible to the agency, as if this would change when the records reach the ‘final archive’, yet current technical solutions have the potential of allowing access regardless of where the records are stored. Notably absent from the discussion is how to ensure over time that users will be able to understand how the information was used at the originating agency. This is something that requires effort and collaboration in some form. Swedish rules and regulations are based on a recordkeeping regime in which records become ‘archival’ (pass the ‘archival threshold’) at the point of creation or arrival in the organization. Practice is, however, also based on a lifecycle approach, where records are ‘active’, ‘semi-active’ and ‘archival’ and the ‘archival threshold’ occurs at the end of a lifecycle. Routines that were created in the paper administration imply that records need to be moved, physically, due to limited office space. Current technologies might provide possibilities for recordkeeping that better correspond to the goals of efficiency, interoperability, reusability and transparency, and thus come closer to realizing the potentials of a truly proactive approach.

From the view of knowledge upon which this thesis is based, the ‘archival threshold’ is a social construct, which as such might be a physical doorway, a ‘flag’ in a database/system, or anything else that marks the change of status of a record. This boundary might be agreed upon, contested, or sometimes even blurred. The status of a record as ‘public’ in the context studied, as a general rule, happens at the creation or receipt at a public agency. Yet, as the result of the research presented shows, there is even a lack of clarity about what is meant by creation or receipt. Is, for example, a record created by a private company working for a public agency created once it reaches the public agency, or will it be received? By becoming aware of the variety of images, metaphors and expectations connected to archives, practitioners and scholars can become better equipped to communicate and collaborate, also with actors who are new to the ‘archival world’.
Concluding remarks and suggestions for future research

The research presented in this thesis has attempted to understand how ideas in combination with material conditions shape the social reality (Hacking, 1999) that currently takes form in relation to digital recordkeeping in the public sector. The overarching research questions addressed were:

- What are ‘archives’ and ‘recordkeeping’ in the digital context and the developing e-government?
- What are the indications of current and future challenges regarding cooperation between public administration and archives?

The research questions were pursued through six qualitative studies, all using the context of the Swedish public administration as a case. The results confirm that the concepts of archives and recordkeeping are multifaceted, and even more so in the digital environment. The results also indicate that though the goals and interests of public agencies and archival institutions are growing closer in several aspects, and there are ambitions to work in a collaborative manner, these efforts may be hampered by a number of factors related to the different ways in which the nature and role of archives and recordkeeping can be perceived. These include: differing ways of understanding and describing the existing concepts of archives and recordkeeping; differing discourses on what digital recordkeeping and digital archives (or e-archives) are or should be; differing understandings of mandates and responsibilities; and different ways of interpreting legal frameworks and their significance. In sum, decision makers might have different interpretations of what an archive is, or could be, and what purposes it serves. This risk becoming a problem when a variety of actors separately plan, discuss and make decisions affecting public recordkeeping. In combination with archivists and archival institutions having limited influence on the information systems that are developed and used, it affects how recordkeeping is valued and what resources are allocated to records creation, management, preservation and use.
The legal and administrative frameworks related to recordkeeping have, in Sweden as in many other countries, originated from a paper based administration and therefore current plans may resemble paper practices more than necessary. The results of the thesis suggest that decisions made at both national and agency-specific level are not first and foremost influenced by archival science. Instead it is still a practice-driven development. There is a need to develop theoretical tools for improving the adaptation of recordkeeping practices to new technologies.

References to ‘active’, ‘semi active’ and ‘archival’ information which emerge in the studies conducted, indicate adherence to a lifecycle perspective. However, a core presumption and driving force behind e-government development is that information created in the business of public agencies is also going to be (re)usable outside the originating context. In other words, records which are labelled ‘semi active’ or ‘archival’ by the originating organization are likely to become ‘active’ again in other contexts. Transferring records to an ‘e-archive’ or a ‘middle archive’ is not only about relieving business systems of the information, and preserving it somewhere else, but to ensure that the records maintain accessible and useful, both in the short and in the long term. Identifying the measures required to make this happen is a highly relevant research topic.

Public recordkeeping should ideally improve the efficiency in public administration, and contribute to strengthening democracy. The result of the thesis suggests that this will require considerable efforts of various nature, including clarifications of what recordkeeping means in the digital environment. Some of the existing preconceptions may contradict the desired development, for example if ‘archives’ are seen as ‘old information’ with little or no significance to the running business. The studies have confirmed that recordkeeping is sometimes perceived as unnecessary, bothersome or difficult, which clouds the ability of archives to function as resources. This risks hampering e-government development, which requires access to trustworthy and usable information. Failing to preserve context when transferring information from a business system to a digital archive solution could formally be considered to have the same effect as destruction (Riksarkivet, 1999).
Cooperation is an important issue which will need to be addressed in relation to the vision of creating a ‘seamless’ public administration. This provides warrant for further research regarding the discourses that affect decisions to develop public recordkeeping. There is also room for further research on how public administration and archives influence each other and how the development of digital recordkeeping can be improved. The risks of postponing appropriate measures, and the effects that will have on future e-government development, is an argument for further research in this area.
References


Consultative Committee for Space Data Systems. (2012). Reference model for an open archival information system (OAIS).


E-Delegationen. (2010:62). Så enkelt som möjligt för så många som möjligt Under konstruktion – framtidens e-förvaltning [As simple as possible for as many people as possible under construction - the future of egovernment].


Mossberg, N. (2013). Förstudie e-arkiv Hur vi skapar förutsättningar för earkiv och ett digitalt informationsflöde [Pre study e-archive How we create the conditions for e-archives and digital information flow].


Sweden. Lag om vidareutnyttjande av handlingar från den offentliga förvaltningen [Law on the re-use of records from the public administration], (2010:566).


Säfvenberg, E. (2017). Avbryter upphandlingen av e-arkiv då ingen klarat kraven [Cancels the procurement of e-archive since no one has passed the requirements]. Upphandling 24.


Upward, F., Reed, B., Oliver, G., & Evans, J. (forthcoming). Recordkeeping Informatics for a Networked Age.


