SEARCH PROCESSES, USER BEHAVIOUR AND ARCHIVAL REPRESENTATIONAL SYSTEMS

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In memory of Alvar Sundqvist
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ABSTRACT

Information technology and political motives, e.g. e-governance, freedom of information legislation, has recent years lead to an increasing emphasis on users and access to records, but little research based knowledge about those issues exist so far. The main focus of the previous research is the use of non-current records in archival repositories. The aim of this thesis is to make a contribution to the research field, in order to gain a better understanding of the information behaviour of users of records in contemporary organizational settings. The research questions addressed are:

- How are records used in contemporary organizations?
  - In what context and for what purposes are records used?
  - What user categories can be identified?
- How is the search for records mediated?
  - What intermediaries are used in the search process?
  - How well do the features of the artefactual intermediaries serve the users' information needs?
  - What is the role of human intermediaries?

An additional purpose of the study is to contribute to theory development, and to provide a conceptual model of the information behaviour of users of records that can form the basis for further research.

The thesis is based on explorative case studies undertaken in two contemporary Swedish public organizations, one municipality and one governmental agency. Data was collected through interviews, analysis of documentary sources and complementary observations. The analysis of the findings was guided by a theoretical framework consisting of activity theory informed by concepts from archival theory and models of information behaviour.
The results of the cases studies showed that information behaviour of users of records and the search process could be described as a part of an activity system. The search process was a sub-ordinated activity of other activities. The needs for records was generated by a task or accomplishment of anykind with purpose to achieve something. Those needs motivated the purposes of use of records: material, operational, accountability seeking or knowledge enhancing purposes. The subjects, users in collaboration with the registrars and archivists, seeked to obtain records with help of different mediational means, e.g. artifactual intermediaries as the journal and the archives inventory that could be defined as representational systems, in order to reach a certain outcome: fact-finding, reconstruction of past actions and events, regaining experience and knowledge, verifying status, or illustrating and exemplifying.

A variety of user groups, internal as well as external, could be identified in both organizations. Those could act as direct or indirect users, and indirect use by one part meant direct use by another who acted as a mediator between the records and the end users. The external users could be defined as stakeholders of the organizations or other users. Users showed, with occasional exceptions, a preference for informal means of mediation, particularly personal communication.

Certain features of the formal representational systems, journals and inventories, could be identified, which made them less useful as search tool. Those were generated by contradictions and tensions within the organizations: contradictions within the representational systems; contradictions between the tasks of the users and the representational systems; contradictions between user requests and the access points in the representational systems; contradictions between external users and the activities of the organizations; contradictions between exogenous institutional conditions and the the activities of the organizations; and contradictions of a temporal character. These circumstances necessitated an active intervention of human intermediaries. This could be seen as an example of the division of labour in the organizations. Search and retrieval of records were part of the registrars’ and the archivists’ specific professional knowledge, but were not considered as primary tasks of other employees or, especially not, of the external users.

The results of the study contributes to the knowledge about the use of records, and how records are approached. It provides a model of the search process that can form the basis for further research. The practical implications of the findings could be improved search tools and user services, i.e. enhanced access. The thesis can also contribute to theoretical enrichment of the field by combining a
more comprehensive social theory with archival theory and concepts from information science.

**Keywords:** access, activity theory, information behaviour, records, representation, users
SAMMANDRAG

Den informationstekologiska utvecklingen och den politiska utvecklingen, uttryckt exempelvis i E-förvaltning och offentlighetslagstiftning, har under de senaste åren lett fram till ett ökat fokus på användare och tillgänglighet av handlingar och arkivinformation. Det saknas fortfarande emellertid en forskningsbaserad kunskap om dessa företeelser. Tidigare forskning inom området har i huvudsak inriktat sig på inaktiv arkivinformation vid arkivinstitutioner. Det övergripande syftet med denna avhandling är att bidra med kunskap om informationsbeteende hos användare av handlingar/arkivinformation i samtida organisationer. Följande forskningsfrågor besvaras:

- Hur används handlingar i samtida organisationer?
  - i vilken kontext och för vilka syften används handlingar?
  - vilka användarkategorier kan identifieras?
- Hur medieras återsökningar av handlingar?
  - vilka hjälpmedel används i sökprocessen?
  - hur väl motsvarar hjälpmedlen användarnas informationsbehov?
  - vilken roll spelar den mänskliga förmedlingen i sökprocessen?

Avhandlingen syftar även till att bidra till teoriutveckling och att utveckla en konceptuell modell för informationsbeteendet hos användare av handlingar och arkivinformation, som kan användas för framtida forskning.

Avhandlingen baseras på explorativa fallstudier i två svenska myndigheter, en kommun och en statlig myndighet. Datainsamlingen har skett via intervjuer, analys av dokumentation och observationer. Analysen grundas på ett teoretiskt ramverk bestående av aktivitetsteori i kombination med arkivteori och modeller för informationsbeteende.

Resultaten av fallstudierna visar att informationsbeteendet hos användare av handlingar och sökprocessen kan beskrivas som en del i ett aktivitetssystem. Utgångspunkten är en önskan att åstadkomma något, vilket genererar ett behov av handlingar för olika syften: materiella, operationella, ansvarighetsutkrävande eller kunskapsmässiga. Användarna i interaktion med registratörer och arkivarier, återsöker handlingar med hjälp av olika typer av hjälpmedel, exempelvis diarier och arkivförteckningar, för att nå ett specifikt resultat: faktainsamling, rekonstruktion av tidigare händelser, erfarenhets- eller kunskapsåtervinning, verifiering eller exemplifiering av något.

Ett antal olika användargrupper, interna och externa, kunde identifieras i båda organisationerna. De externa användarna kunde definieras som intressenter till organisationen eller andra användare. Användarna föredrog i de flesta fall

Avhandlingen bidrar med ny kunskap om användningen av handlingar och arkivinformation och om hur handlingar återsöks, och ett resultat är en modell av sökprocessen som kan användas i framtida forskning. Den praktiska tillämpningen av resultaten kan bidra till förbättrade sökhjälpmedel och ökad tillgänglighet till handlingar. Avhandlingen bidrar även teoriutveckling inom ämnesområdet genom att kombinera ett socio-kulturellt teoretiskt ramverk med arkivteori och informationsvetenskaplig teori.

**Nyckelord:** handlingar, användare, informationsbeteende, tillgänglighet, aktivitetsteori, representationer
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Härnösand April 2009
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1. INTRODUCTION

1.1. Background and motivation

The present study is a work based in archives and information science. The object of the study is the use of and access to records in contemporary administrative settings, with a focus on the search process.

Archives and information science is based in archival theory, a set of propositions about the nature or attributes of archives and records, developed as ramification of archival practices. The concept of records (see further chapter 4) is the pivotal point in archival theory and practice. Records are the material documentation of activities performed by organizations or persons, and they are considered to serve as evidence of those activities. They can thus to some extent make it possible to reconstruct what has happened. Records are very significant in a culture like ours, dependant on the written word, but very little is actually known about them and their employment. They are primarily of instrumental value; they are working material and as such anonymous, usually noticed only when they are not available or unusable. Few recognize them as socio-cultural manifestations of interest for research in their own right.

The records as such and the processes during which they are created are, as stated above, the core of archival theory and practices. The use of records, the users and their needs, and how they search and approach records have been of less interest. However, those issues concern the function and organization of records, and are thus founded in archival theory. An important characteristic of records is that they are generated in one context and often used in a totally different context by other persons than those who originally created them. Records are created for certain reasons, normally in business transactions; kept for other reasons, for instance to meet legal requirements or to serve as evidence of fulfilled obligations; and re-used for various reasons, like further administrative and personal business, legal claims, research or cultural purposes (e.g. McKemmish, 2005; Yeo, 2005). This means that besides bearing evidence of and documenting past actions, they can also bring new knowledge. Use of records is thus not a homogeneous activity, but a complex phenomenon, and users of records are a varied group with different purposes, needs and abilities.

Archives and information science is an emerging discipline of small proportions, thus academic research in the field is rare. Nevertheless a growing interest in research issues has emerged in recent years, partly because of the growth of academic education within the field, partly because of the challenges information technology imposes on established practices and fundamental principles (Fredriksson, 2002; Gilliland & McKemmish, 2004; Sundqvist, 2005). Those challenges have generated problems that require an extension of the field of
knowledge, and have vitalized the archival discourse. Archival practices have always been intertwined with information technology, dealing with the production, dissemination, storage, and retrieval of records, using the technology at hand. However, for thousands of years the medium was stable and physically tangible, and thus the handling of records was primarily concerned with keeping order in a literal sense. Fe
dom from the middle of the 20th century first microfilm, audio recordings, and later computer technology, have challenged the foundations of archival principles and practices. Questions have been raised about what constitutes a record, about authenticity and accountability (e.g. Dollar, 1992), and new thechnology has made an enormous proliferation of records possible, often in susceptible formats of short duration. Research in archives and information science has so far to a large extent been directed to the material aspects or records, primarily preservation issues and the securing of integrity and authenticity of viable information objects, e.g. the InterPARES project, the CEDARS and CAMiLEON projects and the LDB-project (Ruusalepp, 2005). Questions concerning use, users, search and access have gained less attention, but a growing interest can be seen and a few academic researchers around the world are dealing with the issue from different perspectives (Harris, 2005; Sundqvist, 2007). The societal role of archives and the enhancement of use and users as an essential obligation of archives has also to some extent been recognized in professional as well as academic discourse in recent years (e.g. Nesmith, 2008; Skivenes, 2006).

Information technology has nevertheless added new dimensions to the issue of access. Access can be understood as legal, physical and intellectual (Pugh, 2005). Legal access concerns the right and permission to use records, and physical access addresses security, location, opening hours of access services, space and facilities. Intellectual access relates to “the process of identifying and locating records likely to contain information useful for solving problems” (Pugh, 2005, p. 22). Intellectual access is usually endorsed by diverse search tools and reference assistance, which provide information about the records. By nature records make up a complex material, because of their origin in complex social processes. Thus, it requires certain skills and knowledge first to locate the relevant records, then to find the relevant item, and finally to interpret and understand the content. Digitization as such carries the potential of increased access, wider dissemination of records, and greater social inclusion. Digital material can reach a larger and more diverse user population than just those visiting a records repository. However, this improvement in physical access will only be feasible if the intellectual access is enhanced, which leads on to another issue concerning information technology. Not only the records, but also the access to records is being digitized to a larger extent. An example is the implementation of E-Government, which entails the
development of on-line information services partly based on recordkeeping systems (e.g. The 24/7 Agency, 2000). Computer-mediated devices either supplement or substitute for personal interaction with recordkeeping professionals. If there are no human intermediaries taking part in the search process, the accessibility of records will be entirely dependent of the construction and performance of these devices, (Hedstrom, 2002). To develop efficient and usable search tools and to provide adequate services, it is necessary to understand the behaviour of users in the process of searching records; how they approach the records and how they interact with the tools, but also what contributions the human intermediaries provide. To what extent are those possible to capture in systems design, and what, if any, human contributions are indispensable?

E-government, mentioned above, is a recent example of how access issues have become objects on the political agenda. Access has been accentuated in international debate since the 1990s, due to political and judicial concerns about transparency on one hand and privacy on the other (Blais, 1995; Seipel, 2005). Freedom of Information legislation has been issued in several countries, as well as data protection laws. A policy on access to archives has been recommended within the European Union (Recommendation No. R (2000) 13). However, in the Swedish context there has been a long tradition of public access to so called official documents, i.e. records generated by public agencies in conduct of their business. Access to official documents is guaranteed by the Freedom of the Press Act: “To encourage the free exchange of opinion and availability of comprehensive information, every Swedish citizen shall be entitled to have free access to official documents” (SFS 1949:105, Chap. 2, section 1). The principle of public access to official documents consists of three parts: control of the handling of matters; control of the business performance including administration of in-house activities and actual handling; and availability of knowledge resources created by the agencies (SOU 1988:64, pp. 67-73; SOU 1997:39, pp. 490-492). Especially the third purpose is rather far-reaching, and is motivated by the fact that public agencies and institutions including local governments gather huge amounts of information and build up knowledge resources due to their business. These resources are common assets, which should be used for the public good. The emphasis on “exchange of opinion” and “availability of comprehensive information” in the preamble of the Freedom of the Press Act above, seems actually to point at this

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1 Recordkeeping is defined as “the managing of records from their creation during their whole existence, in order to render accessibility of meaningful records for as long as there are of value to people, organizations, and societies – whether that is for a nanosecond or millennia” (McKemmish, 2001, p. 336). The concept will be used in this thesis, covering archives and records management activities.
purpose of use, rather than at control of administrative procedures. This implies a wider view of access than in most countries, where access to information and public records often is limited to the parties in particular matters. It means that public agencies are obliged to serve a wide range of users, and that the different user categories are entitled to equivalent treatment. It also means that the search tools developed by the agencies should be available to and fulfil the needs of external users. A further political strand seen in recent decades is the emphasizing of access to cultural heritage, including the archives (e.g. SOU 1995: 85). Within the cultural heritage sector vast resources have been invested in digitizing and disseminating cultural objects, including records. To what extent these investments have come up to expectations, or if the aims corresponded to actual user demands, is difficult to assess since they have seldom been systematically evaluated (Anderson, 2008; Hill, 2004; Snow et al., 2008).

To summarize, there is both intra-disciplinary and societal interests in studying use, user behaviour and access to records. Knowledge about these issues is still limited. Archival practitioners’ experiences are hardly ever documented or evaluated and the general knowledge of user behaviour is a mixture of common sense, presumptions and prejudices (Anderson, 2004; Duff, 2002). Factually grounded knowledge is needed to provide efficient services to various user groups and to facilitate access. Little empirical research addressing these issues has been conducted so far, and academic research in archives and information science is a rare phenomenon overall. In recent years, however, a growing interest has emerged, even if the research community is scarce and scattered and the main focus is the use of non-current records in archival repositories (Duff, 2002; Sundqvist, 2007). As will be made clear in chapter 2, comprehensive studies of use of current records in administrative settings remain to be done.

1.2 Research aim, purposes and demarcations

The overall aim of this study is to make a contribution to this emerging field of research in order to gain a better understanding of the information behaviour of users of records in contemporary organizational settings. Wilson (1999) has launched the concept information behaviour as a generic notion covering the totality of the “activities a person may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information” (Wilson, 1999, p. 249).

The following research questions will be addressed in the study:

- How are records used in contemporary organizations?
- In what context and for what purposes are records used?
- What user categories can be identified?
How is the search for records mediated?
- What intermediaries are used in the search process?
- How well do the features of the artefactual intermediaries serve the users’ information needs?
- What is the role of human intermediaries?

An additional purpose of the study is to contribute to theory development, and to provide a conceptual model of the information behaviour of users of records that can form the basis for further research. In this study Yeo’s (2005) definition of a user is employed: a user is

“anyone who employs records or seeks information about them, or uses other systems and services provided by an archival institution or records management unit, for any purpose. The definition may embrace record creators, as users of creation and capture systems or as users of records which they or others have created. In some situations users may also include those who benefit indirectly from employment of records, whether as clients of professional record agents, managers who use reports derived from records-based research undertaken by junior staff, or others in the wider community with whom direct users consciously or unconsciously share their work” (Yeo, 2005, p. 26).

The last category is however impossible to trace and assess with any certainty.

The thesis is based on explorative case studies undertaken in two contemporary Swedish public organizations (see further chapter 3 for the selection of cases). Swedish archival tradition and legislation do not make any distinction in principle between the status of non-current archival records and current administrative records (e.g. Gränström et al., 2002). This study will therefore cover the use of and search for records in the organizations, whether they can be regarded as current or non-current. This is also in accordance with contemporary trends in archival theory, particularly the so-called continuum theory (Upward, 2005).

Records are usually not directly accessible, but available only through an intermediary. The intermediary could be human, like an archivist or a registrar, or an artefact, a search tool. The last is a representation of the actual records, for instance a journal or an archival finding aid, where they are described in a summarized and abstracted form. These artefacts are results of earlier decisions, ideas and values, and of course of material circumstances such as available technology. They are not obviously transparent to non-expert users and in some cases not directly accessible, hence requiring the involvement of a human intermediary. The search process often turns out to be a negotiation process involving the user, the artefactual and the human intermediaries, where the human intermediary has to translate the user’s questions to match the features of the artefact, i.e. the search tool. Access to records is thus highly mediated.

The underlying assumption is that a grounded knowledge of user needs and behaviour and of how well those are met by the intermediaries is necessary to
better provide services to users. This study will thus contribute to enhanced access to records. The study can further make a contribution to the information sciences by addressing a field where little research has been undertaken so far, and by contributing to theory development by combining archival theory with concepts from information science and a general social theory framework, as will be discussed in chapter 4.

1.3 Outline of the thesis

This first chapter has given a background to the research problem and outlined the aim of the study and the research questions. The next chapter will give an overview of the previous research in the field. This was based on a comprehensive bibliographical search of articles, reports and theses about use, users, access, information seeking and search, reference service and archival description. As already stated, previous research on the issue has mainly concerned historically oriented use at archival repositories. Some findings of interest to pursue further can, however, be observed: a difference between experienced users and novices, an ambiguous utility of artefactual intermediaries, the significant role of human intermediaries, users’ preference for specific search terms on behalf of general topics, and that use of records was a purposive activity.

In chapter 3 the methodological considerations are discussed and the data collection methods presented. The chapter starts by establishing the epistemological standpoint, critical realism, that provides the foundation for the choice of methodology and the theoretical framework that guides the analysis. A qualitative approach was used, based on explorative case studies of two contemporary Swedish public organizations. Data were primarily collected through interviews, but documentary sources and observations were also used. Chapter 4 presents the theoretical framework that guides the analysis of the empirical findings. A fundamental standpoint is that a social phenomenon, as information behaviour, must be put in socio-cultural and historical context to be fully understood. This requires the use of a more comprehensive social theory. The primary theoretical framework chosen for this purpose is activity theory, which provides a conceptual framework for the analysis of social practices, combined with concepts from archival theory and models of information behaviour.

Chapter 5 gives an overview of archival representation and descriptive systems in general, with an international perspective, and the Swedish system for archival description and system for administrative control of records. The chapter serves as a link between the theoretical framework and the empirical findings in chapters 6 and 7. It gives a background to the local practices applied in the cases and identifies some institutional factors impacting on the implementation of representational systems in Swedish public organizations. Thus it contributes to
the socio-cultural and historical background that is identified in Chapter 4 as being necessary.

Chapters 6 and 7 present the findings of the two case studies, one of a municipality and one of a governmental agency. The chapters are outlined in a similar way, starting with an overview of the organizational, legal and historical context of the organizations, their business procedures and recordkeeping organizations. Then follows descriptions of the most important artefactual intermediaries used in the search processes, and of the use of records and the information of the users of records. These findings are analyzed and discussed in chapter 8 with help of the theoretical framework. A conceptual model of the information behaviour of users of records within an activity theoretical framework is presented, follow by a discussion of the the interaction between users, records, human and artefactual intermediaries, contradictions and tensions that impact on the search process, and the role of the human intermediaries. This will lead up to the answers to the research questions and the conclusions of the study.
2. PREVIOUS RESEARCH

The purpose of this chapter is to give an overview of research about use and search for records, and to position this thesis in relation to previous research on the subject. The findings further informed this study by providing input to the interview protocols and the data analysis, and by providing a basis to which the results could be related. The overview was based on a comprehensive bibliographical search of articles in widely recognized journals, reports and theses covering issues such as use, users, access, information seeking and search, reference service and archival description. Studies in archives and information science were predominant in this overview, but research in library and information science and informatics sometimes overlapped the field of archives and information science, and certain studies from those disciplines were of interest from the perspective of this thesis. The findings covered various subjects, had different aims and scope, and used different methods, but through an iterative reading they could be grouped into a set of thematic, however wide, categories guiding the presentation of the result: use of records; users and user groups; the search process and use of intermediaries; interaction with artefactual intermediaries; and user queries.

2.1 The use of records

Use of records has been addressed in general textbooks and principal works on archival theory (cf. Sundqvist, 2007). The subject has mostly been treated on a conceptual level, where the purpose of records and archives has been defined and from which use could indirectly be derived. That is the motivations for use, the need for records, have been discussed, rather than use as such. Actual use has been examined in a few empirical studies that explore how people use records, what kind of records they use and for what purposes. A central issue from the archival repositories’ perspective is to what extent records actually were used and what kinds of records were used. An attempt to examine how researchers use archival sources, i.e. records, was made by Goggin (1986), who studied patterns of use of records from black and women’s organizations in the Library of Congress between 1971 and 1981. One of the findings was that archival material was used to some extent by the majority of researchers in the study, but primarily to support information in published sources. Another finding was that they preferred narrative sources, like correspondence, minutes, newspaper clippings, diaries etc., to other kinds of records, for example financial records and legal files (i.e. materials

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1 Part of the findings presented in this chapter has previously been published in Sundqvist (2007).
that needed processing). Personal papers were also preferred to organizational records.

Miller (1986) conducted an analysis of how archival sources were used in 214 articles on American social history between 1981 and 1985. He found that social historians’ use of archival material was significant in all types of research. In 175 of the articles archival sources were cited, and substantially used in 158 articles. Correspondence was the most frequently used material, and private material used to a larger extent than public. This was also the case in Beattie’s (1989/1990) study of researchers in women’s history. On the other hand, according to Miller, public material was more intensively used (i.e. of more substantial value for the articles) than private papers. The most significant observation was that process-oriented research (studies of processes, structures, and long-time change) used quantifiable data like financial records, census records, and case files, to a larger extent, while event-oriented research (focused on special events, persons or institutions) preferred narrative materials.

Two similar studies concerning Swedish conditions have been undertaken by Staffan Smedberg. The first (Smedberg, 1980) treated academic use of records in general. The findings show that records were primarily used within historical research, but also to a lesser extent in political science, law, literary studies, art studies, ethnology, and Nordic languages. However, researchers seemed to use materials outside the archival institutions, i.e. still in custody of the creating organizations, to an increasing extent. In Smedberg (1981) he focused on sociology and political science, showing that records were used, but printed material was preferred in cases where the researchers used textual data at all. Researchers in those disciplines also seemed to be ignorant of the characteristics of records, and the differences between records and published materials.

From the perspective of library and information science, Stieg (1981) conducted a questionnaire survey directed to 767 historians in order to find out what formats they used, where they found references, and how they used materials in different languages. The survey showed among other things that the historians considered use of manuscripts, i.e. records, as inconvenient due to several factors: as unique materials, they were only accessible at one location; they were difficult to read; indexes and guides were often inappropriate; and the archival repositories provided inadequate services. As a result, other types of sources were preferred by the informants. Tibbo’s (2003) findings from the American part of the “Primarily History” project, a survey of 400 historians during 2001 and 2002, also showed a preference for other sources, namely contemporary newspapers. However, unpublished correspondence, diaries, and handwritten manuscripts were also both highly used and valued by the historians.
Few studies relate to “non-historians” and environments outside the archival repositories. An approach to investigate information behaviour in administrative contexts was carried out by Byström (1999), who examined the relationships between the complexity of work tasks, information types and information sources in Finnish local governments. The study did not explicitly focus on records, but records were considered as one potential source of information. Byström found that documentary sources, including records, were used consistently during task performance, but more complex tasks required a higher amount of human sources in relation to documents. The overall conclusion was that human sources were preferred to documentary sources. The study did not, however, take legal or evidential requirements into consideration, but treated all needs for sources as informative. In a study of information seeking in Finnish administration with a more direct focus on records and records management (Kostiainen et al., 2003), it was concluded that choice of information sources to some extent was dependent on work role and task performance. However, subjects often selected sources due to familiarity and former utility, though trustworthiness also played an important role in the particular context, which was pre-trial police investigation. The study found that records from the pre-trial investigation did not serve well as information sources for the investigators because of the current records management routines. Use of records in administrations has also been studied by Borglund (2005; 2008) and Borglund & Öberg (2008), who also found that use of records varied according to work tasks, but also according to temporal rhythms. The purposes of use and the categories of users changed by time.

A user category quite different from both historians and administrators is schoolteachers. A couple of studies concerning K-12 teachers’ use of records and digital search systems (Gilliland-Swetland, 1998; Gilliland-Swetland et al. 1999) suggested that they were seldom interested in context, but often in the artefactual properties of records, i.e. records as things. The motive for using records in teaching was usually to illustrate or demonstrate something, not using them as sources for historical studies. Teachers were also less interested in textual material, but in pictorial material like photographs, maps, drawings etc.

Some of the studies above indicated that records were not used to the extent perhaps assumed by archivists. Kemoni et al. (2003), who studied the conditions in developing countries, also stated that archives were underutilized as information sources. This was partly due to professional problems, and partly due to technical problems. The former included, for instance, lack of recognition of archives by governments, obsolete legislation impeding access, lack of professional training, poor descriptive systems, inadequate service, poor state of materials, and lack of access tools. The latter pointed to the technical problems, which concerned insufficient use of information technology; lack of appropriate hardware, software
and user-friendly systems; lack of knowledge about using information technology; costs; and the vulnerability of electronic information. The same problems were recognized in an administrative setting in a Nigerian university, by Uwaifo (2004). Records were seen as necessary tools of planning and decision making, but access was obstructed by lack of records management standards, lack of professional staff, defective security systems and unreliable power supply.

2.2 Users and user groups

User studies have been undertaken in libraries since the 1940s (Wilson, 1981). Equivalent measures have seldom been undertaken in archives or of users of records in general, but a few empirical studies have been published since the 1980s, primarily in the settings of archival repositories. Duchein (1983) emphasized two broad categories of users: scholars and the general public. Among them, the first category was predominant: “[a]mong the applicants for access to archives, scholars, primarily historians, make up by far the largest and most demanding category” (Duchein, 1983, p. 7). The general public, defined as “all those who are neither professional nor amateur historians, nor students, nor interested in archives for professional reasons” (Duchein, 1983, p. 9), was, on the other hand, considered a growing body of actual and potential users, primarily interested in genealogical research.

The literature has regularly noted, that use and thus the users of records have increased over time, and new user groups with various interests have entered the archives (e.g. Blais, 1995). These statements were seldom underpinned with factual observations, but there are some studies supporting the assumptions, although they are often based on weak statistical material. A couple of quantitative studies of user demographics were undertaken on behalf the International Council on Archives in the beginning of the 1980s. Roper (1982) surveyed the academic users at the National Archives in Belgium, Canada, Japan, Malaysia, Spain, United Kingdom and the USA. The findings indicated a general increase in readers and visits between 1972 and 1976. Roper’s conclusion was that during the 1960s and 1970s the academic users clearly exceeded individuals who used archives for administrative, legal or business purposes. However, other important user groups appeared beside academics, like genealogists and amateur historians. Thus, Roper made a distinction between academic, practical, and popular users. Beside an increase in numbers, the researchers had also broadened their interest to new fields and a wider range of materials.

An international survey of 200 archival institutions also showed a general increase of archival users (Principe, 1982). Principe’s interest was not the academic users, but the “common man”. The user categories Principe dealt with were professionals, office workers (including secondary school teachers), labourers,
military personnel, retired persons, students, organizations, and others. In general, scholarly research was more frequent than administrative research. Of the non-academic users, students turned out to be the most frequent visitors, followed by professionals like lawyers, journalists and architects, teachers and retired people. Working people with restricted time schedules were less frequent, probably due to the archival institutions' limited opening hours. The non-specialists made up 70% of the total amount of users, and 65% of these were casual users.

In 1984 Paul Conway (1986) performed a user survey over four months in four presidential libraries1 in the United States. The objective of the study was not to compare the different institutions, but to identify patterns of users’ behaviour. Five distinct user groups were recognized. Definitely the largest group, 51%, was made up by university faculty; the second largest group, 18%, by professionals like journalists, lawyers, government employees and individuals affiliated with research organizations, followed by students at graduate level, undergraduate students; and finally avocational users like genealogists and amateur historians. In his study of the users of the American National Archives and Records Administration, Conway (1994) identified four types of users classified according to their motivation and the scope of the materials sought: occupational users like government administrators, journalists and lawyers; academic users; personal users, for instance family historians; and avocational users like “hobby historians” with a wider range of interest than personal matters. Of those, the personal users were the dominating category.

In recent years a growing interest in better understanding users and evaluating user services at archival repositories seems to have emerged. For instance market segmentation techniques have been employed to gain understanding of the use and users of records. At the Public Records Office (PRO), UK, a market segmentation profile was developed in 2002, in order to customize services (Hallam Smith, 2003). Four key segments were identified by potential need of and interest in the PRO: academics; family historians: educational users like school children, students and adult learners; and leisure historians. The last group constituted the largest segment.

2.3 The search process and use of intermediaries

One of the main issues of this study is how persons conduct searches and how they make use of intermediaries as information systems or various search tools, i.e. artefacts, or human mediators. This is frequently the object of information retrieval studies, but little has been done concerning the search for records. Some studies in

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1 The presidential libraries keeps the archival collections from presidents of the United States of America and are often connected to academic institutions.
library and information science have treated the search behaviour of scholars, among them historians (e.g. Bates, 1996; Cole, 1998; Lönnqvist, 2003; Stieg Dalton & Charnigo, 2004; Stieg, 1981; Wiberley Jr. & Jones, 1989). Since historians are presumed to use records as sources, this research has some relevance for this study.

A common finding was that historians often preferred informal channels and tools like references in secondary literature, colleagues, and the archivists. The results were however not entirely unambiguous. Stieg’s (1981) findings suggested that references in secondary literature were the most common way of finding relevant material. In a “follow-up” study (Stieg Dalton & Charnigo, 2004), much of the original findings were confirmed, but the appearance of electronic catalogues and indexes had induced the use of more formal search tools. Nevertheless, the conclusion that historians preferred informal search strategies was still valid.

In Michael Stevens’ (1977) now classic and often cited study about historians’ archival research, one theme was how historians were led to the sources. A questionnaire was sent to 123 American historians with doctorates at colleges and universities in Wisconsin, and 61 persons answered. The primary purpose was to find out how historians discover the existence of documents needed. The historians were thus asked to rank sources in order of usefulness:

1. references in secondary sources;
2. suggestions from colleagues;
3. National Union Catalog of Manuscripts Collections (NUCMC);
4. suggestions from archivists;
5. accession lists in historical journals; and

The result showed that historians preferred informal sources like references and personal communication, to formal sources like catalogs and guides:

“[…] the formal system is relatively ineffective in providing information to historians. Historians overwhelmingly indicated that the most useful sources are other historians, either in secondary works or by word of mouth” (Stevens, 1977, p. 68).

Beattie (1989/1990) examined the use of, and attitudes towards archival materials and finding aids for a specific user category, namely researchers of women’s history. Formal search tools like finding aids were only ranked as good by a fourth of the researchers, two thirds ranked them as fair or poor, and they were used less frequently than informal tools. Of the latter, researchers firstly consulted archivists, secondly used citations in secondary works, and thirdly discussions with colleagues. However, when ranked according to usefulness instead of use, formal search tools were placed second after consulting the archivists. Barbara Orbach’s (1991) study aimed to find out when researchers use
archival materials, where, how, and why. During 1984 personal interviews were conducted with ten academic historians, of whom eight were professors and two were graduate students, whose research field was general American history. The researchers normally pursued less formal and more intuitive ways to find the relevant material, reasoning out were to find it and then corresponding with the appropriate repository. The role of the archivists in facilitating access and locating material was strongly emphasized.

A more ambiguous result concerning formal versus informal channels was presented by Duff et al (2004). Data was collected in a survey directed to all historians in history departments in Canada 2001. Among other things the survey was about use of archival sources. Findings suggested that archival sources and archival finding aids were the most common sources for identifying and locating material. However, informal networks including colleagues and archivists were also of major importance. The greatest obstacles to research were geographic location, lack of finding aids, access restrictions, and difficult formats. A similar study was the “Primarily History” project, a comparative survey of 700 historians from 68 U.S. universities, and 800 historians from universities in U.K. The purpose was to explore how information technology, i.e. on-line finding aids, web searching and virtual repositories, impacted on the information seeking behaviour of historians, for instance how historians look for primary resources and what type of materials they are most likely to use.

Findings from the American part of the study (Tibbo, 2003) showed that the most common way (mentioned by 98 % of the respondents) of locating printed material was following leads and citations. The use of printed bibliographies, finding aids, and repository guides were also frequent. The use of digitized bibliographic tools, like OPACs, was less common, particularly where OPACs were from other residencies, and general bibliographies. Use of archival databases was even less frequent. In contacts with remote repositories, e-mail appeared to be the most frequent method, but informants generally used diverse methods: e-mail, telephone, and writing. Printed finding aids were used to a larger extent than electronic; almost 90 % of the respondents used print compared with 55 % who had used electronic resources, and informal strategies like asking colleagues and undertaking personal visits to gain assistance were highly frequent. The result of the British study (Anderson, 2004) showed that print retrieval methods were most favoured, followed by finding aids in repositories and informal leads like asking colleagues, while web search and archival databases were less popular. Nevertheless, the informants requested more on-line finding aids, as well as more detailed finding aids over all.

Yakel (2002) examined how users make sense of archives and search tools. A series of interviews with undergraduate students and scholars were conducted to
examine how the users defined what an archive was, how they identified and used search tools, and how they experienced user education. Even though scholars of history used to be considered the primary users of archives, and thus assumed to be experienced users, several of the respondents appeared insecure in their knowledge of what an archive really was and how it differed from other kinds of information sources. Library search techniques and library catalogs seemed to provide a model for information search, which the researchers carried with them when using archival sources. Therefore users found that archival search tools like the finding aids were difficult to understand, and that users had problems finding out what they actually represented.

Based on the same data a further elaboration of the knowledge of the users was done (Yakel & Torres, 2003), aiming at identifying characteristics that distinguished experienced users from new users, i.e. experts from novices. The authors identified three forms of knowledge required to work effectively with archival material: domain or subject knowledge; artefactual knowledge, i.e. how to interpret and analyze primary sources; and so called archival intelligence:

“knowledge of archival theory, practice and procedures; the ability to develop strategies to reduce uncertainty and ambiguity (i.e. the ability to analyze unstructured problems and identify certain solutions); and intellective skills”
(Yakel & Torres, 2003, p. 63).

Novice users had trouble with archival terminology and identifying the functions of archival search tools. Rules of access and use, for instance concerning security, were also troublesome for inexperienced users, taking attention from the actual research problem. Further, they generally had a more vague idea about their research object, which thus limited their abilities to develop search strategies and formulate questions to the archivist, who often overestimated the researchers’ ability to understand archival procedures.

A more prevalent role of findings aids was observed in a qualitative study by Duff & Johnson (2002), who interviewed ten mid-career historians at two Canadian universities about how they carried out their research, how they made use of finding aids, and how they used the archivist. The authors’ findings suggested that information seeking behaviour in archives differs somewhat from information seeking in general, for example as described by Ellis (1984). Four types of information seeking activities were identified, which could be conducted in a nonlinear way: orientation; seeking known material; building contextual knowledge; and identifying relevant material. Research in archives appeared to be an iterative process:

“[d]uring the research process questions get reframed or refined, sources get revisited, and finding aids get re-examined as the historians build their contextual knowledge and increase their understanding of the research topic”
Finding aids appeared to be crucial in the search process, serving several purposes: as means of orientation and getting an overview of the material; as sources of names; and as secondary sources. The role of the archivist was also considered important. Archivists guided the researchers to the sources and gave additional information when finding aids were inadequate.

The value of the archivists, and users’ strategies to establish relationships with archivists was further discussed by Johnson & Duff (2004). Based on interviews with ten senior historians and ten Ph.D. students in history, the authors identified several types of archivists’ knowledge valued by historians: scope and content of the records; recordkeeping systems and provenance, additional material not yet described; knowledge about the archival system; and knowledge about researchers working in similar fields. Users in general assumed that archivists controlled access to records, which made it necessary to develop a good personal relationship with them, and some historians deliberately used “chatting” as a means to get access to the archivist’s knowledge. Ph.D. students, however, felt less satisfied in their contacts with archivists than senior researchers did.

Shelley Sweeney (2002) addressed the question of the experiences of in-person archival researchers, with focus on four aspects of source-seeking experience: the physical and socio-cultural environment; the characteristics of the researcher, including seeking strategies and test of relevance; the nature of archival material and finding aids; and finally the role of the archivist. The study covered three separate repositories: an academic archive, a government archive, and a private archive. A purposive selection of first-time visitors was undertaken, in all fourteen researchers, observed during one research episode. The findings showed that the environment was to some extent negatively experienced by the users, particularly influenced by opening hours, but also because of unfamiliarity with the situation and the archival system. Knowledge of archival procedures was generally low, but researchers with extensive domain knowledge seemed to better cope with the obstacles they met, like the structure of the search tools. Some users expressed the opinion that they would prefer topical lists (preferably topics of relevance for their research), rather than traditional archival finding aids based on provenance. Archivists played a mediating role and especially novice users were dependent on archivists’ intervention, and the more complex the research questions were, the more help from archivists was needed.

The subject of Yakel’s & Bost’s (1994) study was not the scholarly or educational use of archives, but the administrative. Administrators were, according to the authors, often the primary users of archival services. The setting was university archives and their service to university administrators, clerical staff, and faculty concerning job-related issues. Interviews gave notice that administrative users did not use finding aids or other search tools, but relied on the archivist to find the
required material. Requests were often made by telephone and the time factor was important.

The archivists themselves and their information behaviour when providing reference services, were the subject of a recent Ph.D. study (Anthony, 2006). Based on a framework of information processing theory and situated activity theory, the purpose was to study how archivists find information in archives, and what knowledge experienced archivists have acquired to make them experts at finding information in records and document collections. The findings clearly showed differences between the experienced archivists and novices. The most prominent characteristic of the experienced archivists was that they had acquired a profound contextual knowledge of the residential institutions and the records generated by them, which made them able to directly select an initial source and to identify alternative sources. The novices had to undertake initial meta-searches to identify potential sources. The experienced archivists were also to a larger extent able to validate the usefulness of sources to perform particular searches. They also relied on their own memory and the physical placement of items to locate sources, while novices were more dependent on formal finding aids. The importance of contextual knowledge was also emphasized by Duff & Fox (2006) in a study of archivists’ understanding of reference services; knowledge that was primarily gained by their own work experience and internalized as “common sense” (p. 142).

2.4 Interaction with artefactual search tools

Experimental studies of information retrieval concerning records are unusual, but there are some examples. An early study was undertaken by Lytle (1980a), who compared the efficiency of provenance-based retrieval and content-based retrieval in an archival setting. The experiment was performed as a “real-world” trial at an archives held in a division of the University of Baltimore. Authentic user requests were presented to four searchers, where two had previous experience with the content index used and two with provenance-based searching methods, i.e. with two different kinds of intermediaries. The search tools were descriptions of archival collections and folders, and an index based on a particular thesaurus. The results, however tentative because of the small-scale experiment, showed no significant difference between the efficiency of the methods. However, both methods had low recall (Lytle, 1980b). Experience, not the methods as such, seemed to have most impact on retrieval performance.

Since the mid 1990s archival repositories have started to publish information about their collections on the Internet and provide their finding aids online. A series of studies of users’ interaction with online finding has since been undertaken. Duff & Stoyanova (1998) made a focus group study of how users experienced different interfaces of archival descriptions. One purpose was to evaluate the Canadian Rules
of Archival Description (RAD) from a user’s point of view. The result showed that RAD met the users’ demands concerning content to certain extent, but the display of information caused some problems. The most apparent was that users had trouble understanding the logic and order of how the records were described, and that archival terminology was confusing. As the authors put it “[RAD] is an input standard, not an output standard” (Duff & Stoyanova, 1998, p. 45). A similar result was presented by Scheir (2005) in a study of non-historian, non-academic novice users’ interaction with finding aids online. However, Scheir pointed to the fact that the impact of the web design features (navigation tools etc.), was sometimes difficult to separate from the impact of the features of the finding aids as such.

Prom (2004) also studied how users interact with electronic finding aids, in order to examine navigational strategies and how efficiently the participants searched different design features. Comparisons were made between computer experts, archival experts, and novices. In a controlled test combined with a questionnaire and interviews, 89 subjects were performing a set of tasks, using nine different web interfaces to find collections and folders containing records within the collections. Findings showed that both archival experts and computer experts showed better results than the novices. Browsing strategies seemed to be a preferred search strategy by the experienced users, but were also used by inexperienced users with some accomplishment. Experts and novices used the same basic navigation strategies on the collection level, but experts were more subtle in their search. Folder level searches showed greater differences between the users. Archival experts tended to gather contextual data as a means to find out how materials were organized and where to find requested items. Computer experts preferred accessing the search tools available in the system directly, i.e. the “find-in-page” option, without bothering with organization of the material first. For the archival novices the organization and arrangement of folders were difficult to grasp. Search behaviour was highly conditioned by the design of the websites, for instance users often used a search box if it was available even if that was not the most optimal search strategy. The availability of (too) many options had a negative impact on search behaviours, especially for novices who easily got confused and lost track. Deviations from customary search features were also confusing.

The result was to a certain extent corroborated by experimental testing undertaken within the LEADERS-project (Sexton et al., 2004b). A demonstrator application was constructed, containing finding aids, authority records, and image files. A representative sample of users were selected with help of a user segmentation model (Sexton et al. 2004a), and a testing session with four professional archivists was set up. Different behaviour and opinions about the application were distinguished between professional users and leisure users, and between users who were familiar with archival sources on the Internet and those
who were not. Academic users, for instance, preferred to study finding aids before searching, while other users preferred to approach the material directly. Inexperienced users had problems with using finding aids and preferred index-based searching, while academic users found pre-constructed indexes restrained their individual search strategies. Fulltext search abilities were requested by all categories, even archivists. Design features seemed important for use functionality, and clarifying them appeared to be a necessary improvement.

A recent phenomenon discussed in the archival community is the use of so-called social navigation technologies, e.g. wikis, comments, book-marking, social tagging etc., to promote access to archival materials on the internet and to make findings aids correspond to user needs and user expectations. Some development projects have been launched, for instance the University of Michigan School of Information’s *The Next Generation Finding Aid Project* (Krause & Yakel, 2007). The project is based on the digitized collections related to the U.S. military intervention in northern Russia at the end of World War I, the *Polar Bear Expedition Digital Collections*. It is possible to browse the site by collections, individual names, geographic locations, military units, organizations, media types, and subjects, but free-text search is also available. In addition to EAD-based finding aids, the site includes several interactive functions: bookmarking, comments, link paths and a possibility to add user profiles. A preliminary evaluation based on analysis of transaction logs, an on-line survey, interviews, and analysis of user comments, showed that browsing was the preferred navigation tool by the users. The free-text search box was also an important feature, but apparently less reliable, since the users had to define the search entries themselves, which in many cases gave negative results. Of the social interaction tools, bookmarking and user comments seemed most useful. Users seemed willing to share their knowledge with other users, “providing an additional layer of descriptive comments” (Krause & Yakel, 2007, p. 311).

A step further than just providing interactive tools for seeking information, was proposed by Huvila (2008), who claimed that users should also be involved in the management of archives. The result should be decentralised curation shared by archivists and other participants; a radical user orientation including preservation and appraisal issues, “the archive is oriented and re-oriented to its users all the time” (Huvila, 2008, p. 25), and user indexing; and contextualisation not only of the records, but also of their originators, curators and users. This idea was implemented in an action-oriented project of digitizing two historical archives, Saari Manor and Kajaani Castle in Finland, with use of Web 2.0 technology. So far the results of the project have not been published.

A feature of records management in contemporary organisations is the increasing use of Electronic Records Management Systems (ERMS). ERMS are
information systems which include functions to create, capture, process, store, dispose, and retrieve information in a way that warrants authenticity and transactional relationships, i.e. the “recordness” of information (e.g. ISO 15489-1, 2001; MoReq, 2002). The interfaces of the ERMS and the search functions that are provided can be considered as intermediaries between the users and and the records contained in the systems. Gunnlaugsdottir (2006) studied the implementation of ERMS in eight Icelandic organizations. Her findings showed among other things that the potentials of the systems were not fully utilized, for instance concerning the search and retrieval functions. The employees in general used a limited number of search parameters, and had some difficulties in grasping the classification schemes that were incorporated in the systems. Although Gunnlaugsdottir did not make any particular point of it, the difference between expert users, in this case records managers and computer specialists, and other employees was apparent. The former utilised the functions of the systems more thoroughly, and regarded the systems to be user-friendly to a larger extent than the latter did. Similar findings were shown by Singh et al. (2007), who particularly examined the information seeking behaviour of ERMS users. Users tended to stick to the search parameters they were taught when the systems were implemented, primarily metadata search. Classification schemes were hardly used at all as a search option, neither were they part of the users’ training.

2.5 User queries

The way users phrase the questions and the search entries they prefer to use is of relevance to this study, and gives an indication of how the representations of records correspond to user behaviour and what access points should be provided. The issue has been treated in various fields of information science research. A mainstream approach is the study of the behaviour of academics, particularly scientists but even to a certain extent also social scientists and scholars in the humanities, such as historians. In an extensive study, the Getty End-User Online Searching Project, the special traits of researchers in the humanities concerning information seeking were investigated. One objective of the study was to find out how the researchers used OPACs and what kind of access points they preferred (Bates et al., 1993). Subject search showed to be the most frequent type of search, with a predominance of specific subject terms as proper names, dates, events and geographical places, above common terms i.e. more general topics. Similar results were shown by Wiberley & Jones (1989) and Cole (1998). The first claimed that historical studies often had geographic and genealogical approaches. The studied phenomena could often be pinned to a place or a person, which provided the starting point for information search. Names and places were thus common access points for historians. The second, who studied the cognitive aspects of the
information acquisition behaviour of Ph.D. students in history, also found that historians often used proper names as access points in their information seeking. Using psychological schemata theory and theories on expert cognition, he suggested that the collection of proper names during reading helped pattern recognition. A new fact or finding needed to be corroborated by another source, before it could be incorporated into the conceptual part of the knowledge structure. Based on these assumptions, Cole proposed incorporating proper name search in IR systems design.

The results from Steven’s (1977) study about historians’ search behaviour also showed a preference for names, even if the examined historians used both names and general subject terms. A similar result was presented by Orbach (1991), who showed that names were preferred as access points by historians, although several of the interviewees considered subject access valuable. However, some problems concerning subject access were observed: inconsistent cataloguing and the unavoidable subjectivity in assigning subject terms ex post. Other than names and subjects, chronological access was also important for the historians. This was confirmed by a more recent study (Duff & Johnson, 2002). Proper names were the most common way for historians to identify relevant sources, but social historians in particular desired subject indexes, keywords, or thematic entries.

Beattie (1989/1990) also argued for providing subject access to a larger extent for social historians. Organizational or biographical access points (i.e. proper names) appeared less appropriate when searching for information about ordinary and often anonymous women and other neglected groups in history. In an interview study with genealogists, Duff & Johnson (2003) investigated how representatives for this large and rather specialized user group approached archives and carried out their research. Since genealogists focused on people, it was not unexpected that the most important search term was personal name. However, in order to locate persons, geographical information and time were also important access points.

“The ideal search engine for this genealogist would support a search by name, geographic area, and a range of dates. It would also contain digitized images of the original documents” (Duff & Johnson, 2005, p. 87).

The genealogical experts also developed a vast knowledge of sources, since certain material (birth registries etc.) was rich in genealogical information. Forms and genres were thus also important access points in genealogical research.

Analysis of reference questions to identify what information users provide to identify the requested objects, has gained some interest within the archival field. Bearman (1989/90) tried to get a snapshot of reference questions from both staff and patrons during one day, March 15 1989, at 18 archival repositories. The purpose of the study was to find data relevant to design information retrieval systems, and to identify relevant access points. The result, in all 697 questions, fell
into three broad categories: questions of a wide variety, including questions of a more sociable kind like polite lead-ins and gossip, which according to Bearman could not be answered by a computerized information system; questions about procedures and services; and finally what Bearman called substantive questions concerning the actual holdings, about 45% of the total. These were considered to be the most interesting, and were analyzed in depth. Eighteen different access points could be recognized: form; personal name; title; citation/call; corporate name; place; topical subject; date of subject; action; medium/format; field help; publication or accession data; patron's name; series; repository name; request reports; course name/number; and finally language. Another finding was that a specific item, i.e. a specific document, was requested in 56% of the questions, which could be an indication of the importance of the records' evidential properties.

Martin (2001) conducted a study of 595 written reference requests to the Southern Historical Collection and General and Literary Manuscripts at the University of North Carolina at Chapel Hill in 1995 and 1999. The purpose of the study was to observe effects of online holding information and the increased use of e-mail correspondence on user behaviour. Among other things the object of inquiry was studied, identified as the following categories: subject; collection; known item; unknown item; general holdings; or policy information unrelated to policy or holdings. The most frequent search objects were specific collection, specific item in known collection, and subject. To a much lesser extent were specific items in unknown collection, general holdings or policy information, and objects unrelated to policy or holdings requested.

Duff & Johnson (2001) analyzed 375 e-mail reference questions submitted to eleven American and Canadian archives over six months in 1999. The result indicated that most often proper names and dates were used to identify the objects or the request. Place, general subject and specific form were used to a lesser degree, and occasionally events were specified. Collins (1998), who conducted a similar study at two photographic collections, showed a slightly different result. The analysis consisted of a total of 187 questions provided by forms, telephone and fax. The most common identifiers were generic subject terms like categories of persons, geographical features, objects, activities and concepts. In second place came specific subject terms, i.e. proper names: names of persons; places; objects; buildings; and events. These two categories occurred in 86% of the queries. After subject terms followed time, place, genre (landscape, portrait, group etc.), visual attributes (interior/exterior, black and white/colour etc.), physical attributes, and last creator/provenance which occurred in only 4% of the queries. This might indicate that pictorial records are used differently than textual records, or have different characteristics.
Gunlaugsdottir (2006), who studied the implementation of ERMS in contemporary Icelandic organizations, also looked at the access points preferred by the users. Unlike the open questions provided by users orally or in writing in the cited works above, the search entries in ERMS were limited by the parameters registered in the systems. The most frequently used access point was the name of the sender or receiver of documents; the second was the date; and the third was the type of record, for instance letter or report etc. Other options were used occasionally. The findings were, however, based on interviews with records managers and consultants, not with the users themselves. The results seem plausible, but it is not clear if the statements were qualified guesses or based on factual observations.

2.6 Concluding remarks

The purpose of this chapter was to give an overview of literature about research on the information behaviour of users of records. The studies above have different aims and scope, and use different methods. Comparisons are thus difficult to make, and general conclusions can not be drawn. However, it is possible to observe some salient characteristics of the findings, which could be considered in relation to the further research.

2.6.1 The focus on historically oriented use and archival settings

An essential feature of the cited studies was that with few exceptions they were dealing with search behaviour concerning non-current records, primarily in archival repositories. The subjects of the studies were thus often undertaking historical research, many as professional scholars. Use of records was thus considered as historical research, if not necessarily on academic basis. The focus on historical research has implied that records were often regarded as information sources in a more narrow sense, providers of historical facts. A few studies did mention other kinds of use, and other categories of users like lawyers, journalists, teachers, administrators and private persons, and a few have examined information behaviour in administrative settings. It seemed that user needs and behaviour differed somewhat between various user groups and environments, and that other properties of records were of interest than their function as information sources.

2.6.2 The difference between experienced users and novices

In general the differences in behaviour between experienced users and novices seemed significant. Novices had a less developed conception of records and what could be expected to be found in archives. The result was that they had some difficulties in defining their needs and making specified requests, which impacted
on their interaction with the intermediaries. Particularly the structure and terminology of the search tools were difficult to grasp, but there were also indications that novices experienced the communication with human intermediaries, i.e. how to put the question, troublesome.

2.6.3 The ambiguous utility of artefactual intermediaries

Formal intermediaries and search tools like finding aids were vital instruments for the experienced users, however not uncomplicated and self-explaining. The use of traditional search tools required a process of mastering before they could be efficiently used. There is also reason to believe that non-historians and users outside the archival repositories include a larger proportion of occasional users, i.e. novices, who will never gain experience or mastery of artefactual intermediaries and thus their access to records might be restricted. The features of the artefactual intermediaries, particularly computerized systems, might also have a restraining impact on user behaviour and tend to lock the search performance into certain paths.

2.6.4 The role of human intermediaries

The findings above showed that academic users as well as non-academic users, and experienced users as well as novices preferred informal sources and intermediaries (other humans, citations etc.) to formal intermediaries (finding aids, catalogs, databases etc.). In particular, the human intermediaries seemed important as a guide, a discussion partner, or provider of facts. It seemed that experienced archivists had gathered a comprehensive contextual knowledge, not captured in formal systems and search tools, and could thus give further guidance than the artefactual intermediaries.

2.6.5 A preference for specific search terms and access points

According to the works presented above, specific subject terms, particularly proper names (e.g. personal, geographical and institutional names) were the most frequent search terms and preferred access points by users. Some studies, though, stressed the value of general subject terms (topics), particularly in the case of social history. Search terms used for photographic collections also showed another pattern, where general subject terms were more common than specific terms.

2.6.6 The use of records as a purposive activity

The use of records was in general connected to fulfilment of a task, and varied according to the tasks that were performed. Some of the findings actually pointed to the fact that records were not always prioritized as information sources by users, even by scholars. To some extent this could be explained by the complexity of the
material and inexperience with the search tools. Where possible they chose information sources and channels that they perceived to be easily accessible. With a slight paraphrase of a quotation from Hans Hofman (2005, p. 139) it could also be said that “people do not use records for fun; they use them because they serve a purpose”. Records were used because they were needed, i.e. when their properties were of value to the user.

The literature review above showed that there is a gap in the previous research concerning use and search for records outside the archival repositories, and concerning other kinds of use than historical research in any form. The present study will contribute with knowledge about use of and search for records in contemporary real life administrative settings. The previous research, however, presents certain findings of interest to be further explored like the characteristics of the users, the role of the intermediaries, the identification of records in the search process, and the actual purpose of use. These findings have inspired the design of the present study, and the extent to what the results of the studies have a general relevance and can be transferred to other settings it will be discussed.
3. METHODOLOGY

In this chapter the methodological approach and the research design is outlined. The chapter begins with a presentation of the epistemological standpoint that provides the foundation for the choice of methodology and the analytical framework. Then comes a discussion about the methodological approach and the assessment of research quality, followed by a presentation of the research design and choice of settings for the empirical investigations, a discussion of data collection methods and selection of informants. Finally, a description of how the empirical data is analyzed is provided.

3.1 Epistemological assumptions

In archival discourse little attention has been paid to epistemological and methodological issues until recently. The trichotomy theory-methodology-practice has referred to the practical handling of records and archives, not to the conditions for undertaking research (e.g. Duranti, 1993; Eastwood, 1994). Scholarly writings on archives and records have also shown little explicit awareness of the epistemological foundations for the studies undertaken, or of the research paradigm to which they belonged. According to Gilliland & McKemmish (2004) social science and thus archival science could belong to either of the dominating epistemological paradigms: positivism or interpretivism. The positivist paradigm is distinguished by an assumption of an objective reality and the existence of universal laws independent of historical or cultural contexts, and

“[...] is closely associated with deductive reasoning which moves from the general to the particular, making inferences about a particular instance from a generalization, formulating hypotheses from these generalizations to be tested by the research, the collection and analysis of quantitative data, the design of replicable experiments, and the use of scientifically selected samples such as random samples. A key objective of such research is producing findings that are generalizable” (Gilliland & McKemmish, 2004, p. 166).

The interpretivist paradigm, on the other hand, recognizes

“[...] no one objective reality, but rather ‘multiple realities which are socially and individually constructed’, and thus researchers in this tradition are concerned with interpreting social meanings and personal sense-making. The interpretivist research paradigm is closely associated with inductive reasoning which moves from the particular to the general, with the research itself leading to the generation of hypotheses, the collection and analysis of qualitative data to form rich pictures of particular instances, and the use of purposive sampling” (Gilliland & McKemmish, 2004, pp. 166-167).

This polarized image of the two paradigms could however be seen as rather simplistic, and obscuring the multitude and diversity of research traditions that
exists. The authors also admitted that it is possible to cross the borders of the paradigms, which would offer the potential to create new fruitful approaches to research. Hjørland (2005) argued that among the positions that have traditionally been attributed to a certain paradigm, there exists a variety of schools with different ontological and epistemological standpoints. Within the paradigms different attitudes towards the binary concepts realism–idealism, universalism–relativism, objectivism–subjectivism, and rationalism–empiricism could be distinguished. Mechanically defining a certain approach as either positivist or interpretivist, is thus often too superficial and incorrect.

The ontological standpoint behind this study is realism, which should not be defined as positivism, as often happens. The basis of realism is the opinion that there exists a reality independent of the human subject, but that is a wide definition that has to be nuanced to be meaningful. Several diverse philosophical traditions claim to be realistic (e.g. Hjørland, 2004). The position advocated here is critical realism, a school of thought with roots in historical materialism conceptualized primarily by the British philosopher Roy Bhaskar (1997). Critical realism acknowledges the existence of an independent reality. But the reality is, however, not only something “out there”. Even the subject’s relations to the material and the social environment, ideas and conceptions, discursive and social constructions are part of reality. Those can be objectified, be communicated and obtain an existence independent of their origin, but in contrast to physical objects they have to be socially reproduced for their continued existence. Bhaskar describes the world as “stratified” in three domains: “the real” consisting of structures and mechanisms; “the actual” consisting of events and activities; and “the empirical”, which includes our perceptions of the world (Bhaskar, 1997, pp. 13, 56). These domains have their own inherent logics and can not be reduced to each other. Reality is further stratified in physical, biological, psychological, social and cultural levels, which condition but do not determine each other. On each level so called “emergent properties” arise, which cannot be reduced to the other levels, and different mechanisms are active on each level. The human is a biological creature with specific physiological and psychological properties, an actor and a social agent, and none of these properties or functions can be reduced to any other (Archer, 1995).

What is of primary importance in the context of this study are the epistemological positions of critical realism. The standpoint is that knowledge about reality is possible, but not immediate. The perception of reality is not the same as reality itself. It is situated in its own domain, with its own specific logic. Knowledge about reality does not directly correspond to reality itself, but represents certain properties reality is assumed to have. It is dependent on the concepts available, which are produced in a certain social and historical context:
“[...] whenever we speak of things or of events etc. in science we must always speak of them and know them under particular descriptions, descriptions which will always be to a greater or lesser extent theoretically determined, which are not neutral reflections of a given world. Epistemological relativism, in this sense, is the handmaiden of ontological realism and must be accepted” (Bhaskar, 1997, p. 249)

However, the relativism that is proposed here does not imply that all opinions are equal, or that it is not possible to gain factual knowledge about reality. It is rather a notion that knowledge is fallible and must be contested and reconsidered. Critical realism claims that theories and conceptions can be assessed and compared to each other. This is what Bhaskar defined as “judgemental rationalism” (Bhaskar, 1997, p. 248). A theory that better explains a phenomenon within its conceptual frames than other theories within theirs is preferable. However, it is not only by theoretical reasoning or discursive conceptualizations that knowledge can be obtained, but also through practical experiences. The relevance and reason of knowledge can be judged by its use in practice. Critical realism thus also contains an element of pragmatism (Djurfeldt, 1996; Hjørland, 2004).

3.2 Methodological approach

As a consequence of its epistemological standpoints, critical realism advocates a methodological pluralism, which should not be mistaken for methodological relativism (Wikgren, 2005). Depending on the level of reality in which the analysed object is situated, different methods are appropriate: interpretative, analytical, qualitative or quantitative. The complexity of the analysed phenomena might also call for a combination of methods (Djurfeldt, 1996).

For this study a methodological approach that is basically qualitative has been chosen. Qualitative studies are often appropriate in studying processes, such as personal interaction in connection with information seeking (Fidel, 1995). They are also suitable for research in a new field, where little is known. The qualitative approach allows for flexibility, and makes it possible to refine the research method during the process, which was considered important since this study had an exploratory character to some degree.

Irrespective of the method chosen, it is necessary to establish the quality of the research process and the data, and to assess the plausibility of the results and conclusions. In quantitative research the concepts reliability and validity are central in assessing quality and trustworthiness of the empirical findings and results (e.g. Holme & Solvang, 1997; Molander, 2003). Reliability refers to the fact that studies should be repeatable and possible to replicate by other researcher with the same result, i.e. focusing on the quality of measurements. Validity can be defined as internal, which refers to the establishment of correct causal relations between phenomena, or external, which is about the possibility of making
generalizations beyond the actual study. Since those concepts are based on statistical instruments, they are less useful in qualitative research. Instead criteria based on the special characteristics of qualitative studies have to be applied. Lofland (cited in Holme & Solvang, 1997, p. 93) suggests four methodological principles for qualitative research: proximity to the objects of study; a correct rendering of what has happened; a rich descriptive account of the studied phenomena; and use of direct quotations to elucidate the participating individuals’ own expressions. To assess soundness of qualitative studies, Lincoln & Guba (1985) have developed a set of criteria, related to but different from reliability and validity: confirmability, credibility, transferability and dependability.

Confirmability aims to show that the study has been undertaken in a relatively neutral and unprejudiced way, at least by making explicit potential researcher “biases”, and that the interpretations of data and conclusions drawn follows a logical path. To assure confirmability Miles & Huberman (1994, p. 278) proposed that:

- methods and procedures should be described explicitly and detailed;
- it should be possible to follow the process of data collection, processing, analysis and presentation;
- conclusions should be explicitly linked to data;
- methods, procedures and data should be recorded and analyzable by others;
- the researcher should be explicit about personal assumptions and values that could impact on the analysis;
- alternative interpretations and conclusions should be discussed.

Credibility is defined as the extent to which the findings and interpretations can be assumed to be reasonable and plausible according to the data. The basis of credibility is according to Guba and Lincoln to

“[…] carry out the inquiry in such a way that the probability that the findings will be found to be credible is enhanced, and […] to demonstrate the credibility of the findings by having them approved by the constructors of the multiple realities being studied” (Guba & Lincoln 1985, p. 296).

Miles & Huberman (1994, p. 278) suggest some techniques to enhance credibility, for example:

- rich and “thick” descriptions (cf. Geertz, 1993);
- use of triangulation of methods;
- data linked to theoretical or conceptual categories, prior to the investigation or emerging from it;
- internal coherence;
- identification and consideration of uncertainty, negative evidence and rival explanations;
- confirmation by original informants.
The possibility, and even the desirability, of making generalizations within qualitative research have been questioned. However, to a certain extent the result of qualitative studies could be valid for other sites and situations, i.e. they could be transferable. To judge the potential transferability, again the importance of rich descriptions and confirmation from informants and peers are emphasized, as well as the congruency with or confirmation of prior theory (Miles & Huberman, 1994). Yin (1989) proposed the term analytical generalizability in addition to statistical generalizability, meaning generalizing particular findings to a broader theory. By generalizing the results to a more abstract and conceptual level, they could be applied and tested in other circumstances.

Finally, dependability concerns the consistency and stability of the study during the process. Lincoln and Guba recommended a thorough documentation of changes and unexpected occurrences that might affect the studied phenomena. The proposed techniques to ascertain dependability according to Miles & Huberman (1994, p. 278) are:

- clear research questions and a research design congruent with those questions;
- parallelism across data sources, i.e. that they should be approached in a similar way;
- connection to theoretical and analytical concepts;
- data collection should be made across appropriate settings, time and respondents in a consistent way based on the research questions;
- data quality checks (e.g. biases, deceit or informant knowledge ability);
- confirmation by peers.

When performing the investigation, these recommendations have been taken into consideration. A more detailed description of the research procedure will follow below, but there is reason to mention here the researcher’s pre-understanding of the research problem and the studied phenomena. The researcher has more than 10 years experience as a lecturer in Archives and Information Science and previous working experience as a professional archivist. This has given knowledge of the theories in the field and their applications in various settings, and awareness of recordkeeping practices. Besides that, the researcher has in the roles of a citizen, a student, an academic researcher and a genealogist acted as a user of records, thus experienced use of and searching for records from several perspectives. These experiences and the previous subject knowledge have led to identification of the research problem. To avoid possible biases caused by the previous experiences, knowledge and assumptions, the data collection, analysis and conclusions have been theoretically informed and discussed with the informants and third parties such as research colleagues and other archival practitioners throughout the research process.
3.3 Selection of methodology and research settings

The research design chosen for this study is a case study methodology. Case studies are often suitable for studying complex real-life phenomena, comprising several components and relations in their natural environment (Wang, 1999). To elucidate complex phenomena multifaceted approaches can be useful (Marshall & Rossman, 1995), and in case studies different data collection techniques can be used to capture the complexity of the settings. The actual cases studied here were selected as purposive samples, considered to be information-rich and manifesting the object of the study (Miles & Huberman, 1994). According to Marshall & Rossman (1995) an ideal case site provides: 1) a possible entry; 2) a high probability of a rich mix of the phenomena of interest; 3) the possibility of building trusting relations with participants; and, 4) a reasonable assurance of data quality and credibility. The selection of research sites has been done with this in mind. The object of the study is the use of and access to records in contemporary administrative settings, thus the sample had to be constrained to current administrations. Swedish public administrations are, unlike private enterprises, required by law to set up formal record keeping functions, keeping journals and, more importantly, they are obliged to make records available to citizens. This makes it likely that rich data of relevance for the study would probably be obtainable in public administrations, which is why they were chosen as cases.

The research design was a so-called embedded multiple-case design (Yin, 1989). The cases chosen were a municipality and a governmental agency. The reason for choosing two case was to gather enough rich data and to add confidence to the findings, not to make comparisons, thus following a replication strategy (Miles & Huberman, 1994; Yin, 1989). The Swedish municipalities provide a great part of the public services for citizens, and are often approached by citizens in order to get access to records. The municipalities serve a wide range of users, both internal and external: the administrators, the media, the citizens, governmental agencies, researchers, etc. They offer access to both historical records (at least from 1863 when the municipal organizations were established in Sweden), and current administrative records. The selected case was a medium sized, normally organized municipality. It could thus be considered as a mainstream example. The Swedish municipalities consist of several committees, which have their own administrative offices. The committees of this municipality and their administrations form sub-cases, embedded in the overall case study. A governmental agency has a narrower field of competence, and deals with a limited variety of matters. The governmental agencies do probably attract a more limited variety of users compared to municipal organizations, primarily those who are concerned by the particular agency’s field of competence. The agency selected for this study has a national field of responsibility, dealing with infrastructure that has an impact on almost every
citizen. The contact area towards the public is therefore rather broad. The agency is organized into several organizational units. One regional division and a local office would perform sub-cases.

3.4 Data collection methods

A triangulation of data collection methods was applied to achieve the purpose of the study. Wang (1999) identified four methods applied in studies of information behaviour: surveys, interviews, experiments, and observations in natural settings. Surveys are best suited to capture large-scale data for quantitative analysis. For the purpose of this study the method had some disadvantages. It presumes reading and writing skills, which could exclude some user groups. Above all it lacks flexibility and the possibility of acquiring a deeper understanding of the object of study. Experiments are used in information science for instance when studying online information-seeking and human-computer interaction. Experiments could probably be useful studying user interaction with computerized systems, and evaluating systems usability. However, the purpose of this study was to investigate authentic information behaviour in a certain social context, so experiments were not suitable. There would also be some practical problems recruiting a representative sample of users, risking a bias against experienced users and disregarding the occasional user and the general public.

Observation is a common method of studying human behaviour in real-life situations. Wang (1999) presented two basic methods of observations in studying information behaviour: field observation (non-participant) and participant observation. The first would be most appropriate in this case, since the focus is on “natural” behaviour, not disturbed by interaction of a third party. There were two phenomena in this study where observations would be relevant. The first was the question negotiation process between the users and the providers and the second was the interaction with the search tools, i.e. the use of intermediaries. The method however involved some problems, which is why observations were discarded as the primary data collection method and only used as a complementary method. First there was the question of whether a non-interventionist strategy was realistic, i.e. if it was possible to perform observations without impacting on the observed situation. If research ethics require informed consent from the observed subjects, a researcher’s presence would certainly be apparent, and might influence the behaviour of the subjects. This is however a general problem when undertaking observations.

The primary objection against observations in the actual case was however that it was not possible to observe everything in situ. After discussions with the archivists and the chief registrars in the selected organizations, it appeared that requests by external users “over the counter” could be directly observed, but a lot
of requests were made by phone or e-mail. Requests occurred irregularly and occasionally, and the same applied to the officials’ need for records and their search performance. Observations of users’ interaction with artefactual search tools would have required their active participation. The public was however entitled to anonymity and privacy, thus observations might be considered inappropriate in many cases. Observations of interaction with artefactual intermediaries were therefore limited to the staff, primarily the registrars’ use of the journal and similar information systems, carried out in connection with interviews. For this part of the study a think-aloud technique was used, a method applied for instance in studies of human-computer interaction (e.g. Bødker et al., 2004, pp. 250-251). The informants were asked to perform a search common to their work task and to describe what they were doing and thinking, while the researcher was observing and taking notes. To get an overview of the settings, the physical environments, the search tools and the work procedures the researcher also spent several hours at the premises with the archivists and the chief registrars, while observations were performed and field notes taken.

An alternative technique to observations of the search process would have been to ask the user to keep a diary or a search log. This method has been used by e.g. Toms & Duff (2001). However, their studies were performed at archival institutions involving scholars or students. In such environments one could expect a more or less steady flow of visitors. The diary technique demanded that the informants undertook their searches within a certain time, and that they were able to express themselves in writing. In administrative settings people might request records on very rare occasions and they might be under pressure. The actual users would be of various kinds, with different education and abilities. Diaries or search logs were therefore dismissed as realistic data collection methods. Another alternative would have been to ask the registrars and archivists to keep diaries and log the requests during a certain period of time. This method would also have some disadvantages. The control of the collection process would be handed over to the informants, and they had to decide what information they would submit. It would also intrude upon the ordinary workload.

The primary technique of data collection chosen was interviews. It was assumed that interviews would be the method that would most likely make it possible to obtain data of relevance for the study, considering the deficits of other methods in the particular context. Trost (1997) made a distinction between standardized and structured interviews. According to his terminology a standardized interview was characterized by interview questions that were the same and were articulated the same way in all interviews. A structured interview meant that it had a thematic disposition. In both cases the questions could be open or close-ended. In this case a structured interview, using Trost’s terminology, with
open-ended questions, feedback and follow-up questions was chosen. Interview guidelines based on the research questions, the theoretical framework, and previous research were prepared for each group of informants: archivists, registrars, internal and external users. The guidelines were prepared first in the form of lists of questions (see appendix 1, p. 238), which soon developed into thematic maps where the principal areas of questions were out-lined as the example in figure 3.1 below shows. Depending on the informant’s position and tasks, certain themes were emphasized. The map structure gave a better overview of the themes during the interviews. It encouraged a more iterative procedure than a linear protocol, with the possibility to focus on certain areas and to go back and ask follow-up questions etc.

![Thematic map guiding the interviews of registrars](image)

Figure 3.1 Thematic map guiding the interviews of registrars

The qualitative approach allowed for flexibility, and made it possible to refine the interview questions during the research process. The interviews were recorded, but notes were also taken during the sessions to underline salient statements, and to capture impressions not explicitly out-spoken or connections of relevance for the analysis. A couple of interviews were not possible to record due to technical problems, but detailed notes were made. At the end of every session the findings were summarized for confirmation by the informants. If needed a follow-up was made to clarify certain details.
The other major technique of data collection selected, although not mentioned by Wang above, was analysis of documentary sources: legislation, policy documents, internal publications, web sites, finding aids, classification schemes, screen dumps from journals and other information systems, systems documentation, written requests, call slips and the archivist's documentation of reference questions. Legislation, policy documents, internal publications and web sites were mainly used to obtain background information about the cases: mandates and obligations, organization, size, goals, business activities etc. Finding aids, classification schemes, diaries and to some extent other information systems were studied as the predominant forms of artefactual intermediaries, to identify their structure and other properties. Written requests, call slips and documentation of oral requests provided information about users, purpose of use and requested objects. However, they also contained the users' own expressions and formulation of search queries. Hence, they elucidated the search entries users found relevant and made it possible to compare these with options available in the search tools. These kinds of documentary sources varied between the two organizations. In both organizations the amount of written requests was assumed to have increased in recent years, due to the frequent use of e-mail. At the municipality, the archivist had documented requests to the municipal archives systematically since 2002, by saving written requests, call slips and notation of oral requests. The latter were, however, filtered through the archivist, and not always exact recordings (cf. Yakel & Bost, 1994). The core of the questions could still be assumed to have been captured, and the findings could be validated against interview data. This material provided a rather rich sample of user queries, but equivalent data did not exist at the governmental agency. Since the purpose was not to make a comparison between the organizations, this was not necessarily a problem. Instead the documentation of requests could be seen as an additional set of data, complementing data from other sources.

3.5 Selection of informants

Public administrations in Sweden are required by law to register records made or received (SFS 1980:100). This could be done in various ways, but a common procedure is by keeping a journal. The journal is one of the most important search tools within public agencies, governmental as well as municipal. The registrars, who are the officials who manage the journals, have a central function mediating between users and records. They handle external requests about public records or information from records, and they also provide services to members of the staff. The archivists have a similar function in their field of competence. The registrars and the archivists were important informants, since they interacted directly with the users. They were also the primary users of the search tools, as they performed
the actual searches on behalf of others to a large extent. The chief registrars and the senior archivists were thus the key informants in the study.

Entry to the organizations was attained through the senior archivists in both cases. The studies began with lengthier introductory interviews with the senior archivists and senior registrars to gather contextual information. The organization and its procedures were explained to the researcher, and the outline of the study was discussed. A few interviews with specialists, e.g. lawyers and systems managers, were also undertaken to get factual information about the settings. An interview was also undertaken with an archivist at the Regional Archives, responsible for older records deposited by the governmental agency. Feedback from the senior archivists and senior registrars has been acquired through the whole process of data collection and analysis.

The probably largest user category, often overlooked in literature, was the staff of the organizations. To a certain extent they were served by the registrars, but they could also be presumed to use other means to acquire records. Therefore interviews with staff were critical to capture their information behaviour. The qualitative approach discounts the need for a representative sample, but this study aimed at ensuring a broad selection. The primary criterion for selection of informants was their professional status and organizational position, i.e. to reach various groups of employees such as managers, executive officials and administrators, and to cover the different organizational units described as sub-cases in 3.3 above. The actual selection process has been a “snowball sampling” (Miles & Huberman, 1994, p. 28), following leads and suggestions from the informants and other persons within the organizations.

External users posed a problem, since they were not accessible in the same way as staff. As stated above, their encounter with the agencies could be occasional and they had the right to anonymity and privacy. In other words, there was no list of users to pick from. With help from archivists and registrars, who mediated contact with users, a small sample of both frequent and occasional users with different errands was selected and interviewed. The analysis of written requests would supplement the limited sample of external users. In total 27 formal interviews were undertaken at the municipality and 32 interviews at the governmental agency, including the interviews to get background information. The latter could take about two hours, but normally the interviews took about 30 minutes to 1 hour in time.

3.6 Data analysis

Analysis of data was started and partially undertaken during the collection process, but the main part of the analysis was done afterwards. Interviews were
recorded and later transcribed, using the software Transana\textsuperscript{1}. Notations were also made during the interview sessions and compared with the recordings. Data were coded through an iterative process beginning with a set of a priori defined thematic categories based on the research questions: users, purpose of use, search process and user queries. These were tested against the data and the theoretical framework, and modified until a coherent categorization was achieved. The two latter categories were divided into sub-categories including search paths, interaction with artefactual intermediaries, question negotiation; and requested objects, query type, identifiers (the information provided by the users to identify the requested object). The written documentation of user requests was entered into a database, and analyzed in a similar way.

This procedure was not compatible with certain approaches of qualitative methodology like grounded theory (e.g. Strauss & Corbin, 1998), which proposed an entirely inductive process. However, the research questions pointed at certain topics that would be interesting to capture, which made pre-defined coding categories useful. Linking data to pre-defined theoretical or conceptual categories could also be one means of assessing the soundness of the research according to Miles & Huberman as outlined above.

The artefactual intermediaries, primarily the journals and the archives inventories, were analyzed according to purpose, structure and content, with a focus on their representational functions based on the theoretical framework. The findings were then compared with the findings from the analysis of the interviews and documentation of user requests.

Direct quotations have, as Lofland suggested above, been used to a large extent to give a rich and accurate picture of the findings. The interviews were literally transcribed, although hemmings, mumblings and suchlike were excluded, and standard Swedish orthography was used. Quotations from the interviews and documentation of user requests have then been translated into Standard English, although an attempt has been made to retain the tone of the original wordings, e.g. the level of formality.

3.7 Concluding remarks

Considering the research problem and the object of the study, the use of and access to records in contemporary administrative settings, a qualitative methodology has been chosen. A qualitative approach is common in studies of human behaviour and activities in real-life situations, and in explorative studies where it can be necessary to reiterate and refine the data collection methods during

\begin{itemize}
  \item Transana is an Open Source-software for qualitative analysis of digital video and audio recordings, \url{http://www.transana.org/index.htm}
\end{itemize}
the research process. A case study design has been selected, which has made it possible to gain a deeper understanding of complex phenomena and processes in a natural environment by focusing on a clearly-defined area, its constituent elements and their relations and interactions. Two case studies have been undertaken in Swedish public organizations, one municipality and one governmental agency. Several forms of data collection methods have been used: interviews, observations, and study of documentary sources. The analysis of the findings was based on the research questions, the theoretical framework, and the previous research. The quality of the research and the soundness of the research process have been ascertained by a comprehensive recording of data during the investigation; a thorough description of the research process and the findings; linking data to theoretical and conceptual categories, confirmation of findings by the informants; and assessment by peers during the research process.
4. THEORETICAL FRAMEWORK

In the following chapter the theoretical framework used to guide the analysis of the findings is described. The search for and use of records is a certain form of social practice in real-life settings, which implies that the object of study cannot be treated as an isolated phenomenon, but connected to or part of a wider contextual environment. A fundamental standpoint is that a social phenomenon must be put in socio-cultural and historical context to be fully understood. This requires the use of a more comprehensive social theory guiding the analysis. The primary theoretical framework chosen for this purpose is activity theory. Activity theory is not a predictive theory, but provides a conceptual framework for the analysis of social practices. Thus, it can be informed by other theories of particular relevance for the object of study. The object of this study, the use and search of records in contemporary administrative settings, requires a conceptual notion of records, thus archival theory provides a basic foundation for the analysis. Since this study covers a certain form of information seeking and use, information science can also contribute with conceptual models of relevance for the analysis.

4.1 A foundation in archival theory

The focal concept in this thesis is records. It is thus necessary to theoretically elaborate the concept and identify its specific characteristics. The concept of records is the core of archival theory. Archival theory is not a theory about how to conduct research, or a system of ideas proposing to explain observed phenomena or events and make generalizations. Archival theory is a set of propositions about the nature or attributes of archives and their contents, i.e. the records, which makes the foundation of recordkeeping practices. Duranti (1997) said:

“Archival theory is the whole of the ideas archivists hold about what archival material is; archival methodology is the whole of the ideas archivists hold about how to treat it; and archival practice is the application of both theoretical and methodological ideas to real, concrete situations.” (Duranti, 1997, p. 45)

But, archival theory can also be applied as an analytical framework, helping to understand certain phenomena, and maybe even provide some explanations, for instance why records are created and used.

4.1.1 Information – documents – records

Records are very significant in a culture like ours, dependant on the written word, but very little is actually known about them and their employment. They are primarily of instrumental value, working material and as such anonymous, usually noticed only when they are not available or functioning. In everyday language, the concept of records is used rather indiscriminately, often synonymously with or
substituted for documents or information. The relation between those concepts is however a bit more complex:

“records consist of data/documents/information. They may consist of all these things simultaneously. Thus, a record may be a collection of data. It may be one document or a sequence of documents. It will definitively consist of information in some form” (Reed, 2005, p. 102).

In contemporary definitions of records, information is an almost compulsory component, for instance in international standards like the standard for archival description, which defines records as “[r]ecorded information in any form or medium, created or received and maintained, by an organization or person in the transaction of business or the conduct of affairs” (ISAD(G), 1999), or the international standard for records management, 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” (ISO 15489-1, 2001). Information is not explicitly defined, but is in the last example obviously used with two different meanings in the same sentence. To be a record the information must be connected to a context, to the creator or the creating activity, but it must also be recorded, i.e. materialized in some form.

Thomassen (2001) gave a more elaborated definition:

“A record is information that can be retrieved in the form of a document, i.e. the smallest unit of data that can function as information. Records are distinguished from other documents by the reasons of their creation. Unlike books in a library, which are the product of a conscious collection activity, records have in common the fact that they are linked to the process that produced them. Records are process-bound information, that is to say, information that is generated by and linked to work processes. A work process is the organizational form in which a task or part of a task is carried out. In companies we talk of business processes” (Thomassen, 2001, p. 374).

It is interesting to note that Thomassen identified records as documents, yet without explicitly defining the latter. The focus on processes refers to the fact that records are reflecting the activities and events they are parts of, but the wording suggests that Thomassen was inspired by contemporary management discourse. Thomassen further stated that records serve different functions; the overall accomplishment is to serve as memory of individuals, organizations, and society. Memory can function in different ways; to support organizational management, provide accountability and evidence, and a cultural-historical function.

The so-called UBC Project held a more material approach to the concept of records. One purpose of the project was to define what a record is, especially in an electronic environment. Part of the project’s result was a glossary of concepts necessary for developing requirements for records in electronic systems. Even here records were considered as documents. A record was defined as a “document created by a physical or juridical person in the course of practical activity.” A
document was then defined as “[i]nformation consigned to a medium”. Using the analytical tools of diplomatics combined with archival science the project reached the conclusion that “[…] records are necessarily composed of documents and the complex of their relationships” (Duranti et al., 1997), i.e. having both material and abstract components. The concept document is also treated in the international standards, determined as “[r]ecorded information regardless of medium and characteristics” (ISAD(G), 1999), or “recorded information or object which can be treated as a unit” (ISO 15489-1, 2001). A document has thus a material quality, being a carrier or container of information, but not necessarily linked to a certain context. None of the works cited above goes into the complexities of the concept information, but seem to glide between a notion of the cognitive content and its material manifestation.

The concept record is thus to some extent an abstraction, constituted of contextual relations adherent to documents, while the documents are the material objects. However, in practice and also often in theoretical works, the term records is generally referring to the actual documents. Records could thus be considered to have a material component, composing artefactual objects. Pugh (2005, pp. 35-36) attributes this as the intrinsic value of records.

4.1.2 The records and the archives

Records are usually referred to in plural form; they are considered as collective entities. They have according to Schellenberg

“a collective rather than a unitary significance. All records arising from a particular activity have a cohesive character and are part of one another. They have a meaning as a group rather than as single items. They lose their significance if they are dealt with as single items rather than as collective units” (Schellenberg, 1988 (1965), p. 67).

A similar view is held by Nils Nilsson (1973) , who claimed that records obtain their full significance first when they are viewed in a collective context. At least in Swedish archival tradition and some other European countries these collective entities are considered as archives. Conversely, in the American tradition a distinction is made between current records and archival records or archives. Schellenberg regarded records as

“[a]ll books, papers, maps, photographs, or other documentary materials, regardless of physical form or characteristics, made or received by any public or private institution in pursuance of its legal obligations or in connection with the transaction of its proper business and preserved or appropriate for preservation by that institution or its legitimate successor as evidence of its functions, policies, decisions, procedures, operations, or other activities or because of the informational value of the data contained therein” (Schellenberg, 1956b, p. 16).
Schellenberg made a clear distinction between records and archives concluding that:

“[t]o be archives, materials must be preserved for reasons other than those for which they were created or accumulated. These reasons may be both official and cultural ones” (Schellenberg, 1956b, p. 13).

Records did not emerge out of nothing, they are purposively created, but that did not necessarily make them archives according to Schellenberg. They had a “potential archival quality”. When the records had fulfilled their original purpose for the creating agency, they could be preserved for other reasons. The records which finally acquired status as archives were

“[t]hose records of any public or private institution which are adjudged worthy of permanent preservation for reference and research purposes and which have been deposited or have been selected for deposit in an archival institution” (Schellenberg, 1956b, p. 16).

The genesis of modern archival theory, the Dutch Manual for the Arrangement and Description of Archives originally published in 1898, provides a definition of archives, but not of records:

“An archival collection is the whole of the written documents, drawings and printed matter, officially received or produced by an administrative body or one of its officials, in so far as these documents were intended to remain in the custody of that body or of that official” (Muller, Feith, & Fruin, 2003, p. 13).

According to them, archives consist of documents, not records, but this could be due to the fact that the concept “record” does not exist in the Dutch language. A slightly different definition was presented by the British archivist Sir Hilary Jenkinson, who gained great influence in the English speaking world. His book A manual of archive administration was the leading textbook for 40 years. Jenkinson stated that a document that belonged to an archive

“[…] was drawn up or used in the course of an administrative or executive transaction (whether public or private) of which itself formed a part; and subsequently preserved in their own custody for their own information by the person or persons responsible for that transaction and their legitimate successors” (Jenkinson, 1922, p. 11).

These early definitions were enumerating, which meant that what was not explicitly included was left out of the definition. This meant that the concepts could be regarded as rather rigid, and a literal interpretation would not allow for adaption to new circumstances, i.e. the impact of technological and organizational changes.

Hofman summarized the most common notions of archives:

“- a conceptual notion of all the documents created and/or received by one records-creator in conducting his business […]- those records of an organization or individual that have continuing value; - a conceptual entity in the process of
being formed by an organizational recordkeeping system; - a physical entity being the result of a chain of activities […] of one or more record creators as transferred by the final owner to an archival repository […]” (Holman, 2005, p. 137).

The first can be said to correspond to the modern Swedish view, codified in the Archives Act (SFS 1990:782, section 3). The second is a “mainstream” approach, accepted by many archivists in most countries, similar to the Schellenbergian view. The third and fourth notions represent rather recent overtures, for instance advocated by contemporary Australian theorists. Like the concept of records, the concept of archives is subject to various interpretations. Nevertheless, there are some common denominators: archives consist of records, which per definition implies that they have their origin in business activities; and, they are collective entities making up a whole that is constituted by the relations between records.

4.1.3 The properties of records

One of the most comprehensive and prominent elaboration of the properties of records was made by Schellenberg, who recognized primarily two kinds of value in records:

“primary values for the originating agency itself and secondary values for other agencies and private users. Public records are created to accomplish the purposes for which an agency has been created – administrative, fiscal, legal, and operating. These uses are of course of first importance. But public records are preserved in an archival institution because they have values that will exist long after they cease to be of current use, and because their values will be for others than the current users” (Schellenberg, 1956a, p. 238).

Schellenberg regarded primary value as basically the business of the creating agency, not the business of the archivists. He therefore focused on the, in his opinion, more important secondary value. Here he conducted his famous argument about the distinction between evidential value and informational value. This distinction was meant to serve as a practical tool when appraising records to be preserved for the future. Schellenberg claimed that there are two issues to consider when appraising the secondary value:

"(1) the evidence they [public records] contain of the organization and functioning of the Government body that produced them, and (2) the information they contain on persons, corporate bodies, things, problems, conditions, and the like, with which the Government body dealt” (Schellenberg, 1956a, p. 238).

It is important to note, that the two categories did not refer to different types of records. The same records could contain both kinds of values. Schellenberg determined evidential value as
"[t]he records of an agency that contain 'evidential' value, then, are those necessary to provide an authentic and adequate documentation of its organization and functioning" (Schellenberg, 1956b, p. 140).

Records with informational value could then be understood as records containing information about anything else:

"Informational values derive, as is evident from the very term, from the information that is in public records on persons, places, subjects, and the like which public agencies deal; not from the information that is in such records on the public agencies themselves" (Schellenberg, 1956b, p. 148).

Examples were "Records relating to persons", "Records relating to corporate bodies" and "Records relating to places" (Schellenberg, 1956b, pp. 153-160). The values of records, evidential as well as informational, could thus be attributed to the information content of the records.

The Swedish theoretician Nils Nilsson (1983) performed a similar, but more stringent discussion, strangely enough without any references to Schellenberg. Nilsson also labelled records according to value. His basic standpoint was that archives are entitities, consisting of mutually dependent parts, and the whole is larger than the sum of the parts. The entirety and the relations between the parts, and between the parts and the whole, were generated by the common origin in an activity. The records were thus the material results of different processes. Here Nilsson introduced the dichotomy processual and informational value, his most important contribution to archival theory. Processual value, which seems related to Schellenberg's evidential value, was due to certain properties of records because of their origin in an activity:

"They have been parts of a course of events. They are often provided with later annotations and references to other records. Therefore they can later be studied as elements in a process. The knowledge that can be gained from them, is not just due to the wordings and the text, but to the records' position in the archives and in the course of events" (Nilsson, 1983, p. 25. Sundqvist's translation.).

This implied that records were something else than just information content. Nilsson explicitly argued that processual value was not primarily decided by the content in records. Instead, it could be expressed by for instance physical order, annotations, and references between records. Informational value then, consisted according to Nilsson of "...facts, views, atmosphere etc., that more or less intentionally are conveyed through the text" (Nilsson, 1983, p. 24. Sundqvist's translation.). The difference between processual and informational value is more distinctive, than between Schellenberg's evidential and informational value, even if they seem related. Nilsson vindicated the primacy of the processual value, and regarded that as a prerequisite for the informational value. It verified the information and made it possible to interpret and use.
Angelika Menne-Haritz, one the most prominent European theoreticians of today, moved the attention from the records as such, to the actual events and transactions resulting in records. Menne-Haritz (1998) considered records as materialized decision processes. Records are not narratives of transactions, they are the transactions themselves. This led to the standpoint that records are not primarily information or information carriers:

“Records are not created for the purpose of being read in archives. During their creation, they serve other purposes. Their capacity to transfer information is an addition, not part of the intentional purpose for writing them down. So records are not information, they are only the source of it. Archiving is not information processing” (Menne-Haritz, 1998, p. 19).

Records are tools used to perform actions, and some records can be seen as performative acts with transformative effects. An administrative decision does not exist until the minute is signed and approved; an agreement is not valid until it is signed by the parties. This implies that records, even if preserved in total, are only fragments of the actual course of events. They do not reproduce the past, but they can provide means to reconstruct parts of what has happened.

Menne-Haritz, strongly influenced by Schellenberg, developed his reasoning further. She argued that Schellenberg’s definition of evidential value should not be understood as that evidence could be found in records about procedures and guidelines. Instead

“[e]vidence means patterns of processes, aims and mandates, procedures and results, as they can be observed. It consists of signs, of signals, not primarily of words. /---/ It might even be the following up of papers in a file, indicating a sort of working order” (Menne-Haritz, 1994, pp. 113-114).

This is almost the wording of Nils Nilsson, and like Nilsson Menne-Haritz gave primacy to evidence:

“The informational content in records is never objective, it cannot be so. So the role of evidence can be described as giving insight to the primary purposes as a necessary supplement to informational values, without which the latter are meaningless, could be interpreted in the wrong way or are simply trivial. Records cannot be made sources and historical research would lack context information. To become sources for any secondary purpose, records must be described and appraised so that evidence is accessible and understandable /---/ and hence the informational content understandable” (Menne-Haritz, 1994, p. 124).

Several other contemporary writers advocate the opinion that records are evidence of transactions, not primarily information sources, for instance Richard Cox:

“A record is a specific entity and is transaction oriented. It is evidence of activity (transaction), and that evidence can only be preserved if the record’s content, structure, and context are maintained. Structure is the record form.
Context is the linkage of one record to other records and to the originating process. Content is the data or information, but content without structure and context cannot be reliable data or information” (Cox, 2001, p. 46).

Records are thus not primarily kept because of their information content, but “to meet the needs of accountability, evidence, and corporate memory [...] to capture transactions, document activities, serve legal and administrative functions, and provide a basis for memory” (Cox, 2001, p. 25).

Bearman (1994) also highlighted the distinction between records and information, or rather between information with value as records, i.e. evidence of transactions, and other information, although an explicit definition of the latter is missing. Bearman’s ambition was to develop strategies for the management of electronic records, within the records-creating organizations. An important task for records and archives management was thus to identify the information that qualified as records. The purpose is, according to Bearman, to achieve organizational accountability. Bearman approached the issue from present to the future, instead of from present to the past as in traditional archival theory. Thus, he addressed the “primary values” of records, omitted by Schellenberg. A central part in developing records management strategies, according to Bearman, was to create and maintain recordkeeping systems, which captured the contextual information necessary to provide evidence of business transactions. Provenance was the materialization of context, and Bearman argued that the systems as such should be considered as the provenance of records because of their definite boundaries. A recordkeeping system should be distinguished from an information system, which “store information in discrete chunks that can be recombined and reused without reference to their documentary context” (Bearman, 1994, p. 35).

The transactional nature of records has also been emphasized by proponents of the Australian records continuum theory (for an overview see McKemmish, 2001). According to this approach records are always connected to social activities, either personal or business activities. They are kept as evidence of transactions and it is their intent and functionality that constitutes “recordness”, not information content or physical characteristics. The record is thus more of an abstract notion, not reducible to the physical components. The continuum approach challenges the basic notion of records as fixed entities, and considers records as dynamic objects: “[t]he record is always in the process of becoming” (McKemmish, 1994, p. 200). During a continuous process records could be amended, completed, reorganized, and used in various ways. According to the continuum theory there is no fixed point, where the records are finished and where the contextual relations are established for once and all. This means that not only the origin of creation, but also further use can be incorporated in the concept of records.
4.2 An activity theory framework

4.2.1 Activity theory

The overarching theoretical framework guiding the analysis is activity theory. Activity theory has philosophical roots in historical materialism and emanates from the Soviet socio-cultural school of developmental psychology, based primarily on the works of Lev S. Vygotskij, Alexander Luria and Aleksej Leontiev. It has later been applied as a framework for a more general social analysis in, for instance, educational research and Human-Computer Interaction (HCI) research (e.g. Engeström, 1987; Kaptelinin & Nardi, 2006; Nardi, 1996b; Säljö, 2000; 2005). Recently activity theory, or the wider notion of socio-cultural theory to which it belongs, has also attracted interest in information science research (e.g. Hjörland, 1997; Nowé Hedvall, 2007; Spasser, 2002; Sundin, 2003).

According to Kaptelinin (1996), activity theory is founded on six basic principles:

1. The coupling of consciousness and activity. As the theory was originated in the discipline of psychology, the development of human consciousness was the original object of study. The fundamental idea is that consciousness in a wide sense, the human mind, has emerged through activity, i.e. interaction with the environment. It does not evolve as an independent biological developmental process, nor by a simple reaction to external stimuli (cf. Säljö, 2005).

2. Object-orientedness. Activities are directed to phenomena that objectively exist in the environment, i.e. objects. The environment constitutes an objective reality, and even social and cultural phenomena have objective properties, independent of the individual’s understanding of them.

3. The hierarchical structure of activity, further explained below.

4. Internalization-externalization. Mental processes are derived, but not replicated, from external actions and social interactions through internalization. Thus, new knowledge and new abilities can be acquired. Mental processes can then be externalized, and made manifest and communicated by external actions. Internalization-externalization is a continuously on-going process of transformation.

5. Mediation. Mediation is a basic notion of activity theory. It is presumed that humans experience the world and connect to each other not immediately, but through the mediation of artefacts including non-material constructs.

6. Development. Activities are changing and developed over time. To understand a phenomenon it is necessary to study how it has evolved into its existing form. Activity theory thus includes a component of historical analysis.
The qualities of activity theory in relation to the purpose of this study are that it provides a framework for analysing a real-life practice, where individuals interact with each other and with technological and intellectual objects; and that it does not ignore more stable contextual attributes and historical conditions on behalf of the situational. The use of and search for records is a highly mediated practice, involving the users interacting with human as well as artefactual intermediaries, undertaken within or as part of a specific social and historical context. Activity theory is thus highly applicable to the object of this study. The ontological standpoint is realistic; there is a material world independent of human consciousness, and we also can gain knowledge about it by interacting with it. Our perception of it is, however, mediated and dependent on social, cultural and historical circumstances, corresponding with the notion of critical realism. As a complex theory, some parts have more relevance for the object of study, while less attention will be paid to others.

4.2.2 Activities and activity systems
As the name suggests, the prime unit of analysis in activity theory is an activity, which in this context is given a special meaning. An activity is a historically and socially situated accomplishment performed by a subject, an individual or a group, directed to an object in order to reach an outcome. The object can be material or ideal. The object motivates the existence of activity, and different objects distinguish activities from each other. The relation between the subject and the object is a more or less complicated mediated process. This basic conception was first outlined by Vygotskij (1978, p. 40), later visualised as a simple but illustrative triadic model:

![Figure 4.1 The basic structure of an activity (e.g. Kuutti, 1996a, p. 28)]

The original applications of activity theory concerned developmental psychology and the individual’s relations and interactions with the surrounding world. The scope could therefore be considered to be rather local and particularized. However, the impact of a wider collective and societal context is implicit in the model, which is based in historical materialism. Neither should the notion of subject be exclusively interpreted as an individual. Activity is often a collective enterprise, and the subject could be a collective, or if so preferred, an
activity could involve several subjects. This was emphasized already by Leontiev (1978, p. 63), and the simple triadic model has been criticized and extended by Engeström (1987), who explicitly added community, those who share the same object, as a component in the model. Then two more relationships became visible: the relation subject–community, and the relation object–community. These more complex structures of activities are defined by Engeström as activity systems (1987, p. 78). For instance, the business of an organization could be regarded as an activity system. Neither should activities be regarded as independent entities. Activities and activity systems are related to each other in more or less interacting networks.

Activities, and more so activity systems, are more or less durable high-level formations, realized by more directed, short-term performances. Activities can thus be said to have a hierarchical structure. A certain feature of activities according to activity theory, is that they are purposive. They are generated by a motive.

"The main thing is that behind activity there should always be a need, that it should always answer one need or another. Thus the concept of activity is necessarily connected with the concept of motive. Activity does not exist without a motive; 'nonmotivated' activity is not activity without a motive but activity with a subjectively and objectively hidden motive" (Leontiev, 1978, pp. 62-63).

Activities are realized by actions subordinated to a conscious purpose. "The actions that realize activity are aroused by its motive but appear to be directed toward a goal" (Leontiev, 1978, p. 63). The concept of action is related to the concept of task (Leontiev, 1978, p. 65; Nardi, 1996a, p. 74), which has been used as an analytical concept in systems design and to some extent in studies of information seeking and use (e.g. Byström, 1999; Byström & Hansen, 2005; Hackos & Redish, 1998). Byström & Hansen (2005) connect information seeking and information search to task performance, particularly work tasks, proposing a three-level model where information seeking is considered as a sub-task of the work task, and information search (or retrieval) as a sub-task of information seeking.

Actions are executed as operations, limited procedures performed more or less automatically, determined by the current conditions. The conditions can include available resources, technology, organization, individual characteristics etc., and are both historically and situationally shaped. Activities thus form systems consisting of goal-directed actions performed through operations. In real life actions are undertaken in sequences, in order to obtain a particular goal. Activities consist of chains of actions (Kuutti, 1996b, p. 30), i.e. processes, rather than of singular disconnected actions. Actions and operations are initiated by the overall motive for the activity, and cannot be understood independent of the framework of the activity. However, they do not conflate with the activity. A particular action can be part of different activities, and progress from one activity to another. The
elements of an activity can change over time and they can shift between the levels as conditions change. Thus actions can turn into operations as with practice they become routine (Leontiev, 1978, p. 66). Operations can require conscious attention due to changing conditions, for instance the introduction of a new tool, thus transforming into actions.

Activities and activity systems are changeable due to human action. An important factor behind development and change is what activity theory calls “contradictions”, inconsistencies and discrepancies between activities or elements of an activity. Engeström identified four types of contradictions within the organizations: primary contradictions within the components of the activity; secondary contradictions between the elements of an activity; tertiary contradictions between different developmental phases of an activity; and, quaternary contradictions between activities and neighbouring activities, or between activity systems (Engeström, 1987, pp. 82-91). Contradictions can be manifested as problems, disruptions and breakdowns, calling for human agency. An example can be the presumed inadequacy of a tool, leading to a change in work processes. This can be seen as changes and transformations caused by endogenous factors, contradictions within or between activities in an activity system. However, since activities (and organizations) are open systems, the impact of exogenous factors, i.e. changes in other activity systems, must be taken into consideration. Exogenous factors like changes in law, new technologies, and economic fluctuations might be the cause of changes and contradictions, and lead to transformation of activities.

4.2.3 Mediating artefacts

As stated above, mediation is a focal concept of activity theory. The significance of mediation was first acknowledged by Vygotskij, who claimed that higher mental processes and human consciousness were developed through interaction with the external world, and that the interaction and perception of the environment was mediated by artefacts, often referred to as tools. Wertsch (1998) introduced the concept of mastery, claiming that human knowledge and skills basically are acquired by learning to use tools. Individuals adopt existing socioculturally developed tools, re-shape them and make them to their own. This process is referred to as appropriation, which is not accomplished without friction.

These tools could be material things, but also immaterial constructs like ideas, ideologies, methods, organization, rules, and symbols. Even language itself, as emphasized by Vygotskij (1986), conceptual apparatuses and categorizations could be considered as tools for human activity. The relation between humans and artefacts is however considered asymmetrical in activity theory (Nardi, 1996a). Artefacts do not act consciously. Goals and motives are human features, which can
be mediated and executed by artefacts, but not created by them. A similar view is held by Archer (1995), who elaborated the relation between actors and agency. Things, as well as humans, could have agency due to their mere existence:

“[...] ‘agency’ is the mere capacity to ‘make a difference’ to society, but [I] do not see that this necessarily entails activity especially if this means an ability ‘to have done otherwise’” (Archer, 1995, pp. 118-119).

Things can have effects, cause change or put constraints on human activity, but not perform activity themselves. They can be agents, but not actors since they do not possess some form of consciousness or intentionality. Activity theory thus diverges from some socio-technical approaches like actor-network theory, which equalizes human and non-human subjects in social interaction (e.g. Frohman, 1995; Latour, 1987).

Artefacts are thus inevitable components of activities and mediate the relations between the various elements of an activity. This means that mediation takes part not only between subject and object, but also between subjects, for instance between a user of records and an archivist. “Equipment mediates activity connecting man not only with the world of things but also with other people” (Leontiev, 1978, p. 59). In Engeström’s extended model of activity systems, the relation between subject and object is mediated by tools, the relation between subject and community by rules, and between community and object by the division of labour, i.e. Engeström put some emphasis on institutional factors (Engeström, 1987, p. 78). However, since tools can be understood both as physical and immaterial, the difference between the categories of mediational means is not entirely clear, a set of rules or an organizational form could for instance be regarded as tools in Leontiev’s sense. The question is whether Engeström actually extends Leontiev’s original framework, except by visualizing some components implicitly inherent in the original model.

Artefacts are never neutral means. They are created within a socially and historically situated human activity, thus human knowledge, ideas, conventions and concepts are built in to them. But even if they are created by humans, are they not emerging as solitary creations of the individual’s brain. They often evolve due to other demands than the mental functioning of individuals: historical tradition, decision-making processes and other organizational procedures, economic considerations etc. (Wertsch & Rupert, 1993). Their employment, as well as the development of new artefacts, is thus restricted by a historical, social and technological legacy. Artefacts are thus a means of human achievement, but they also cause constraints.

“The tool is at the same time both enabling and limiting: it empowers the subject in the transformation process with the historically collected experience and skill “crystallized” to it, but it also restricts the interaction to be from the perspective of that particular tool or instrument only...” (Kuutti, 1996b, p. 27).
These constraints can be a cause of contradictions in activities and activity systems.

The concepts of mediation and mediating artefacts have an obvious application to search for records. Search for records is a highly mediated process, with several instances of mediation involving both artefactual and human intermediaries, and physical and conceptual means of mediation.

4.3 Information behaviour and means of mediation

4.3.1 A model of information behaviour

Vakkari (2003) states that information science deals with the mediation of stored information between producers and users, individuals’ and groups’ information environments, information needs and ways of information seeking, and the organization of information resources to enhance access. This is also the object of this study, but with a focus on records and not information in general. Research about information need, seeking and use has played a salient role in information science. Since the 1990s contextual and social aspects of information seeking and information seeking in everyday life have attracted attention to a larger extent (Vakkari, 1997). Attention has also widened from seeking and use of published material to information of various kinds and a rather rich progress of theory generation and development of new models has been seen within the field (Fisher et al., 2005). Information science can thus inform the general framework of activity theory with concepts and models that allow for a more detailed analysis of the particular social practices of information seeking and use.

Wilson (1999; Wilson & Walsh, 1996) has launched a model of information behaviour as a general framework of information activities, see figure 4.2 below. He stated that information seeking is not an isolated phenomenon, but a component in a larger context not only covering actual seeking activities, but also the need for information, its use, transfer and exchange. As an operational concept within the information behaviour framework information seeking is defined as

“ [...] the variety of methods people employ to discover, and gain access to information resources” while information search is “ [...] a sub-set of information-seeking, particularly concerned with the interactions between information user (with or without an intermediary) and computer-based information systems, of which information retrieval systems for textual data may be seen as one type” (Wilson, 1999, p. 263).

According to Wilson, those concepts are “nested” to each other in what can be described as an hierarchical structure. A slightly different and for this study more adequate definition of the concepts was provided by Byström & Hansen, who claimed that information seeking activities
“focus on the satisfaction of an entire information need (consisting of different types of information, subject topics, etc.) through – often several – consultations of channels and sources”, while information search activities “focus on the satisfaction of a separable fraction of an information need through a single consultation of a source or sources” (Byström & Hansen, 2005, p. 1056).

Figure 4.2 A model of information behaviour (Wilson, 1999, p. 251)

The details of Wilson’s model can be discussed, and it has been contested and supplemented with other components even by Wilson himself, but one of its merits is that it explicitly relates information seeking and search to information needs and uses. Search for and use of records are, as stated above p. 24 f., purposive activities generated by a specific need. Information seeking is generated by a need, and is aimed at the use of the obtained information resulting in an outcome. Need and use are, however, not always inseparable entities (cf. Taylor, 1991). Use, or at least intended use, can be seen as a major motive behind information seeking activities. A taxonomy of the use of records was proposed by Shepherd & Yeo (2003, pp. 155-156), who discussed use in relation to the records’ properties. The motivations to use records were condensed into three categories:

- business purposes to support administration, legislation, public or professional service, economy or transactions between individuals or organizations;
- accountability purposes to prove that organizations meet legal or other regulatory requirements;
• cultural purposes to gain a wider understanding of various phenomena in the world (outside business activities).

According to archival theory these manifestations of needs can be derived from the basic properties or values of records: informational, evidential, and artefactual or intrinsic value. A strong relationship between accountability and records’ evidential value is presumed. In the other cases the evidential character is not predominant, but rather an underlying means to accomplish the informational and intrinsic values of records.

Users of records could be analytically categorised in various ways. Pugh (2005) theorized the concept of users of records in her textbook on reference service. First a distinction was made between direct and indirect users (Pugh, 2005, pp. 37, 40) The direct user was defined as someone that was taking part of a record or obtaining information from it, including reading a document, receiving a copy, receiving information by mail, telephone or in person, or loaning a document, while indirect users were the beneficiaries of others’ direct use, for instance by studying books or other publications based on records. She further identified two primary groups of users (Pugh, 2005, pp. 43-60):

• vocational users
  - staff, often neglected but one of the most frequent and important user groups;
  - professional users like lawyers, engineers, journalists etc., who use records due to their work;
  - scholars using records for academic research;
  - students, like scholars conducting academic research, but perhaps with less skills and thus with special demands for service;
  - teachers, for instance in history and social science classes.

• avocational users
  - genealogists;
  - amateur historians;
  - “hobbyists” with various research interests.

Conway (1994, p. 51) made a similar categorization, identifying users according to their motivation and the scope of the materials sought:

• occupational users like government administrators;
• journalists and lawyers;
• academic users;
• personal users, for instance family historians;
• avocational users like “hobby historians” with a wider range of interest than personal matters.

Both Pugh and Conway were identifying users from the perspective of archival repositories, and are assuming that users had some sort of historical interest. A slightly different way of categorising users was proposed by Yeo (2005, pp. 37-39,
According to him users could be divided into three main categories:

- self-directed users aiming to fulfil individuals’ personal needs and interests; they may be material, political, emotional or just for pleasure.
- occupational users, who use records in connection with their professional activities, for instance by journalists, estate agents, engineers, and professional researchers.
- educational users, who use records for instance in connection to school assignments, students’ thesis work, or by study groups.

This categorization acknowledged the existence of users with other than scholarly, historio-cultural or professional interests, and had a wider scope than just archival repositories.

Information retrieval was then considered to be a sub-set of information search, defined as “searching for and extracting information from an electronic set of information objects” (Byström & Hansen, 2005, p. 1057).

### 4.3.2 Representations and representational systems

The focal point of the information behaviour model is the actual search process, i.e. the user’s interaction with the information sources usually by mediation of an intermediary, artefactual or human. The concept of artefacts has been elaborated by Marx Wartofsky (1979), who recognized three kinds of artefacts:

- primary artefacts that are directly used in the production of the necessities of life and the reproduction of the species, like clubs, axes, needles etc.;
- secondary artefacts used in the preservation and transmitting of skills; and finally
- tertiary artefacts, rather abstract derivations of praxis and the material world, like imaginations, aesthetic perceptions, ideational opinions etc. In this context, the second category is of most interest.

Wartofsky categorised secondary artefacts as representations, the symbolic means of communicating actions, skills and ideas:

“[...] reflexive embodiments of forms of action or praxis, in the sense that they are symbolic externalizations or objectifications of such modes of actions – ‘reflections’ of them, according to some convention, and therefore understood as images of such forms of action – or, if you like, pictures or models of them”

(Wartofsky, 1979, p. 201).

The fact that representations are symbolic means that they do not have to be exactly corresponding to the represented object. Anything can be a representation of anything, presuming that the communicating parts can agree that the representation shares some attributes with the represented phenomenon. Normally
a representation is less rich in qualities than the represented object, since it serves
as a simplification or a model of a complex phenomenon.

Representations have a central function in the handling of information and play
an important role in the process of information search. Representations like
inventories, catalogues, interfaces etc. mediate between the user and the
information sources. Buckland (2003) described information representation as

“[…] the extraction of some elements (e.g. keywords or phrases) from a
document so that its essence can be characterized and presented. Typically,
information representation can be done via any combination of the following
means: abstracting, indexing, categorization, summarization, and extraction”
(Chu, 2003, p. 13).

A representation can be considered as a surrogate of the represented object.
Buckland (1991, p. 53) identified five characteristics of representations:
1. They are more or less incomplete.
2. They are made for convenience, e.g. to facilitate retrieval.
3. They normally shift “from event or object to text, from one text to another text,
or from objects and text to data.”
4. Additional details could be added to them.
5. They could be iterated over and over.

Buckland obviously referred to physical representations, but representations
can also be manifested in less tangible forms like sorting order and cross-references
showing internal relations.

Recordkeeping practice has to a large extent been involved in the creation of
representations. This has often been undertaken in several instances, with different
purposes. Within administrative contexts various systems of controlling current
records have been developed: filing systems, classification schemes, registration
systems etc. These systems have normally aimed at controlling the records of
different fractions of the business. When the records were no longer in active use,
and perhaps transferred to an archival repository, more holistic descriptions of the
total of preserved records have been created to serve as inventories and finding
aids.

The process of representation involves selection, classification, highlighting or
ignoring parts of the objects represented. Thus, the result is a construct carrying
historically and socially influenced ideas, values and decisions, which are seldom
explicitly stated. Representations of records are carriers of the social, historical and
technological environment of the creators and reproducing their knowledge,
opinions and values: “Representational systems are both manifestations of a
culture as well as the infrastructure to support that culture” (Yakel, 2003, p. 6).
4.3.3 The role of the human intermediary

A central feature of activity theory is the idea of activities as collective and collaborative enterprises. In the process of reaching an outcome individuals interact with other individuals in several instances (cf. Bødker & Bøgh Andersen, 2005). Within information science the field of information retrieval (IR) research has focused on the interaction between users and information (retrieval) systems (e.g. Belkin, 1980; Ingwersen, 1996; Marchionini, 1995), however this interaction has often been treated in isolation. Saracevic (1989) claimed that the interaction generally is more complex, by adding the intervention of a human intermediary, see figure 4.3 below. Hence, information retrieval comprises various combinations of interactions between user, system and the human intermediary: dyadic like user-system or user-intermediary interaction or triadic like user-intermediary-system.

![Diagram](image)

**Figure 4.3 A triadic model of information search interaction (Saracevic, 1989, p. 76)**

The basic standpoint behind the model illustrated in figure 4.3 is that search interaction takes part as a discourse or dialogue. Even in the case of user-system interaction, the users are involved in a dialogue with themselves, with the system, and with the retrieved objects. The human intermediaries fulfil different objectives, e.g.:

“assist in the diagnosis of the user’s problem and in the (re)formulation of the question; suggest appropriate systems or databases for searching; translate the question into one or more queries and search strategies acceptable to the given system and database; conduct and modify searching; assist in the evaluation of results; provide the user with appropriate outputs; and/or counsel the user in follow-up activity” (Saracevic et al., 1997, p. 44).
The importance of human-human interaction during information seeking was already addressed by Taylor (1967) in the 1960s, who claimed that information seeking to a large extent takes part as a question-negotiation process. The information seekers’ questions are “open-ended, negotiable, and dynamic” (Taylor, 1967, p. 2). The question-negotiation process was conceptualized in a model consisting of levels of information need, questions formulated according to these levels, and “filters” through which the questions passed and where the librarian intervened to capture data to find out what information the user is looking for.

<table>
<thead>
<tr>
<th>Levels of information need</th>
<th>Questions</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>The visceral need - a conscious or unconscious need for information, which may not be possible to express explicitly</td>
<td>Unexpressed.</td>
<td>Subject definition.</td>
</tr>
<tr>
<td>The conscious need</td>
<td>A conscious description of the area of need.</td>
<td>Identification of the objective and motivation of the user.</td>
</tr>
<tr>
<td>The formalized need</td>
<td>A formal statement of the need in concrete terms.</td>
<td>Identification of the personal characteristics of the user, which determines what questions should be asked.</td>
</tr>
<tr>
<td>The compromised need</td>
<td>The question presented to the information system.</td>
<td>Translation of the inquiry to fit the information system.</td>
</tr>
</tbody>
</table>

Table 4.1 The question-negotiation process (Taylor, 1967, pp. 8-11)

The intervention of the human intermediaries is perhaps even more salient in the search for records, depending on two factors: in many cases users do not have direct physical access to the records, and the available search tools, as stated in section 2.4 above, require certain skills to use (cf. Long, 1989). During the mediating process the user’s question must be adapted to the structure and characteristics of the search tool, which can have both an enabling and a constraining impact on the search performance (e.g. Yakel, 2002, 2004).

Artefacts, like information systems, can function as a means of communication between users and human intermediaries, thus mediating not only between the subjects, the users, and the information sources, but also between several subjects. Yakel argues that in an archival setting the finding aids form the basis for
4.4 Concluding remarks

In this chapter a theoretical framework that will guide the analysis of the findings has been out-lined. The theoretical framework is three-fold, consisting of archival theory, activity theory and models of information behaviour.

Records play a conspicuous part in this study and have thus to be conceptualized. The record is the most important concept in archival theory. Its interpretation has gone from tangible items; documents, documentary materials, recorded information, to less tangible concepts like documentation of transactions, or even transactions themselves. This is partly due to technological development, providing media and formats of more ephemeral character, but also, and more importantly, to a greater theoretical awareness. With some variations, the definitions of records nonetheless have certain common denominators: Records are material objects. Even electronic records have a material manifestation, thus composing objects. Records consist of or contain information. They accomplish transactions as results of activities performed by organizations or persons, and thereby serve as evidence of those activities. Records can thus be regarded as objects, information or evidence. The need for records and their use is due to their specific properties. The conclusion is that according to archival theory the fundamental property of a record is its evidential character. It is the function as evidence of transactions that constitutes the “recordness”. From that can be concluded that these properties, in contrast to Schellenberg’s view, do not emerge in some secondary phase of the records’ existence, but are inextricably connected to the concept as such. This requires that some inherent intangible qualities are recognized: context and relationships. Preserving the context and the relationships between records, and between records and the activities they originated in, is and has been the primary concern of archival practice.

Records are socio-cultural phenomena and to understand their function and use it is necessary to regard them in a socio-cultural and historical context. Activity theory provides the comprehensive analytic framework for the study, identifying the basic units of analysis and their relationship to each other. The search for and use of records is a certain form of social practice, where individuals interact with each other and with artefacts in several instances of mediation to obtain certain outcomes. The concept of mediation is a central feature of activity theory, giving an understanding of how humans perceive and interact with the surrounding world and with other humans. The model of information behaviour can contribute with
more specific elements of the process of identifying information needs, searching, using and transferring information, in this study applied to records. The focus of the model of information behaviour is the actual search process where users of records interact with artefactual and human intermediaries. The first can be considered as representations of the records, carrying a historical, social and technological legacy. During the search process the users’ questions must be adapted to the structure and characteristics of those representations; a form of mediation which can be performed as a negotiation between the users and the human intermediaries.

As stated in chapter 1 and chapter 2 research in archives and information science is still of small proportions. As well as a need for more empirical studies in the field, there is need for theoretical development. This study aims to contribute to the enhancement of the theoretical foundation of the discipline, by applying activity theory as a general analytic framework complemented with archival theory and models of information behaviour for studying use of records, user behaviour and access. By combining concepts from archival theory to an information science framework, a theoretical development enriching both traditions will also be possible.
5. ARCHIVAL REPRESENTATION

The aim of this chapter is to give an overview of the principles of archival representation and to discuss the features of the traditional search tools that are used in a Swedish context. One of the main obligations of recordkeeping practice has been to create and maintain instruments to access and control the bulk of records emerging from organizational or personal activities. This endeavour has usually been undertaken as the fundamental activities of arrangement and description of archives. Traditionally this has been done when records are no longer in active use, and perhaps transferred to an archival repository. Thus the result is closely connected to the physical order of the records, and a presumed reconstruction of the past. Within administrative contexts other systems of controlling current records have been developed autonomously. However, both these activities have resulted in artefacts mediating the search for records, which will be discussed in the following. First a historical overview of the general principles of archival description will be presented with an international perspective, then the particular Swedish system for archival description will be outlined. After that follows an account of the background and development of administrative systems for registration of records and their application in Swedish public organizations. The overview will provide an explanatory background to the forms of archival representation and search tools that are used in the organizations presented in chapters 6 and 7.

5.1 Archival descriptive systems

5.1.1 The principle of provenance

Arrangement and description are based on archival theory, basically the idea of the record as a documentary product of activities and transactions performed by a creator, a person or an organization. According to Duranti (1989) archival theory has its origin in ancient legalistic principles concerning legal and economic transactions, where the records of the transactions gained value as evidence. Until the end of the 18th century recordkeeping practice almost exclusively concerned legal and administrative matters. Records were means of power. Then two phenomena occurred, which had powerful impacts on practice and the objectives of preserving records. First the political and administrative changes in Europe due to the French Revolution and the Napoleonic wars. The records created by the “ancient regimes” lost their practical political meaning, and were transferred away from the political centres. This was the origin of the national archival institutions (Duchein, 1992). At the archival institutions huge amounts of records from different administrative bodies were gathered, and efficient means to handle them
were needed. Diverse classification systems were developed during the 18th and 19th centuries, but the complexity and variety of the materials obstructed efficient solutions. Another approach was established in France 1841, called le respect des fonds, which prescribed that records from different administrative bodies should be kept as separate entities. I.e. the administrative origins, not any artificial classification scheme, were used as the basis for physical arrangement.

This system was supplemented in 1881 at the Geheime Statsarchive in Prussia with the Registraturprinzip or the principle of original order. According to that, records of different origin should not only be kept apart from each other, they should also be kept in the order given by the creating agencies (Nilsson, 1973). This reflected the registry system tradition that was applied in Prussia and in other North and Central European countries. The registry system implied that documents were classified according to a pre-defined scheme at their creation or arrival in the agency, registered and finally sorted according to the scheme (Duchein, 1992; Miller, 2003). The records were thus already from the beginning captured into a system that would be kept during the whole existence of the records. Le respect des fonds and the principal of original order together formed the principle of provenance, which has been the guiding principle of modern archival practice.

The second phenomenon that impacted on archival theory and practice was the appearance of history as a science. During the 19th century historical scholars became the primary clients of the archival institutions. Their demands promoted effective ways of arrangement and retrieval, but more important were the scientific methods developed by historians, especially the criticism of sources. The historians had to establish criteria to judge the authenticity of the records and to evaluate their accountability as sources, which also required knowledge about the origin of the records (Saarenheimo, 1997).

The location of provenance and its boundaries is, however, disputed. Traditionally, it has often been defined rather narrowly as the organizational unit creating the records. In a world with stable organizational structures and paper based records, this has been a workable solution. Still, it is not evident on what level, i.e. the organization as a whole or its sub-units, provenance should be identified in large, complex organizations (Duchein, 1983; Nilsson, 1986). Another interpretation is that it is the activity performed which creates the records, thus a processual view is propounded where the organizational structures are less important. The dynamics of modern organizations with frequent organizational changes and increasing integration between organizations has made it more difficult to keep records from different organizational units separate. The problem was acknowledged within the Australian Commonwealth Archives Offices already in the 1960s, giving rise to the Commonwealth Records Series system for archival
control (Hartland et al., 2005; Wagland & Kelly, 1994). In short, the system was based on the records series (i.e. sequences of records of the same type or generated by the same business activity) as primary unit of description, not the records-creator. Provenance or respect des fonds was effected by a system of intellectual control by adding contextual metadata (for instance about the creator) to the description, not by physical arrangement.

Modern information technology has further challenged the principle of provenance. In his seminal work from 1992, Charles Dollar identified what he called "technology imperatives", inevitable changes forced by technological development, affecting archival practice and principles, among them the principle of provenance. These imperatives were 1) the changing form of documents; 2) the changing methods of work, and; 3) the change of technology. The first concerned the fact that electronic documents lacked the fixity of traditional paper documents. Content and physical form are not inseparable, "...the logical and physical relations of electronic documents were in fact separated and stored independently of one another" (Dollar, 1992, p. 36). This had the implication that documents did not "exist", except in the moment of capturing. I.e. information was stored in bits and pieces, and could, with help of certain software, be connected and transformed to a document when needed. The changes in methods of work concerned the growing independence of time and space, decentralization, new forms of collaboration and eroding hierarchical structures. Finally, Dollar stated that "...technological innovations fuel new innovations" (Dollar, 1992, p. 42), referring primarily to the shorter life span of computer hardware and software, leading to technological obsolescence and risking information losses. These changes made it impossible to control records and describe their origin and function by the arrangement of physical objects. Nevertheless, he claimed that "[a]dherence to the principle of provenance is absolutely essential with electronic records" (Dollar, 1992, p. 51), but that it could not be reduced to keeping physical units separated. The solution laid rather in designing systems which captured the contextual information needed to fully understand the records, not merely to maintain physical order.

Today the principle of provenance can be understood as a theoretical assumption, upon which there is a general agreement, that the origin of records and their contextual relations matters in the understanding of them. Exactly how provenance should be defined and how far-reaching it is, is still an object for debate, perhaps more eloquent than before.

5.1.2 Archival description

According to the principle of provenance, records are treated as collective entities, the archives of the creator, not as solitary items. To understand the records
and to guarantee their authenticity, it is necessary to preserve the connections to the creator and the activities which resulted in creation of records. Records must be represented so the contextual framework of their origin is disclosed. This was the basic idea of the founding fathers of modern archival principles, Müller, Feith and Fruin (1940). Records were represented as whole entities, archives, in an hierarchical structure according to the creator’s organization, the creator’s activities and transactions performed.1 This constitutes what in traditional archival practice is referred to as archival description.

Archival description can be considered as both product and process according to the following definitions:

“The creation of an accurate representation of a unit of description and its component parts, if any, by capturing, analyzing, organizing and recording information that serves to identify, manage, locate and explain archival materials and the context and records system which produced it. This term also describes the products of the process” (ISAD(G), 1999).

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“1. The process of analyzing, organizing, and recording details about the formal elements of a record or collection of records, such as creator, title, dates, extent, and contents, to facilitate the work’s identification, management, and understanding. – 2. The product of such a process” (Pearce-Moses, 2005).

A more user-oriented approach was advocated by Haworth, who claimed that archival description was

“the presentation of an accurate representation of archival documents so that users can, as independently as possible, locate them. . . . If a user can retrieve what he or she is looking for with as little mediation as possible from the archivist, this constitutes an efficient finding aid” (Haworth, 2001, pp. 11-12).

The American term finding aid also indicates that the archival description is supposed to serve as a tool for access and retrieval. However, even if access and retrieval is emphasized in some contemporary definitions, archival descriptions were originally developed as a means for managing archival repositories.

Due to local traditions and, until recently, lack of standardization and professionalization, archival descriptions have produced a great variety of diverse catalogues, inventories, registers etc., even if the underlying rule normally has been the principle of provenance. Archival description as it is usually performed, has recently been criticized by post-modern archival theorists for representing only the perspective of the records-creators and reproducing existing power structures

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1 Records generated by private persons are very seldom registered, described or captured in information systems. It happens when records from more or less prominent persons are delivered to archival institutions or a libraries etc., usually but not always after the person’s death.
and biased opinions of individuals and groups (e.g. Cook, 1997; Cook & Schwarz, 2002; Duff & Harris, 2002; Light & Hyry, 2002). To what extent this is actually the case, whether it is inevitable and what should be done about it can be discussed, but it is a plausible assumption that archival descriptions and other renderings of records represent certain perspectives and have certain purposes.

5.1.3 International standards of archival description

Archival theory, and thus archival practice, has been interpreted in various national or even local ways, and national definitions and terminologies have been developed (e.g. Backhaus, 1995). To some extent this has impeded and delayed international cooperation. Archival practice has even in some cases been considered as idiosyncratic and entirely dependant on national or local administrative conditions, which has made international comparison impractical. However, during the second half of the 20th century, international cooperation and exchange has taken form, for example within the International Council on Archives. Among other things this has resulted in development of terminological authorities and programs of standardization (Backhaus, 1995). However, standardization programs originally started on a national level. One early example could be the development of the Swedish general archives scheme (see below section 5.1.4), but perhaps the most important driving force has been the progress of computer technology and an aim for automated retrieval systems.

In the United States attempts to build a national information system for archival holdings started in the 1970s, influenced by national library catalogues and the American standard for exchange of bibliographic information, USMARC. The USMARC-standard was, however, inadequate in describing the collective nature of records and their contextual relationships, so an adaptation to archival conditions was needed. Due to the work of the Society of American Archivists’ National Information Systems Task Force, a version for archival purposes was issued in 1983, the USMARC Archival and Manuscripts Control Format (AMC)\(^1\) (Madden, 1991). The MARC-format consisted of a set of structured data elements. For each unit described, e.g. a book, a collection, or an archives, three elements were defined: the structure, the content designation, and the data content (A General Introduction to the MARC Format). The concept structure referred to how the elements in a record were identified, e.g. different types of information were recorded in fields which were identified by tags. Content designation concerned established codes and conventions used to identify and further characterize the

\(^1\) According to American archival terminology, records from individual persons and families are defined as manuscripts, while the term archives is exclusive for records originating from organizations and institutions (e.g. Pearce-Moses, 2005).
data elements within a record. Content of the data elements was usually defined by specific external standards, thesauri etc. The MARC AMC contained seventy data variable fields, with between one and twenty subfields that contained a particular data element like name, date and so forth (Madden, 1991). Only a few fields were however mandatory. It should be noted that the USMARC AMC was a standard format for exchange of information about archives, not a standard for archival description. The construction of a uniform structure and a consistent terminology nevertheless contributed to the development of descriptive standards or guidelines, for instance the American Archives, Personal Papers and Manuscripts (APPM) and the Canadian Rules for Archival Description (RAD) (Duff, 1998; Hensen, 1989).

As an outflow of national standardization work, the International Council on Archives set up an ad hoc commission on descriptive standards in 1990 with participants from several countries, whose work in 1994 resulted in the General International Standard Archival Description ISAD(G)\(^1\) (Ottosson, 2000). A second edition was published in 1999. In 1996 ISAD(G) was supplemented with a standard for authority control (ISAAR(CPF), 1996). ISAD(G) should comply with and be complemented by national standards and practices. Thus, it prescribed the elements of archival description, but not the exact applications.

The aim of the standard was to

“a. ensure the creation of consistent, appropriate, and self explanatory descriptions;
b. facilitate the retrieval and exchange of information about archival material;
c. enable the sharing of authority data; and
d. make possible the integration of descriptions from different repositories into a unified information system” (ISAD(G), 1994, I.1).

The term “repositories” in “d” above was further changed to “locations” (ISAD(G), 1999, I.5) as a response to the criticism that it was conserving the separation between archival records and current records, and maintaining a repositorial perspective (see Duff, 1998 for an overview). In the second edition it was stated that

“the purpose of archival description is to identify and explain the context and content of archival material in order to promote its accessibility. This is achieved by creating accurate and appropriate representations and by organizing them in accordance with predetermined models. Description-related processes may begin at or before records creation and continue throughout the life of the records. These processes make it possible to institute the intellectual controls necessary for reliable, authentic, meaningful and accessible descriptive records to be carried forward through time” (ISAD(G), 1999, I.2. Sundqvist’s emphasis).

\(^1\) ISAD(G) is however not an international standard ratified by the International Standardization Organization, but a professional standard.
The standard defines 26 elements that could be combined when describing an archival unit (e.g. a fonds\(^1\), a series, a file or a record). Of these, six were considered mandatory for international exchange of information: reference code; title; creator; date(s); extent of the unit of description; and level of description (ISAD(G), 1999, I.6, I.12).

ISAD(G) was based on the principle of provenance, which in this interpretation entailed that archives were described in a multi-level hierarchical structure:

“...If the fonds as a whole is being described, it should be represented in one description... If description of the parts is required, they may be described separately... The sum of the total of all descriptions thus obtained, linked in a hierarchy, ... represents the fonds and those parts for which descriptions were made”(ISAD(G), 1999, 1.1).

**Figure 5.1 The hierarchical structure of a fonds (ISAD(G), 1999. Appendix A-1)**

The description should go from the general to the specific. At fonds level information for the fonds as a whole should be provided. For the subsequent levels, information for each level should be provided, but only information

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\(^1\) The French word *fonds* is used for the highest level in the hierarchy – the total of the records created and/or accumulated by a particular person, family or corporate body in course of that creator’s activities.
relevant to the specific level and information should not be repeated. The standard did not, however, specify the amount of levels. Each description should be linked to the next higher units, and the level in the hierarchy should be explicit.

Still, the structure was influenced by the idea of physical arrangement. The concept series for instance, gave associations to sequences of similar documents, not to intricate relationships.

To make transfer of information about archival material feasible, a standard format for information exchange was required. The advance of information and communication technology, especially the emergence of the Internet, made the MARC-AMC format inadequate. In 1993, a project took form at the Berkeley Library, University of California, aiming to find an encoding standard for digital archival descriptions such as inventories, registers, indexes etc (Ruth, 2001). A set of requirements for the encoding standard was decided, including:

“I) ability to present extensive and interrelated descriptive information found in archival finding aids, 2) ability to preserve the hierarchical relationships existing between levels of description, 3) ability to represent descriptive information that is inherited by one hierarchical level from another, 4) ability to move within a hierarchical informational structure, and 5) support for element-specific indexing and retrieval” (Development of the Encoded Archival Description DTD, 2002).

By analyzing a fairly large amount of finding aids from different locations, basic structural elements of archival description were identified as a starting point. The properties of traditional paper based archival description were thus inherent in the EAD. The mark-up language SGML was chosen as encoding format because it was a non-proprietary standard, independent of specific technological platforms and suitable for publication on the Internet. It was also apt to represent the hierarchical structure and complex relations of archival material, which allowed for greater flexibility than the MARC-AMC standard and common relational database applications (Ruth, 2001, p. 36-37). In 1996 a prototype DTD (Document Type Definition, i.e. rules for structuring a document) for archival descriptions was designed, called Encoded Archival Description (EAD). Prior to the release of Version 1.0 of the EAD DTD in 1998 it was decided to make the DTD compliant with XML. (For an overview of the structure of EAD see Ruth, 2001.) At first, the development of EAD took place independently of international standardization work, but later EAD was adapted to ISAD(G). Extending from the EAD development, a standard structure for contextual information, i.e. information about creators of archival materials, has been constructed corresponding to ISAAR(CPF) (Szary, 2005). Together these standards formed a fairly comprehensive rule for archival description; EAD as a data structure standard and ISAD(G) as a content standard, supplemented with standards for authority control of contextual data. However, both EAD and ISAD(G) have been created by mapping existing finding aids and
descriptive practices against each other, hence facing the risk of conserving structures based on repository control of physical items. The very idea of post-hoc description has further been challenged and considered as inadequate when it comes to electronic records created by the complex, ever-changing organizations of today. Instead a pro-active approach involving the capturing of metadata throughout the processes of creation, use, maintenance and preservation of records during their whole existence has been suggested (e.g. Cunningham, 2000; Wallace, 1995).

5.1.4 The Swedish system for archival description

Due to a rather centralized governmental administration and the principal role of the National Archives, a particular system of archival description has emerged in Sweden based on the so called general archives scheme for classification of records. It was developed for governmental agencies and has been mandatory only within the governmental sector, but has been disseminated to the municipal and the private sector and thus became a sort of de facto standard, albeit with local variations. The general archives scheme has often been understood as the application of the principle of provenance and therefore been considered as a solid, unquestionable and unchangeable practice. The reason for this is probably a confusion of the sections of the statute concerning arrangement and description of certain public archives issued 1903 (SFS 1903:56). The first section established that the records from one agency should be treated as one entity, and, if possible, preserved in the original order outlined by the creating agency. The second section contained a systematic plan for making inventory lists of records from central public agencies, which later became known as the general archives scheme. A separate statute (SFS 1903:104) established corresponding rules for town administration and the magistrates court. The general archives scheme thus became identified with the introduction of the principle of provenance in Sweden. Later the general archives scheme also gained a stronghold outside the governmental sector, in municipalities and private organizations, partly because of the publishing of widely spread textbooks, for instance Lindén (1934) for municipalities and Kromnow (1947) for business corporations.

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1 Allmänna arkivschemat.
2 Until 1971 were towns separate legal subjects with both governmental and municipal bodies. The governmental bodies were subordinated to the National Archives’ control.
3 In the latter case, the scheme has been employed almost entirely by archival institutions and repositories storing records from associations and business corporations. Few private organizations have arranged and described records within their normal administrative business.
In the late 19th century the National Archives was concerned about the state of recordkeeping at local agencies, and raised the issue of requiring governmental agencies to produce inventories and submit them to the National Archives. To prevent too extensive divergence and establish a common appreciation of the concept of archives, a certain amount of standardization was required. Several agencies had also at that point of time delivered certain quantities of records older than a hundred years to the National Archives. A standardized model for inventories thus served as an instrument for controlling the archival functions of subordinated agencies, and for the National Archives’ own repositorial management. However, the idea of standardized inventories was not new. Schemes for classifying records had already been established for some agencies, for instance the Navy and the local parishes (Burell, 1999; Gränström, 1976).

The scheme of 1903 outlined an hierarchical structure of the inventories based on formal criteria, i.e. types of records, and a special vocabulary was developed. The fonds was divided into sections coded by letters, according to which the records were classified. The original scheme consisted of seven capital sections:

A. Minutes and agendas
B. Drafts of letters
C. Journals
D. Ledgers and equivalent registers, lists, logbooks, and rolls, not pertaining to journals or accounts
E. Incoming letters
F. Accounts
G. Other special series
(H, I etc.)

The capital sections G and beyond were optional and dependent on local conditions. If an agency for instance had special collections of maps or drawings, separate capital sections for those types of records could be made up. If necessary a level of sub-sections could be added, as a common heading for series with similar or related content. Under each section the series of records were listed, i.e. suites of records of the same type, usually as physical volumes (bindings) in chronological order. Single items were not notated. It is noteworthy that the hierarchical structure bears certain resemblance to the structure of the ISAD(G), and that the Swedish system for archival description could be adapted to the standard without too much strain. During the 1990s the National Archives made efforts to coordinate descriptive practices in the governmental sector, in order to facilitate transfer and exchange of information electronically. Conforming to international standards was then considered necessary, and the National Archives’ and the provincial archives joint system for inventories, ARKIS II, was based on the requirements of ISAD(G) (Ottosson, 2000).
The order of the sections in the general scheme demonstrated a valuation of records, placing “the most important first”; normally minutes as they represented the decision-making processes of the agency. The system still allowed for adaptation to different agencies’ particular circumstances. For example, the capital section A for grammar schools consisted of minutes and examination ledgers, since the latter were considered vital for school administration. If necessary the structure could also be expanded by the use of additional capital sections or sub-sections, thus some flexibility was inherent in the seemingly rigid system. Hildebrand clearly stated that the inventories should reflect the functions and activities of the agencies (Bihang till Svensk Författningssamling 1903 nr 58). The intention was to provide a structure for describing series of physical records that emerged from the administrative activities, not a plan for sorting individual documents. However, the general principle of describing records according to type has sometimes been interpreted as an imperative necessity even on item level, resulting for instance, in case files having been broken up and the content arranged in different series.

The scheme comprised the main types of records created by 18th and 19th century governmental agencies in Sweden. Administrative changes during the 20th century called for extensions of the scheme, which were in accordance with the statute. One example was the establishment of action files\(^1\), consisting of records belonging to specific business matters. Swedish public administration is to a large extent performed by the handling of matters, resulting in a decision or resolution. The records produced during a matter were originally bound in volumes of drafts of outgoing letters and separate volumes of incoming letters. In the 20th century several types of records other than letters emerged during the process of handling matters: inquiries, calculations, statistics etc. Instead of splitting those into separate volumes a habit of making files occurred, i.e. keeping all records concerning one matter together in a physical file. These files soon became regarded as belonging to a capital section of their own in the general archives scheme, namely F, while the Accounts were pushed down to capital section G (Gränström, 1976). These modifications were soon considered as more or less mandatory, even if they were not codified by law until 1962 (SFS 1962:110), when a new version of the general archives scheme was issued. This version consisted of eleven sections, which were all fixed:

A. Minutes and agendas
B. Drafts of letters
C. Journals
D. Ledgers and registers
E. Incoming documents

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\(^1\) The term was introduced by Miller (2003).
F. Records arranged by subject (e.g. action files)
G. Accounts
H. Statistics
I. Maps and drawings
J. Photographs
K. Other records

Examples of Other records could be papers belonging to individual executives or collections of press clippings. In 1979, technological changes influenced the addition of another capital section. The idea was that audio recordings, moving pictures, computerized registers etc. should be assigned to the capital section where they belonged: audio recordings from meetings should be listed under A Minutes; computerized journals under C and so on. If necessary, information required for use, preservation, technical control etc. should be added to the inventory list (SFS 1968:473). Later this information was assigned to a special capital section, Z Documentation of recordings (SFS 1979:277). Cross references should then be made between Z and the other sections. This was a rather complex procedure and the underlying logic was not entirely clear. The use of section Z has thus been interpreted and applied in various ways.

Even if the general archives scheme has been widely adopted¹, it has not remained without criticism. The always zealous archivist and debater Sten Engström (1950) recognized several and partly inconsistent principles behind the division into capital sections: value, e.g. separating the journal from other kinds of registers; type of records; origin, i.e. made or received by the agency; and function, e.g. accounting. These inconsistencies made it difficult to decide what section records should belong to, and a risk of breaking up intrinsic relations. Engström further argued that the scheme was not entirely applicable on the records of local agencies that the call for uniformity obscured natural dissimilarities between different types of organizations. Gränström (1976) also put forward the inherent tensions in the scheme. The modifications of 1962 reinforced these tendencies and forced a more rigid application than the original scheme intended. The changes of 1979 further added to the complexity.

The problem was augmented by the dispersion of special forms for the inventories. The original form was issued as an appendix to the proclamation of 1903 (Bihang till Svensk Författningssamling 1903 nr 58) and copied in several textbooks. The form consisted of a legal size folder where the name of the archives should be listed on the front page and records listed in the spread. The inventory

¹ A prominent exception is the scheme for parish records, which were established already in 1883 and used until 1991. This scheme was in structure similar to the general scheme, but was not based on the principle of provenance.
was divided into columns and the series listed after each other in order of the general archives scheme. The field for annotations made it possible to add details about the information content, but has mainly been used for managerial notes about physical characteristics or cross-references to other series. Each series was coded according a certain principle: the capital sections were coded with capital letters, A for Minutes, B for Drafts of letters etc; the sub-sections with Roman numerals; sub sub-sections down to series with minuscules, or if necessary Arabic numerals. Each volume of records was then given a current number within the series. The volumes were thus given a unique identity consisting of the code and the current number, which made them possible to locate. This system was suited for post-hoc description of “dead” archives, but made amendments and extensions difficult. At the end of the 1950s the folders were replaced by a loose-leaf system, where each series of records was listed on a separate leaf. A new form came in to use, which became widespread and is still in use in many institutions1, figure 5.3 below. A certain jargon had also developed over time, for instance the use of the Latin term *signum* for the identity codes.

It has also been customary practice to make an introduction to the inventory, including information about the records-creators’ history and organization and the archives custodial history, selection and disposition of records etc. The loose-leaf system made description of still-growing archives more feasible, but perhaps obscured a survey of the archives in total and made the series appear as solitary entities to a larger extent. The structure of the loose-leaf form also gave prominence to chronological order because of the salient position of the time column, no matter what the characteristics of the materials. These features of the form were a legacy in the computer-based systems for archival inventories that emerged during the 1990s. By using mandatory fields, automatic coding and sorting of volumes according to pre-defined principles, these systems forced the inventories into an even more rigid structure. Manual inventories allowed for at least some deviation from the overruling norm.

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1 The form has traditionally been referred to as the GLA-form, assumed to have been constructed at the Provincial Archives of Gothenburg (GLA), and is documented in literature the first time in 1959 (*Arkivbildning och arkivvård hos häradsskrivarna*, 1959).
Figure 5.2 The inventory form

<table>
<thead>
<tr>
<th>Serierubrik</th>
<th>1</th>
<th>Seriesigt num</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plats</td>
<td>3</td>
<td>Valynummer</td>
<td>4</td>
</tr>
<tr>
<td>Anmärkningar</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Series’ caption, 2) Series’ identity code, 3) Place, 4) Volume number, 5) Time, 6) Annotations

The structure of the inventories reflected a storage order, not the processual relations between records and the generating activities. This can be illustrated by the following example. A conventional administrative process handled by an agency was usually initiated by an application from a “loyal subject” or from another agency, i.e. an incoming letter. The letter was registered in the journal and handed over for decision to an official or a college. The decision was annotated in a minute and delivered to the applicant usually as an extract from the minutes or made public as a resolution, i.e. out-going letters that in their turn were registered in the journal. Originally drafts or extracts of the out-going resolutions were noted in ledgers, so called registries. Later copies were taken and kept at the agencies. The incoming letters and copies of the out-going letters for each year were bundled or bound in separate volumes. The records from a decision process thus consisted
of several documents, kept in separate volumes. Those were later arranged in separate orders, making up different series that were described in the inventory as belonging to different capital sections according to the general archives scheme. The relationships between the records were not evident. A similar problem occurred with accounts, which consisted of different books or ledgers connected to each other in more or less complex bookkeeping systems. Each type of book, however, made up a separate series in the inventory, normally without references to related books. This problem, obvious in for example 18th century archives, has of course become more profound over time with the growing complexity of administrative processes and a steady proliferation of records.

In 1990 the first Archives Act (SFS 1990:782) was issued in Sweden. It stated that governmental as well as municipal agencies should create inventories of their archives, which were defined as the total of the official documents from the agency. This suggested that records still used in the current administrative activities of the agencies should also be embraced by the inventory. That was a clear deviation from the principle of post-hoc description. As a complement to the inventory, a so called archival description\(^1\) was suggested. The description consisted of a narrative of the agency’s organization, activities, records production and recordkeeping procedures. In accordance with that a new set of regulations was issued by the National Archives, e.g. a revised version of the general archives scheme (RA-FS 1991:1), table 5.3 below.

The revision if anything almost meant a re-establishment of the scheme of 1903, and the basic structure remained. Despite the intentions to capture the total flow of records in the organizations, the system reflected a traditional environment, with stable organizations and work processes and paper based records that could be handled as clearly-defined physical entities. As shown above the traditional system of archival description had limitations even in case of century old paper-based records, and it was definitively not adapted to the administrative reality of the late 20th century. In this system, giving a consistent account of multifunctional information systems was problematic. Beside this deficiency two other points of criticism have been stressed: the inventory was of little value as an administrative tool for the record creating agencies, and it had limitations as a search tool (e.g. Smedberg, 2000). These deficiencies must be considered as a serious shortfall since the inventories’ function to provide transparency and citizens’ control of public affairs according to the Freedom of Press Act, and facilitation of retrieval of

\(^1\) Arkivbeskrivning, which literally means archival description, but with a different connotation than the English term. The choice of vocabulary was not quite appropriate considering that international standardization work started at that time, and an important part of that was about the construction of a consistent terminology.
information for administrative use has been emphasized in public archival discourse and several governmental reports (Gränström et al., 2002; Regeringens proposition 1989/90:72; SOU 1988:11). The inventory was still primarily an instrument for repositorial control. The general archives scheme according to the statute of 1991 were as follows:

A. Minutes
B. Copies of out-going documents
C. Journals
D. Ledgers and registers
E. Incoming documents
F. Records arranged by subject
G. Accounts
H. Other records

The growing inadequacies of the general archives scheme and its inherent tensions have not only prompted calls for revision, but also for a total abandonment. Since the 1990s an increasing focus on business functions and processes has become apparent in both private and public administration, and attempts have been made to model the descriptions of records according to these. Brolén (2003) suggested an object-oriented model of archival inventories. For each business function in an organization certain objects can be identified. Records should thus be organized and registered according to these objects. Within personnel administration the object is normally the individual employee, within eldercare the client etc. The capital sections of the general archives scheme should be replaced by the business functions as the organizing principle of the inventories, and the series would consist of case files related to specific objects. The case files did not necessarily have to be physical items, but logical description of the records (e.g. transactions in a database) independent of form or media. The basic motive behind the model was to make the description of records closer to the business activities, and hence easier to identify and access by the members of the organization. However, actual examples of alternative models of archival descriptions have been few until recently. One was the archives scheme for the town district committees of Stockholm, as shown in table 5.1 below (Arkivhandboken). The sections were based on business functions, but the general structure was basically modelled on the general archives scheme and the primary aim was control of physical items through inventories.
Table 5.1 The archives scheme for the town district committees of Stockholm

A more far-reaching approach has been taken by the National Archives within the project INFOTEK-RED, and the following Arkivredovisningsprojektet (Insyn i medborgarnas tjänst, 1998; Jansson et al., 2002). The motivations behind the projects were partly the inadequacy of the traditional system discussed above, partly insufficient inventories in general at governmental agencies that called for amelioration. A model was suggested based on the idea that business processes, instead of types of records or organizational functions, should be the organizing structure for description, manifested in classification schemes, for instance (Jansson et al., 2002). The description of content should further be separated from the description of physical objects and their management. Intellectual control would thus be separated from administrative control. Both are necessary but have

<table>
<thead>
<tr>
<th>Capital sections</th>
<th>Sub-sections</th>
<th>Series</th>
</tr>
</thead>
</table>
| A Activities common for the committee | A1 Minutes | A1A Minutes from the town district committee board  
A1B Minutes from the social committee  
A1C Etc. |
| A2 Journals and files | A2A Journal for the town district committee board  
A2B Personnels registesr  
A2C Object registers  
A2D Action files |
| A3 Other administrative records |
| B Finance |
| C Staff |
| D Children and youth activities |
| E Social services |
| F Eldercare and service for disabled |
| G Technical administration |
| Ö Other |

Table 5.1 The archives scheme for the town district committees of Stockholm
different purposes and different target groups. Intellectual control is primarily important to the users, whereas administrative control is a tool for the recordkeeping function but necessary to enhance intellectual control. Intellectual control requires explication of contextual relations, like relationships between units within the records-creating organization, between the organization and other organizations, between the organization and its predecessors and successors, between business processes and records, between records creation and types of records, and between the business activities and information potentials. To exercise administrative control descriptions of the physical units and their scope, how they are processed, their physical status, existing copies, and information about secrecy and copy rights etc. should be made.

Still, the projects focused to a certain extent on the transfer of records from agencies to archival repositories, and the requirements for continuous preservation at archival institutions. Thus a custodial approach was undertaken, and the descriptions were mainly seen as tools of repositorial control even if that was not explicitly stated. No general regulations concerning this new model for archival description had been issued when this study was undertaken, but a few agencies have been granted exemption from the general archives scheme to implement the new system.

5.2 Administrative systems for the control of records

5.2.1 The registry system

A special trait of Northern European public administration has been the registry system. The registry is an administrative function where documents created or received by the agency are classified and registered. Contrary to post hoc descriptions the initial registration takes part at the beginning of an administrative process. During the process annotations are made of the actions performed and the resulting documents, making up a file, are registered. When the process is finished, the file is closed and composes the records of the process. With computerized registers new possibilities to extract, compile, process and compute the registered information has emerged, thus adding extra value. An additional purpose of the registry is consequently to generate reports and statistics of the business activities (e.g. Larsson, 2001).

1 This is due to a peculiarity in Swedish public administration. According to the Freedom of the Press Act public agencies are obliged to make available to the citizens not only actually existing documents or compilations of information, but also compilations or extracts of information that potentially can be made available by ordinary means (Gränström et al., 2002, p. 34).

2 Not to be confused with the Registrar’s office in British administration.
With roots in the medieval chancellery, the registry system developed during early modern times and reached its modern form in Prussian governmental administration during the 18th and 19th centuries (Miller, 2003). The original form of registration was simply chronological lists of letters, supplications and resolutions, rendering a rudimentary control of business matters possible. Later a more systematic approach was undertaken, when separate registries for correspondence with certain (important) patrons, and further on for special units or commissions, were created and often supplemented with alphabetical indices (Nilsson, 1966). The Prussian registry system was composed of several devices, of which the central part was the Tagebuch, i.e. a journal (Enders, 1967; Miller, 2003). It consisted of a ledger where entries for each matter handled were made in chronological order. The pages were divided into columns for the numbers assigned to each matter, dates when the documents belonging to the matter were received, and a description of their content. Finally, the date of closure was added.

The registry was not only a means of controlling files, but the whole process of handling business matters, i.e. a sort of early workflow system. The registration was connected to storage and retrieval with help of a registry scheme accounting for the matters the agency was handling. The files were classified and coded according to the scheme and after closure stored in the order the scheme prescribed. Various indices could provide complementary access points. After the reorganization of German administration in the 1920s, the so-called Büroreform, the registry scheme developed into an Aktenplan, a more comprehensive and detailed classification scheme (Enders, 1967). Common mandatory schemes were stipulated for certain categories of authorities, for instance a special plan for police administrations (Brenneke, 1953). As a consequence of the reform the registry system developed into a file management system, rather than a way to control the administrative processes as such (Miller, 2003).

5.2.2 The Swedish registry system

Sweden belonged to the German cultural sphere and was from early modern times dependant on public servants educated in the German states. This was probably a reason why a registry system similar to that used in the German states emerged in the Swedish royal chancellery. The oldest registry preserved, a list of outgoing royal letters, was dated from 1551. The term diarium, literally diary or journal, was mounted in the statute of registries 1620, and has since been a common designation for registries kept in public administration. Until the 20th century the correspondence journal was the normal form of registration, i.e. incoming and outgoing letters were entered in chronological order. Later it was often replaced by a journal of business matters, where each matter handled by the agency was registered in chronological order and the documents concerning the
matter annotated under these entries (Nilsson, 1966). Keeping a journal is, however, only one form of registration.

Before 1980 certain authorities were obliged to keep a journal, but there were no general regulations. Registration of official documents has since been regulated by the Secrecy Act, which stipulates that official documents (with some exceptions) should be registered by date, identity code, name of sender and receiver, and subject heading (SFS 1980:100, chapter 15, sections 1-2). The legislation does not prescribe in detail how it should be done, and in administrative practice different forms of registration can be distinguished. Certain types of documents have intrinsic characteristics that allow them to be kept in order according to a “given” system, and hence retrievable without registration. Minutes are for instance usually kept in chronological order and documents concerning individuals by name or civic registration number. Some documents are registered and retrievable in specific business information systems, either manual or electronic. Certain matters consider primarily specific objects, i.e. estates, buildings etc., and each object could cover several matters. In those situations case file registration could replace or supplement the journal (e.g. Larsson, 2001). In the first example registration is made in a separate register and the records collected in case files, in the latter a certain object identity code is added to the ordinary journal. Specific objects are often easily distinguishable access points, thus registration and storing according to a classification scheme is sometimes redundant, but not always, since the code only identifies the object and not the actual matters.

### 5.2.3 Classification schemes

When bound ledgers were replaced by loose leaf-binders, the entries could easily be organized according to subject, thus matters of the same type could be kept together (Nilsson, 1966). This practice has further been enhanced by the use of classification schemes, possibly inspired by the German Aktenplans. The classification scheme could be used primarily as a way of coding documents or files, thus providing additional information, i.e. metadata, about the matter handled. The files could then be stored in chronological order, or whatever order the administrators assumed appropriate. A more thorough use of the schemes has been to let them decide the storage order of the files. Thus files concerning the same type of matters were kept together, which facilitated retrieval and disposal. Classification schemes were first used in Swedish governmental administration in the Ministry of Foreign Affairs around 1900 (Nilsson, 1966). Later inspiration came from business enterprises using the Dewey-system for document classification (Nilsson, 1966). The Dewey-system turned out to be insufficient for the purpose, since it did not connect to the activities of the organization. Leaving most of the classes empty because usually only a few classes were relevant for each agency, the
system did not provide a lucid overview of the agency and its activities and records creation. Instead, special classification schemes adapted for different kinds of agencies have become regular since the 1940s (Nilsson, 1966).

However, a legacy of the Dewey-system was the practice of decimal classification. Classification schemes based on decimal classification are still very common, in spite of its deficiencies. Decimal classification is in principle extendable without limit vertically, but limited to ten groups in the horizontal direction, no matter how extensive the business of the organization is (Brenneke, 1953; Nilsson, 1966). A way of evading the problems has been to use alphanumeric systems of various kinds. Still, these kinds of classification systems meant imposing a more or less artificial sorting, not reflecting the actual activities of the agencies. A common feature of many classifications schemes used in Swedish administration was an emphasis on general management and support functions like staff, economy, legal issues etc. Those took up several of the groups, which often were detailed and sub-divided on several levels. The actual business and competence fields of the agencies, on the other hand, were often rather scantily accounted for. This may have been because the general functions existed at every agency and were organized in similar ways. A sort of general model was thus developed that could be inherited from other agencies. In textbooks and instructions those groups were also laid out in detail as examples, while the specific groups obviously had to be left open.

Compared to governmental agencies, the municipalities pursued a rather clear-cut administration until the 1950s, and few kept a regular staff of officials. The municipal recordkeeping was thus relatively basic and the custom of keeping journals did not appear before the first decades of the 20th century (Lindén, 1934). Town administration was however more advanced, partly because of size but mainly because the towns were assigned more extensive duties, and they also undertook some governmental functions. In his textbook on municipal archives management from 1934, Lindén briefly mentioned journals as a certain type of records, but did not consider registration as a part of archives management. Neither did the National Archives’ instruction for municipal archives that was issued a year earlier (SFS 1933:483). During the 1950s a more general approach to recordkeeping took form. The federation of rural local governments\(^1\) issued a couple of brochures concerning archives management that were explicitly about keeping journals, where a classification scheme based on the decimal system was suggested. The classification was adapted, but not entirely adjusted to the general chart of accounts for municipalities (Diariëföring och arkivläggning hos

\(^1\) Until 1971 towns and rural municipalities had different responsibilities and were subject to different legislation.
A few years later the federation of towns issued a similar classification scheme for town administration (Registreringsplan och vissa kontorsrutiner för de centrala förvaltningarna i Sveriges städer och stadsliknande samhällen, 1958). In both cases the suggested schemes were considered as recommendations to be voluntarily adopted and open for local adjustments.

In 1968, a new classification scheme for local governments was composed, still based on decimal classification but further elaborated. The principal difference compared to the old scheme was that it was structured as a matrix, figure 5.4 below. Each matter was thus assigned a double classification, by function and by matter, and the classification code consisted of two sets of numbers. This led to a further addition of metadata by simple means.

![Figure 5.3 The municipal classification scheme of 1968 (Kommunal diariföring, 1968)](image)

During the 1970s the details of the scheme was revised, but the overall structure remained intact. In the version from 1980, however, the process of keeping a
journal was outlined rather briefly and the classification scheme was not set out as a matrix. Instead it was presented in a sequential order, heading by heading (Kommunal diarieföring II, 1980). There is reason to believe that it was therefore interpreted as a traditional sequential decimal registration scheme, and that the idea of double coding by function and by matter was not recognized. The model of representation thus had an unexpected and unfortunate impact on the practice of registration. The system of double classification was then abolished in the 1989 edition of the local governments’ classification scheme (Kommunal ärenderegistrering, 1989).

5.2.4 The manual journal system

The use of loose leaves instead of ledgers rationalized the registration process and rendered search and retrieval more efficient, especially when pre-printed forms and carbon copies became customary. In municipal administration a system with registration on cards was recommended, one card for each matter, sorted according to the classification scheme in boxes especially made for the purpose (Diarieföring och arkivläggning hos kommunalfullmäktige och kommunalnämnd, 1955). Later several cards for each matter could be created and sorted in various ways, depending on the need for retrieval. The main routine for the handling of matters was that when a matter was opened, usually initiated by written communication to the agency, the initial document was marked with the date of arrival and assigned a serial number and an appropriate classification code. Then a set of two cards and a journal list was drawn up, with annotation of the name of the patron, date of arrival, serial number, classification code, subject heading, and name of the official handling the matter. The journal list was put in a binder, composing the chronological list of matters. On the first card transactions and additional documents were registered during the handling process, and the card was sorted according to the classification scheme. The other was used as an auxiliary register sorted, for instance, by the patron's name, with cross references to the main card. An alternative routine was to let the second card follow the file during the handling process and make the annotations on that card. The first card, which made up the actual journal, then only contained the basic information on the matter (Kommunal diarieföring, 1968). The second card could also be substituted for pre-printed file covers on which the events during the handling process and the enclosed documents were notated (Levande arkiv, 1980).

The action files were stored sequentially according to serial number, i.e. chronologically, or systematically according to classification code and then by serial number. A similar routine was undertaken in governmental agencies (Kåhre, 1972). During the 1960s and 1970s pre-printed sets of registration forms were frequently used. Each set consisted usually of three or four copies, divided in four
or five parts, so-called strips, where the matters were entered. The first copy was kept as the chronological journal. The other copies could be sorted according to the classification plan, or for instance by name of the patron, thus several search entries were created.

The limited space in the cards or strips allowed only for sparse annotations concerning each matter. A common view has also been that registration was a laborious task and should not be overexerted, thus only information necessary for the normal handling of matters should be registered and formal registration only undertaken when absolutely required (e.g. Levande arkiv, 1980; Nilsson, 1966; 1973).

### 5.2.5 Computer based registration systems

Computer-based registration started on an experimental level in the late 1960s, mainly as a by-product of other computerized administrative routines. At first agencies with a special need for large scale registration of similar matters were using computerized systems, for instance the Swedish Patent and Registration Office (Datorbaserad diariätoring, 1981). In some cases, as for the Swedish Air Force, computerization meant transferring the manual routines, i.e. replicating the traditional journal cards in a computerized registration form, without adding further search possibilities. The benefits of computerization were considerably increased possibilities for control of the handling of matters and for retrieval of statistics from the system (Datorbaserad diariätoring, 1981). Improved search facilities and increased possibilities of public insight and control of the agencies were however considered the most important gains and the primary motive for computerization (Datorbaserad diariätoring, 1981; STADIS, 1983). A computerized system allowed for more access points than a manual system (theoretically all registered facts could provide access points, but technical limitations constrained the possibilities for free-text search). Furthermore all information was accessible in the same register, which made the use of complementary registers superfluous, and annotations previously made on separate cards or file folders could now be made in the system and thus be directly accessible. Still, the limitations of contemporary computer technology constrained the use of computer registration and made supporting manual routines necessary (e.g. Wilhelmson & Appelquist, 1990). For example long-term preservation of the journal required printout of a hardcopy, due to lack of storage capacity as well as to legal restrictions, thus losing most search possibilities in the long run.

The first systems were either adaptations of generic computer systems like word processors or database managers, or specific systems developed by or for the agencies themselves. To support the agencies in development or purchase of registration systems the Swedish Agency for Public Management issued a specification for a computerized journal keeping system, which served as a
guideline for both agencies and vendors during the 1980s (Datorbaserad diariöföring, 1981). The proposal basically meant transferring the information in a manual journal with supplementary annotations to a database manager, but with the important addition of subject keywords. This was the main difference compared to a manual system, considering the content of the register. The keywords made search according to subject/topics possible, even if the matters were classified under different headings of the classification scheme. (For instance complaints could occur under various headings, and would not be directly searchable if not added as a keyword.) The use of keywords could induce a simpler classification procedure, since to some extent they could replace an extensive sub-division of the classification scheme. In practice several agencies omitted the classification scheme and relied on keyword classification only.

A couple of years later the Swedish Agency for Public Management launched a special software for journal keeping, STADIS, in which the use of keywords was emphasized (STADIS, 1983). However, keywords were not supposed to be used arbitrarily. Each agency should establish a set of fixed keywords, i.e. a sort of thesaurus even if that term was not used, based on the business matters handled by the agency. Beside keywords, 18 access points in all were provided by STADIS as fixed metadata fields in the database: year; serial number; classification code; keywords; initial date of registration; date of closure; department; executive officer; project/object; precedent; document number; date of registration of document; document date; incoming/outgoing/annotation/report; sender/receiver; (other) classification; patron’s reference number; and date of answer (STADIS, 1983, p. 56). For quick retrieval the metadata fields had to be indexed, however in deference to the limits of the system, the Swedish Agency for Public Management suggested that serial number, classification code, keywords and 2-4 other fields should be prioritized. Free-text search was not provided, because that would increase the time of retrieval. It is also noteworthy that it was concluded that registrars, the primary users of the system, had little need for free-text search. Later in the 1980s, when several commercial products entered the market, free-text search became customary, at least in the subject headings (Wilhelmson & Appelquist, 1990, appendix 2).

Technical improvements have enhanced search efficiency and time of retrieval, and free-text search is nowadays the rule. Still, the structure of the systems has remained fairly stable. The object of registration and the basic content of the journal have not changed particularly over the years, but modern technology allows for processing and re-using the information to a greater extent, e.g. producing statistics and reports for different purposes. Another technological impact is the emergence of distributed systems, allowing several persons access simultaneously, later reinforced by Internet and Intranet applications. The Internet
has among other things been considered as a means of transparency and public access to information. One of the first steps in the establishing of E-government in Sweden was making the journals of the agencies available on the Internet. Yet the possibility of publishing the journal was circumscribed by regulations. Classified information and sensitive information could not be published according to the Personal Data Act. The journals on the Internet were thus not complete, but restricted versions with less search options (Diarier på Internet, 2003).

The technological changes have allowed for a transformation from plain journal systems, handled by the registrars, to systems for the management of the process of handling business matters, with functions for control and follow-up, sometimes executed by the administrative officers (Elektronisk ärende- och dokumenthantering, 1997). This is actually a kind of return to the Prussian registry system, which originally was a function of controlling the administrative process itself rather than just keeping track of the records. A more pervasive development in recent years is the replacement of the journal with document management systems or records management systems (Elektronisk ärende- och dokumenthantering, 1997; MoReq, 2002), i.e. a transition from pure representations of records, to systems containing the records as such and the rules for their administration. However, in these systems the access to records would still be mediated by a “filter” of a search system, for instance a journal.

5.3 Concluding remarks

This chapter provides a background to the following case studies, presented in chapter 6 and 7, aiming to give a better understanding of the concrete applications of archival representations and search tools that are used in the studied organizations and their functions.

The principles and functions of archival representation and administrative registration of records have been discussed, and the particular Swedish systems for archival description and registration have been analyzed. Those systems have been generally adopted because of legislation and the dissemination of widely used textbooks, which could be considered as authorities in the field. Physical manifestations of the rules as forms, schemes and concrete examples have apparently had a great impact and became more or less fixed models, even if they were not mandatory but possible applications of basic principles.

The traditional Swedish system for archival description is based on two artefacts, the general archives scheme and the inventory. They were innovations prompted by the enhanced responsibilities of the National Archives during the late 19th century, and bearers of inherent features of repositorial control. The general archives scheme was based on an assessment of the administrative functions of 18th and 19th century governmental agencies and their most important
administrative procedures. Applied in other environments this might have caused strains, but the scheme and the inventory forms have gained wide acceptance even outside the governmental sector. The scheme does in some sense reflect administrative processes, however they are not explicitly stated and it is obscured by the structure of the inventories. The processual and contextual relations between records and activities are difficult to capture within the rigid frames of the traditional inventory forms, and one purpose of the National Archives’ current work of developing new models for archival description is to avoid this problem. What is primarily represented in the inventories is a storage order, how the items, i.e. the material residues of the processes, are arranged on the shelves; not information content and not the relations between records and business activities, or between different records. This feature has been even more profound with the implementation of artefactual tools as the inventory form and computerized systems for archival descriptions. The inventory thus functions rather well as an instrument for handling paper-based records in the custody of a repository, but less well as a search instrument or as an instrument enhancing transparency or administrative control of current organizations.

Within organizations the journal, in combination with the classification scheme, can be said to be the most prominent representations of records and the most important search tool in Swedish public administration. The journal is an older phenomenon than archival description and has emerged out of the needs of the administration and the decision makers to control and follow-up business processes. Later it has been subject to legal requirements to enhance transparency and the exercise of external control of the agencies. The journal only covers a part of the records produced within an agency: records that directly result from the handling of business matters, but it captures individual items and their connections to the business processes. However, the registration of records is subordinate to the registration of matters, which is the primary purpose with modern journal keeping. The records can be said to be representations of decisions and actions performed, but in the journal the records are primarily represented by the matter, i.e. the subject heading and the classification code. The subject heading can be a more or less subjective denomination of what the matter is about. The classification schemes are based on the areas the agencies business is supposed to cover. Even if the journal is an important search entrance to the records of an agency, its primary function is to support and control the administrative process as such, and the records and retrieval functions are means, not ends.

To understand the representational systems, it is necessary to have a previous knowledge of the administrative processes and procedures. To find information it is even more essential to have that kind of knowledge, because of what Terry Eastwood (2007) calls “the inferential nature of archival information retrieval”. To find
a certain document it is necessary to first establish if it ever was created and by whom, then to find out if the archives are preserved and where, and finally to locate the specific item which requires familiarity with the structure of the inventories or other search instruments, i.e. an understanding of what they are representing. All this requires an inferential reasoning; it is rarely possible just to “look it up” somewhere.

Another, and more important aspect is that records to a large extent contain potential information (e.g. Nilsson, 1983). Records are often used to provide facts or solve problems that have very little to do with their original purposes or the creators’ businesses. This requires an even higher degree of inferential reasoning; to establish what sources can potentially give answers to the actual question. The required information often has to be created by the user by making inferences from the records. It is not explicitly stated in the records, and even less expressed in archival descriptions or other representations. Archival descriptions will thus always be incomplete in the sense that the full information potential can never be displayed, because it will be in a continuous process of creation and recreation. The representations can however be more or less elaborated, more or less accurate depending on their purpose, and more or less explicit about the considerations behind their creation.
6. CASE STUDY 1: A SWEDISH MUNICIPALITY

In this chapter the findings of the first case study are presented. The chapter starts with an overview of the organizational, legal and historical context of the studied organization, its business procedures, recordkeeping organization and the artefactual intermediaries of interest for the search of records. The theoretical standpoints behind this thesis require that the object of study must be analyzed in a socio-cultural, historical and situational context. Then the use and users of records are identified and the search behaviour of users investigated. The administrative offices and the municipal archives are treated separately.

6.1 Setting

6.1.1 The Municipality

The municipality of Örnsköldsvik, named after the central town, is situated in the county of Västernorrland in the northern parts of Sweden. Örnsköldsvik of today was founded the 1st of January 1971, after a merger of the previously independent municipalities of Anundsjö, Björna, Gideå, Grundsvika, Nättra, Själevad and Trehörningsjö, and the town of Örnsköldsvik (Lundmark, 1993). The town Örnsköldsvik originates from a small market town established in the village Lungånger in 1842, and reached full town privileges in 1893 (Lundmark, 1993).

In 2004 Örnsköldsvik had a total of 55,950 inhabitants, whereas the central town had 28,474 inhabitants (Örnsköldsviks kommun). A small town in a rural area, Örnsköldsvik is however the 30th most populated of the 290 municipalities in Sweden (Statistiska centralbyrån). Since the late 19th century Örnsköldsvik has been a heavily industrialized region, with emphasis on forestry products and mechanical industry. The town of Örnsköldsvik is also the commercial centre of the area. Recent decades, employment in traditional industry has declined and today public service offers the most important labour market opportunities. The municipality itself is the largest employer. Still, private industry and commerce play an important role in the local economy.

6.1.2 History, function and competence of the Swedish local government

Local self-government is instituted by Swedish constitutional law in the Instrument of Government (SFS 1974:152, section 1). Local self-government is effected by the municipalities and the county councils. The criteria of a local

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1 The county councils deals with administrative affairs on the regional (county) level, and were established at the same time as the local municipalities in 1863. Since the county
government are that it is a legal subject and a territorial entity with self-government, it has mandatory citizenship for its inhabitants, and it has certain legal competence, i.e. power of taxation and some power of ordinance (Gustafsson, 1999). According to the Local Government Act, local self-government is manifested by a general competence of municipalities to administrate affairs of common concern within their territory, which not are handled by the Government or any other subject (SFS 1991:990, chapter 2, section 1). Together with the power of taxation this gives the municipalities a certain liberty of action and independence from the Government, and they can choose the direction of their affairs according to local political decisions. However, the municipalities are obliged to fulfil a wide range of public commissions according to special legislation, for instance the Social Services Act, the Health and Medical Services Act, the Education Act, the Planning and Building Act, the Act concerning Support and Service for Persons with Certain Functional Impairments, and the Environmental Code (Gustafsson, 1999):

- social benefits
- planning and building
- primary and secondary education
- housing
- adult education
- electricity
- day-care for children
- heating
- elderly care
- water and sewage
- support to the functionally impaired
- public cleaning
- treatment of drug and alcohol abusers
- culture and recreation
- rescue service
- local communications
- environment and health protection
- civil defence

These services do not necessarily have to be produced by the municipal organization, but can be carried out by private entrepreneurs on commission.

The Swedish municipalities were established in 1863 according to the Royal ordinances of local governance of 1862 (SFS 1862:13; SFS 1862:14). Local councils are not subject to this study they will not be treated further. For reference see for instance Gustafsson (1999) and Petersson (2005).

1 Official translations according to the Government Offices.
governance in the countryside had earlier been executed by the parishes, dealing with both religious and civil matters: for instance poor relief, primary education, building and maintaining churches, building and maintaining roads, supporting clergymen, and electing the peasants’ representatives to the estates of realm. The territorial base for the rural municipalities was the original parish, but from 1863 the competence was divided between the municipalities handling civil matters and parishes handling church administration and religious matters. The latter included primary education, which was not fully taken over by the civil authorities until the 1950s.

The town administration was a bit more complicated and since medieval times had been regulated by royal privileges. After the legal reforms in 1863, a distinction was still made between towns and rural municipalities. One difference was that town administration embodied both governmental and municipal functions. For instance, administration of justice was a part of town administration, while it in the countryside was effectuated by bodies extraneous to the municipalities. A third municipal unit was the market town, smaller town-like villages where some parts of the town legislation were valid, but in other areas they were considered to be like rural municipalities. In 1863 there were about 2400 rural municipalities, about 10 market towns, and 89 towns with royal privileges (Gustafsson, 1999).

Due to a general expansion of public administration and a growing demand on public services, new tasks have been imposed on the municipalities during the 20th century. Together with economic and demographic changes this made the original municipal structure obsolete. Larger entities were necessary to maintain legal obligations and provide a sufficient tax base. A few mergers or partitions of particular municipalities had been undertaken over the years, but general alterations of the municipal structure were accomplished on two occasions: the first in 1952, which reduced the total amount of municipalities to 1037; the second during a period in the late 1960s and early 1970s, which further reduced the number to 278 (Gustafsson, 1999). The distinction between different types of municipalities (rural municipalities, towns and market towns) was then abolished.

The municipal legislation has been subject to revision several times since 1862. The first major revision took part in 1930, primarily to incorporate partial revisions and supplements to provide a consistent legal framework (SFS 1930:251; SFS 1930:252). In 1953 another major revision took place, which among other things resulted in a common legislation for the different types of municipalities, the Local Government Act (SFS 1953:753). However, they were up to a point, still subject to different rules until the structural reforms around 1970. In 1977, a law that covered both municipalities and county councils was issued (SFS 1977:179), which was in turn replaced by a new law in 1991 (SFS 1991:990). The most important
implications of the latter were a substantial freedom for the municipalities to model their organizational structure, something that previously had been strictly regulated; and extended possibilities to delegate executive power from the council to subordinated boards and commissions and in turn, from boards and commissions to officials.

6.1.3 Organization

According to the Local Government Act of 1991, the municipalities have considerable freedom to structure their internal organization, but a few requirements are made by law. Every municipality should have an elected council, which shall appoint an executive committee and other committees needed to fulfil the obligations of the municipality. Each committee is considered as an independent agency, with its own decisive power. The committees usually have their own administrative offices, but can also share administrative services. Some municipal business, where no specific procedure is legislated, can be performed by companies, associations, foundations, or individuals, contracted by the municipalities. The municipalities can also own limited companies. The municipality is thus not one organizational or legal entity, but a rather complex structure of various units with different tasks and obligations, different legal status and different fields of competence. Organizational changes are nowadays frequent.

The municipality was governed by the council. The council had decisive power over principal issues of major importance, for example goals and policies, budget, taxation, organization and procedures of the committees, election of committee members and draft committee members, election of auditors, financial benefits for elected representatives, annual reports, and local referendums. The council had 61 representatives, elected for four years after nomination from the political parties. The executive committee had 15 representatives. The main duties of the executive committee were to draft matters for decision in the council, execute the council’s decisions, and to co-ordinate and direct the municipal administration. The executive committee also represented the municipality in legal transactions and dealings with other subjects, if it was not otherwise prescribed by law or council decision. Another regular task was to submit comments on governmental proposals. Drafting of matters was primarily undertaken in the three select committees. The executive committee was also directing the rescue service in the municipality. The main part of the municipality’s activities was conducted by committees that were assigned special duties. Beside those committees, the municipality had three smaller decisive bodies: the committee for crisis management; the election committee; and the chief guardian. Some municipal activities were conducted by municipal enterprises, for instance heating, housing, and public transportation. The municipality also controlled a few foundations,
which administered cultural and recreational grounds, and supported environmental protection.

In 2005 the municipality of Örnsköldsvik was organized as follows:\footnote{The following is, if not stated otherwise, based on information from the official web site Örnsköldsviks kommun, http://www.ornskoldsvik.se retrieved 2005-03-04, and the author’s own field notes.}:

![Organizational scheme Örnsköldsviks kommun](image)

\textbf{Figure 6.1 Organizational scheme Örnsköldsviks kommun}
The municipal administrative office held a central position within the administration, coordinating issues of common interest for the municipality and in-house functions such as accountancy, personnel administration, information and PR, IT, legal support, security, procurement, and the secretariat. The secretariat provided the council, the executive committee, the committee for crisis management, the election committee, and the chief guardian with administrative support like registration, drafting of matters, preparation of decisive meetings, keeping of minutes, and the municipal archives. Besides in-house administration, the municipal administrative office also had functions for general community planning, development of trade and industry, and higher education. The other committees maintained their own administrative offices.

6.1.4 The municipal work processes

The administrative and decisive procedures of the municipality were primarily regulated by the Administrative Procedure Act (SFS 1986:223), apart from the general framework of the Local Governments Act. A substantial part of the activities of Swedish public agencies was undertaken as “the handling of matters”. Strangely enough, the concept matter is not explicitly defined in Swedish legislation, but the common interpretation of the concept is something that results in a decision (Warnling-Nerep, 2008). The handling of matters is thus the actions undertaken to provide basis for a decision. According to the Administrative Procedure Act the handling procedure should be recorded. The concrete result of the handling of matters is then action files, in paper or electronic form.

A matter was usually initiated by an application or an inquiry from a citizen, a private corporation or another agency, but matters could also be initiated by the municipality’s organization itself and its officials. Some matters were primarily internal, concerning for instance staff, organization, facilities or other “household” issues. Committees, the administrative functions, or officials could be assigned certain duties: to investigate certain issues, to make agreements with other subjects, or to execute decisions. The accomplishment of the assignment should be reported and followed up. Matters that were objects for decision in a committee or the council should be drafted, which resulted in a written proposal for decision, presented to the chair of the committee. Proposals with enclosures (the documentation concerning the matters) were then sent out to the representatives with the summons to the committee or council meetings. Council meetings were open for the public, and decisions made in the council were required to be officially announced. Some matters of less importance, for instance certain grants

1 The following is, if not stated otherwise, based on the municipality’s official web site Örnsköldsviks kommun, http://www.ornsksoldsvik.se.
to associations, were not decided by the committees but delegated to individual officials. Minutes should always be kept at meetings, and after confirmation publicly announced. Decisions (i.e. extracts of sections from the minutes) were registered and dispatched to the parties concerned. If no appeals were raised within three weeks from announcement, the decision gained legal force and the matter was closed.

Despite the importance of the handling of matters, it only covered a part of the municipality’s activities. A certain amount of the administration concerned in-house activities: personnel administration; accounting; maintenance of properties; management of information systems etc. The dominating activity was however the execution of decisions as actual handling, for instance payment of social benefits, teaching, nursing, maintenance of streets and real property, public cleaning etc. (Warnling-Nerép, 2008).

6.1.5 The municipal recordkeeping organization

Municipal recordkeeping, like governmental recordkeeping, was primarily regulated by the rules concerning official documents in the Freedom of the Press Act (SFS 1949:105), the Secrecy Act (SFS 1980:100), and the Archives Act and Ordinance (SFS 1990:782; SFS 1991:446). Recordkeeping could also be impacted by other legislation, which required that certain documentation should be provided and kept for a certain time. In compliance with the rule of local self-government, the municipalities had decisive competence about their recordkeeping within the legal framework and were not subject to supervisory control by the National Archives. Regulation concerning municipal recordkeeping had also been less extensive than that concerning governmental recordkeeping, and it was only in 1937 that it was established that local governments should fall under the Freedom of the Press Act and that their records should be considered as official documents (Axelsson, 1991; Gränström et al., 2002). When the municipalities’ structure was changed in the early 1950s, an ordinance required that records from closed down units should be taken in to the custody of their successors (Axelsson, 1991). The Local Government Acts of 1953 and 1977 contained brief remarks that records should be preserved and described, but it was not until the Archives Act of 1991 that municipalities’ recordkeeping became subject to inclusive legislation.

In the municipality of Örnsköldsvik each administrative office had a registrar and a staff member that was assigned responsibility for the archives and also functioned as liaison with the municipal archives. The files and the other records generated by the administration or the committees were then kept at the registry at

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1 The following is, if not stated otherwise, based on the municipality’s official web site Örnsköldsviks kommun, http://www.ornskoldsvik.se.
the central administrative office or at the committees’ administrative offices for about 10 years before transfer to the municipal archives. However, exceptions of this practice occurred. The municipal archives belonged organizationally to the municipal administrative office, i.e. the secretariat, but were physically separated from the other functions. The staff consisted of the municipal archivists, one other archivist, and occasionally temporarily hired assistants.

6.2 The artefacts

6.2.1 The journal

According to the archives inventories some of the preceding municipalities had already implemented journals before the establishment of the current municipality in 1971. The earliest journals were probably inspired by the recommendations of the federation of rural municipalities from 1955 (Diarieföring och arkivläggning hos kommunalfullmäktige och kommunalnämnd, 1955). It is noteworthy, that the town, which was larger and had a more complex administration, did not implement a proper journal before the merger in 1971. Instead the files were sorted according to current numbers, and an alphabetical index was set up afterwards.

In 1971 a new journal for the newly established organization was set up. This was a manual system, based on the pre-printed registry cards with carbon copies from the federation of municipalities (cf. section 5.2.4 above). In 1986 the first computerized journal was implemented. The system contained nine searchable metadata fields and a field for annotations of the actions undertaken during the handling of the matter. The metadata fields were:

- journal reference number
- classification code
- date of initial registration
- date of observation
- subject heading
- administrative office
- executive official
- initiator/sender
- date of closure

The interface had thus close similarities with the previous registry card. In 1995 the content of the journal was converted into a new system, ÄHS. ÄHS was in use until 2005, when the new electronic records management system LEX was

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1 The following, if not stated otherwise, is based on interviews with the chief registrar and documentation of the journals.

2 ÄHS was the trademark of a commercial product, but the abbreviation stands for Ärendehanteringssystem, which literally means system for handling of matters.
introduced. ÅHS was technically a more sophisticated Windows based product than the previous system, with several more functions. That made a more thorough registration possible and thus gave additional search possibilities. However, the registration view did not contain many more metadata fields than the previous system, see figure 6.2 below.

Figure 6.2 Journal interface – basic view

The metadata fields were:
- Journal reference number (1)
- Alternative denomination (2)
- Classification code (3)
- Status (4)
- Sender/receiver (5)
- Annotations (6)
- Subject heading (7)
- Date of decision (8)
- Date of external observation (9)
- Date of arrival (10)
- Secrecy classification (11)

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1 The LEX system has not been included this study.
- Registrar’s signature (12)
- Administrative office (13)
- Executive official (14)
- Date of reminder (15)
- Date of closure (16)
- Direction (17)
- Date of registration (18)

This was basically the same information as was entered in the manual registry card. Additional metadata registration was possible and to some extent required, for instance data about the decision-making process. In the calendar view (1) the transactions performed and documents created during the handling process were annotated, which resulted in a transaction list (2) that corresponded to the annotations on the registry cards or the file folders, see figure 6.3 below.

Figure 6.3 Journal interface – calendar view

The system also contained views concerning archives management with metadata fields for retention periods and archival identification codes, but those were not in use. Recurrent metadata, for instance classification code, administrative office and executive official, were eligible from drop-down menus. Subject headings were not pre-defined, thus it was up to the individual registrar to
assign appropriate wording. ÅHS also included a function for index terms, however not implemented.

6.2.2 The classification scheme

From 1971 until 2005, the municipality used the classification schemes issued by the federation of municipalities for the classification of matters (Kommunal diarieföring II, 1980; Kommunal diarieföring, 1970; Kommunal ärenderegistrering, 1989). During that period three classification schemes were in use: the first in 1971-1979; the second in 1980-1991; and the third from 1992 until 2005, see table 6.1 below.

The main groups were similar in the two first schemes, with the primary exceptions that consumer policy and environmental control were added to groups 2 and 8 respectively in the scheme from 1980. This was a manifestation of the increasing interest in and a more profound legislation concerning these issues in the 1970s, leading to extended responsibilities for the municipalities. The particular differences lay in the details of the sub-groups, but no radical changes were made. To some extent the modifications concerned terminology, for example using the term drug abuse instead of intemperance or domestic care instead of home help.

In the last classification scheme the system of double coding was abandoned, but the decimal classification system with ten main groups divided into sub-groups etc. was kept and the content of the main groups was rather similar to the previous schemes. However, the groupings were slightly different, they appeared in a different order, and the last group (9) was left open for local needs. Some of the activities previously grouped together were separated and re-grouped. This was probably in an attempt to better suit contemporary municipal administration. The numerical classification codes were registered in the journal, but not the full captions. To search by classification thus required knowledge of the correct coding of a field of activity. Classification schemes could also be used for records other than those that belong to a matter, to facilitate storage and retrieval (e.g. Nilsson, 1966). This practice, however, was never applied by the municipality.

1 In connection with the implementation of the LEX system, a new classification scheme was developed based on the work processes in the organization.
<table>
<thead>
<tr>
<th></th>
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<tr>
<td>0 Common activities.</td>
<td>0 Activities.</td>
<td>0 General administration.</td>
<td></td>
</tr>
<tr>
<td>1 Legal and societal protection. Census registration and taxation.</td>
<td>1 Societal protection. Taxation. Traffic control. Consumer policy.</td>
<td>1 Central administration.</td>
<td></td>
</tr>
<tr>
<td>2 Property management and housing.</td>
<td>2 Property management and housing.</td>
<td>2 Planning and building, agency. development, property management.</td>
<td></td>
</tr>
<tr>
<td>3 City planning. Street and park services. Sports, outdoor activities and recreation.</td>
<td>3 City planning. street and park services sports, outdoor activities and recreation.</td>
<td>3 Street and park services, water and sewage, energy supply.</td>
<td></td>
</tr>
<tr>
<td>4 Harbour services. communications. Trade and industry. Tourist services.</td>
<td>4 Harbour services. communications. Trade and industry. Tourist services.</td>
<td>4 Environmental control and nature protection, health protection, public cleaning.</td>
<td></td>
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<tr>
<td>5 Industrial activities.</td>
<td>5 Industrial activities.</td>
<td>5 Traffic, harbours, communication.</td>
<td></td>
</tr>
<tr>
<td>6 Education. Culture.</td>
<td>6 Education. Culture.</td>
<td>6 Schools, education.</td>
<td></td>
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<tr>
<td>7 Social services and social insurances.</td>
<td>7 Social welfare.</td>
<td>7 Social services.</td>
<td></td>
</tr>
<tr>
<td>8 Health and medical services.</td>
<td>8 Health and medical services. Environmental control.</td>
<td>8 Recreation, culture, tourism.</td>
<td></td>
</tr>
<tr>
<td>9 Central administration.</td>
<td>9 Central administration.</td>
<td>9 -</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.1 The classification schemes

6.2.3 Other systems

The municipality also maintained several other information systems, of which some functioned as substitutes for the journal:

- **ECOS**, a system used by the officials at the Planning and Environment office handling matters concerning environmental control. The matters were registered by the registrars, but the officials could make annotations of their actions during the handling process. Documents created by the officials, like

---

1 The following is based on interviews with registrars and officials, and analysis of printouts from the systems.
Word-files, could be stored in the system and directly retrieved. It was also possible to add scanned documents to the system, but that function was not implemented during the study. The system was integrated with LEX in 2005, i.e. registrations in ECOS were accessible through LEX.

- WINBÄR was a system developed for the handling of building permits, but also used for registration of general administrative matters handled by the Planning and Environment office. The system thus contained metadata fields particularly designated for the permission process such as applicants, property unit designation, valid city plan etc. External parties were registered as applicants even if the matters did not concern permit applications, but most of the fields had to be left empty when administrative matters were registered. The system was replaced by LEX in 2005 and the content was converted.

- ProCapita was used for administrating activities relating to individuals, ProCapita IFO for the social registry and Pro Capita VO for the care of the elderly or services to functionally impaired persons. In the social registry matters concerning individual and family welfare were registered, e.g. financial support, assistance, child-welfare, abuse treatment and family law. Those matters were initiated by an application from a citizen or a notification from a third party, followed by an investigation. The investigation involved gathering of information, for instance medical records, and then a proposal was submitted to the committee for decision. Decisions were annotated in the minutes of the committees. The particulars were registered in the ProCapita systems, which were used as a means for handling the matter and for further execution of the decision, but that also functioned as a substitute for the journal. The records as such resulted in physical case files for each subject, sorted according type of matter and civic registration number.

6.2.4 The archives inventories¹

The administrative offices did not keep inventories of their holdings, i.e. the records were not properly described until they were delivered to the municipal archives. In principle, a committee with its administrative office and sub-ordinate operative units (e.g. each school, nursing home etc.) was considered as one records-creator, thus resulting in separately arranged and described archives. The inventories were made up in a traditional way according to the general archives scheme. The older inventories were typewritten on the usual loose-leaf forms. More recent inventories were created in a word processing format, but the structure of the form was still kept.

¹ The following is based on interviews with the archivist and analysis of the inventories.
The annotation field was sometimes used for noting the records’ physical form, bound volumes (Inb.) or boxes (Kart.), in abbreviation. This habit has been widespread and seems to have been considered mandatory, but is of very little practical use and is probably incomprehensible for others than the archivists. Annotations were, however, also used in some cases to describe the content of the volumes, for instance when the content of occasional volumes deviated from the rest or in cases of series with mixed content, or to make it possible to retrieve individual items in particularly extensive series. An example of the latter was the files of registered matters that were sorted according to classification codes, see figur 6.4 below. The classification codes were thus annotated in the inventories. Other examples could be case files concerning individuals sorted according to civic registration number, where first and last numbers in each volume were annotated, or physical objects according where identity codes were annotated.
### Figure 6.4 Inventory sheet - action files

1) Record’s creator, 2) Series’ caption, 3) Series’ identity code, 4) Place, 5) Volume number, 6) Time, 7) Annotations

<table>
<thead>
<tr>
<th>Plan</th>
<th>Volume number</th>
<th>Tid</th>
<th>Anmärkningar</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1972</td>
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</tr>
<tr>
<td></td>
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<td>&quot;</td>
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<td></td>
<td>74</td>
<td>&quot;</td>
<td>Diarium - 73</td>
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6.3 The use of records

6.3.1 The use of records at the administrative offices

The purpose of this section is to identify categories of users of records in the municipality, their motivations and patterns of use. Based on the interviews, a variety of users were identified, both internal and external. The most frequent group of users was considered to be staff of the municipality: officials, administrators and managers, who needed records to accomplish their work tasks:

“…everyday a request for records occurs, it does.
From people working here or from outside?
Certainly it is the officials who have needs for their work. They want to see previous decisions and suchlike. But it [requests] also occurs from the public, and the media.” (Chief registrar)

Staff were identified as users by all the registrars, although not always until they were explicitly asked about it. The internal users seemed to be such an obvious user category, that they were difficult to recognize. Another group not always recognized as users were the registrars themselves. The registrars were the primary users of the journal system, registering and retrieving records. The latter activity was to a large extent performed in response to others’ requests, but the registrars also needed to consult the journal for their own purposes, for instance to do follow-up registration, to check whether an incoming document belonged to an already open matter or to find out how similar matters were registered to ensure continuity:

“Well, first of all you search previous matters for your own work, to see if something has come about before, if there is an open matter so this is an attendant record. This is done almost all the time, also when you are making a new entry in the journal.” (Chief registrar)

Officials admitted using records with certain but various frequencies. Officials directly involved in operational work tasks used records regularly as a part of the work process: receiving records, creating records, processing records and retrieving records. An example was the care of elderly or functionally impaired. During the period a person was subject to action the Pro Capita-system and the files were used on a regular basis:

“How often do you need to consult those files or search the system?
Yes, it is rather usual during the work process, because if you have a person who requires an action or needs extension or reduction or whatever, you usually look back at previous investigations as long as the person is in question [for contributions of support]. But if the person moves or dies, then it is no longer of interest. Then we remove them [the files]. But during the period we are making contributions in any form or whatever, it is convenient that we can go there [to the files]. (Official 3)” 

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Senior officials also used records, but it seemed to a lesser extent:

“Do you ever have to consult records or information from records in your work?
Yes, I do concerning certain… especially different kinds of minutes to know ‘what did we say then?’ [---]
Do you ever need to consult the drafts of the decisions, files and suchlike?
Yes, I do as well.
Can you estimate how often you do this; every day, every week or occasionally?
Occasionally, some times every month.” (Senior official 1)

This could probably be explained by the fact that senior officials mostly were not directly involved in the handling process, but had more strategic duties, and that to a larger extant they depended on processed information like summaries, reports etc. A large part of their work also considered personal communication in the form of meetings, which could require use of records as part of the preparations. Still, some senior officials claimed that they often used records:

“In your work, to what extent do you have to consult records, previous matters and decisions and suchlike?
Very often!
Can you give any examples?
It can be in matters of decision, something pops up: ‘What did we say about that? Have we really effectuated this? It can be a request from an association; it can be a politician who asks ‘What did we actually say about this? How did it look? How is it?’ Yes, I have to say it is rather frequent.” (Senior official 5)

The disparate answers could be due to organizational features since each administrative office was allowed to set up its own organization, to leadership style or personal information behaviour. It was however not the aim of this study to go further into that. The reasons for using records seemed nevertheless common to most of the informants: to see what was previously said, done or decided in a certain matter or in similar matters. This phenomenon was found both on policy level and on more operational levels:

“Do you ever have to consult records or information from records in your work?
Now and then, when it comes to referrals for consideration. […]
What kind of information do you need then?
[…] then I need to know what answer we gave the last time, what information we provided.” (Official 1)

Another reason for the officials’ use of records was to prepare themselves before meetings with the committee, or on occasions when they had to be held accountable for actions undertaken, for example in connection to audits. Senior officials also claimed to use records to follow up co-workers decisions in case of complaints or appeals:

“It is not that many who directly ask me ‘where am I in the handling process?’;
It is more [questions] of a general character for me. If it is something about the handling of a matter, it is often, I think, a complaint that they have not gotten any feedback from the executive officials.” (Senior official 5)
Officials’ use of records was partly triggered by their own needs when fulfilling work duties, either required by law or as a result of a cognitive need for information about the particular issue. However, they also served others’ information need, like clients’ or senior officials’ needs. During the handling process the parties might require information about the status of the matter. Employees that were not directly involved in the handling of matters, i.e. specialists like investigators or in-house functions like accountancy, legal support, maintenance etc., were less influenced by external requests. Since to some extent they performed support functions to other members of the organisation, the needs of the latter often led to use of records. Senior officials and managers were also often indirect users, requiring processed information extracted and compiled from records:

“Do you ever have to consult records or information from records in your work?

[---] This need often occurs, perhaps not for me, I am not into the operational decisions, but when I am taking part in a select committee or in a… In the executive committee the drafts are available with enclosed documents.

So you rarely need to search any records for your own needs?

No, I have to say so.[---]

Do you ever need to access specific files?

No, never.

Never?

No.

So what you need is rather facts?

Yes. You know I am not involved in the handling of matters in that way. I can possibly give my opinions about a proposal for a decision, but then I get it… a plastic folder with some drafts, so I can sit down and discuss it with the official in charge. But that is very rare.” (Manager 1)

The same occurred in the relationship between officials and politicians. The politicians, the elected representatives, were indirect users in that sense that they relied on drafts presented to the decisive committees by the officials. However, they could also directly use records for their own requirements:

“You send out drafts before committee meetings, but do politicians ever make requests by themselves, and want to consult records and previous matters?

Yes, they do sometimes.

So they demand that kind of service?
Yes, and we have to give them that service and find them [the records] for them. So it is, and it can happen anytime, it can happen in connection with a meeting.” (Senior official 1)

The reason for using records could be to better prepare a decision, but politicians’ need for records could also be generated by other means, for instance their relation to and accountability towards citizens:

“To what extent do you need to consult or search for records?
It happens. It actually happens that ... X [the commissioner] has perhaps had a visit, or she might have received a letter, or she is going to have a visit, and those may concern specific matters. Then you have to call Y [the registrar], and then... either you go down or she comes up, and you get a bunch of green files...” (Administrator 2, assistant of the commissioner)

Use of records could also be a part of the continuing political activities. A political party could have raised an issue or perhaps submitted a proposal, and then it needed to consult records to collect factual information about the issue or to recall previous actions:

“Does it happen that politicians make requests and want to consult records?
Yes, it happens of course. Not so often... The question is more like ‘what did we say about this in the school proposal last time?’ That is to say the big issues: the general plan, the budget two years ago ‘What did we say about that?’, the ‘big’ documents so to say. Details, the small questions... that’s rare. Then, when drafting proposals it happens... well for some reason, the last one year and a half, there have been a lot of proposals that have an historical basis. [...] ’What was said when the Ark was built?’, ‘What was said when the Botnia railroad project started?’, such questions. Then we have had to go back in the rolls and find out what was said. They [the politicians] have made a request or issued a proposal, and to be able to draft it accurately we have had to go back so to say. Also, before meetings in the select committees we have something called chairmen’s draft meeting [...]. The matters I find ready for decision that should be put on the committee meeting’s agenda, should be ticked off. And then [...] the commissioners [...] can say ‘but isn’t this an issue two years ago or five years ago?’ It happens sometimes that you get such a ‘go back-assignment’ [...]”
(Administrator 3)

This meant that officials and administrators often acted as intermediaries, filtering information for the “end-users” who often had a decision-making position. The internal users could thus act both as direct users and indirect users, when performing their various duties as employees or elected representatives.

The internal users were the primary users of records, but the external users were also an important and much varied group. One of the most commonly recognised user categories were journalists and special procedures had been developed to handle their requests. The incoming mail, if not classified, was usually displayed at the reception and extracts from the journal were submitted to the journalists so they could choose matters of interest. The registrars were also
aware of the kind of issues media took a special interest in, and prepared them to make them available.

“We have daily coverage, that is to say the journalists come every day to see what [mail] we have received and we have actually a certain feeling for what they want to write about, something that concerns the municipality locally. Not something too detailed or too narrow, it must be of general interest or... and we put it out here, and they can have a copy and so. But sometimes they make deeper investigations: ‘how is the Arena-project proceeding?’ And they request agreements, a lot of decisions... and it can be that the public writes to the [...] newspapers, and debates and issues are raised, or they do it anonymously so the newspaper has to do the research so to say.” (Chief registrar)

Journalists were thus given a sort of special treatment, playing the role of “gatekeepers” and representatives of the general public. Another important group was citizens, usually parties in specific matters or persons interested in certain matters even if they were not formally parties in them.

“It happens of course that individual citizens come here, or someone interested in some particular controversial matter that is debated, it happens [---] What do you think is the most usual reason for consulting records? That you want to know the decision of an application you have made to the municipality. Being a party to the matter? Yes, you are a party to the matter.” (Registrar 4)

A third group of citizens were actually not directly concerned by the business of the municipality, but in demand of records, or information from records, kept by the municipality. According to the registrars’ and officials’ statements a certain amount of these requests seemed related to city planning, building and technical services, for instance persons intending to install geothermal heat or dig up a private road needed to know where sewers, water pipes and electric cables were drawn:

“Does it happen that you receive questions from outside that lead you to consult records? Yes, private persons often want to know where sewers are drawn when they are going to install geothermal heat or something...” (Official 1)

Some might be troubled by the condition of the neighbouring property or have a complaint on an other subject’s activities:

“Does it happen that you receive questions from outsiders that lead you to consult records? Yes, it does. What kind of questions? [...] well, let’s say that someone has put up a storage place, then a neighbour may call and ask: ‘Are they allowed to do that?’ Then maybe I say ‘Yes, I believe so’, and then if there is a decision they want to see that, so you have to retrieve that and send it over. (Official 2)
Another example was estate agents, who were considered to be rather frequent users of building permit files, requesting copies of drawings of potential market objects. I.e. the users might not necessarily have a relation to the municipality concerning the issue, but using the municipality’s records for their own purposes. Another group of users without a direct relationship to the municipality was mentioned by several of the registrars and officials, namely students doing social science assignments about public access to official documents. On the other hand, researchers were never mentioned as a user category.

The external user groups were usually referred to as citizens or the public, which could be interpreted as private persons. However, such demands for records could be made by other legal subjects like business corporations and associations as well. For example, the Culture and Recreation committee and its office frequently dealt with associations. Associations, or interests groups, could also act as representatives for citizens on issues of special interest. These could either be concerning specific matters or the municipality’s actions in general concerning a certain issue, for instance support to the visually impaired or environmental issues. Finally, other agencies were mentioned as a user category. Other agencies could of course be parties in matters, but they could also have a legal interest in the municipality’s business. Some authorities, for example the County Administrative Board, had superintendence over some of the municipality’s obligations or tried appeals in certain types of decisions. Other agencies needed records from the municipality to fulfil their own obligations, for instance the police and courts. The municipality also provided statistics to other agencies, for instance the National Board for Health and Welfare and Statistics Sweden.  

6.3.2 The use of records at the municipal archives

The documentation of requests to the municipal archives provided the basis for an analysis of user groups. Through an iterative process, by reading the requests thoroughly again and again and confirming the interpretation with the archivist, an identification and categorization of users were possible.

The analysis of the documentation of requests to the municipal archives during the period 2002-2005 resulted in 1440 substantive requests, i.e. questions concerning the holdings (c.f. Bearman, 1989/90). In addition to those 31 follow-ups or specifications to previous requests were documented, which are of relevance for further analysis of the interaction between users and the archives but not included in the sum. Fragmentary or irrelevant items (statements like “can’t read the file, send new copy”), and requests for administrative services and consultations (for instance general questions about how to do genealogical research) have been excluded.
The users of the municipal archives showed a slightly different pattern than the users of the records within the municipal administration. Of the 1440 requests about a third, 475 requests, were internal, emanating from employees of the municipality and its various organizational units. The rest, 965 requests, were external. Thus the share of external user requests seemed to increase with time. Internal requests were usually issued by registrars and administrators. Officials sometimes requested records directly, but most often with help of registrars or an administrator, e.g. a secretary. This was also confirmed by the interviews:

“Do you ever contact the municipal archives?
No, I don’t. If so, if I request anything, then those who work here make that contact. I use my co-workers to guide…” (Senior official 3)

“Do you ever contact the municipal archives?
Yes, but only through X [the registrar] and Y. Y is responsible for the [administrative office’s] archives. And they make contacts… but I have no direct contact. […] I’m a bit spoiled; when I need something from the municipal archives X takes care of that.” (Senior official 4)

No politicians occurred among the users, but may be end users of some requests, which in some cases was explicitly stated in the documentation:

“X [the commissioner] called this morning and wanted me to make a map with all closed down schools marked with year, […] I want to hear if you can give me the years for all schools closed down since 1975…”

Staff could also request records on behalf of clients. This could for instance be the social services offices requesting a paternity suit or an adoption file by demand of a client or schools asking for reports on on behalf of former pupils. A recurring type of request, 19 in all, was the city library requesting genealogical material or answers of genealogical questions. The city library provided micro fiches of genealogical records, mainly parish records, but in some cases those needed to be complemented by municipal records. Instead of referring clients directly to the municipal archives, the librarian in charge often helped out with the search. The main part of the requests were, however, made by the officials in the process of handling of matters or administering the business of the municipality, even if the request were mediated by a third person.

The external users showed a greater variety. Requests were most frequently issued by individuals, i.e. not representatives of agencies, business corporations or associations of various kinds. A few requests (22) could be identified to be issued by parties in matters or stakeholders in the business of the municipality. Users seldom made requests as parties in active matters, since the records were usually not delivered to the municipal archives until several years after the matters were closed. However, they could have an interest in closed matters to whom they have previously been parties, or wish to consult earlier decisions in matters similar to
current ones. These kinds of requests were mostly concerning building matters, properties and city planning, i.e. matters concerning rights and liabilities that had long-term consequences, or in a few cases concerning social registry files or paternity suits. A further five requests could be identified as made by individuals acting as citizens, pursuing their right to control of public affairs. These concerned the municipality’s treatment of the functionally impaired, school issues and the closure of the municipal consumer guidance service.

The most frequent users were not citizens directly concerned with the business of the municipality, but subjects wanting records or information from records created in the municipality’s administrative processes and kept by the municipal archives, but with no direct relation to the municipality. Unlike the administrative offices, the municipal archives was to some extent frequented by researchers such as genealogists and local historians, who together provided around 30 % of the requests. Of these, 10 requests were posed by study groups. However, since these kinds of users were often made recurring visits, they constituted a relatively low proportion of the individual users. The few professional researchers comprised one historian and a couple of medical researchers, responsible in all for 10 requests. Two requests were issued by a local author undertaking research. Requests from students within different levels of the formal educational system doing school assignments or writing theses also occurred, 21 in all, of which a few were apparently from students in journalism trying public access to official documents.

The largest user group was, however, private persons requesting records or information from records for personal business purposes. These totalled 567 requests. For example, they requested copies of their own school reports or student medical records, students’ registers, adoption files and paternity suits. A few requests (4) seemed to be issued by private persons out of plain curiosity, requesting celebrities’ school reports.

Legal entities such as associations and business corporations could be parties and stakeholders in matters as well as private persons. However, there were few such indications in the analyzed material. Several occupational requests were related to city planning, building or house lots, issued by building and engineering firms. Some business corporations and associations were also recognized by using information from official documents for commercial purposes. In this case it was party promoters requesting students’ registers in order to organize school reunions. In all 18 requests were made by business corporations, e.g. banks and insurance companies, engineering companies, and party promoters. Other recurring occupational user groups were agencies and associations requesting records for their own administrative or business purposes, 14 and 9 requests respectively, and hospitals and clinics asking for medical records, 4 requests. Media did not appear to be such an important category of users as at the
The reporter at the local newspaper stated that the only time he had used the municipal archives professionally, was when he was going to be interviewed himself due to his forthcoming retirement, and he needed to freshen up his memory. The few requests from media that were identified in the documentation, 5 in all, related to school reports of local celebrities. However, in what role a person requested records could not always be established with certainty:

“…it is difficult to give an exact answer, because we are not allowed to ask who they are. Sometimes there comes a person who wants an answer to a specific question, and we don’t know if it is the media or the general public.”

(Archivist)

The users of the municipal archives were basically of the same kind as the users of the records of the administrative offices, with the addition of researchers, professional as well as amateurs. To what extent the external users who directly consulted the municipal archives were end users or mediators is difficult to assess, except when explicitly stated. For example, there were cases where parents requested copies of school reports or medical certificates for their children who have left home. In those cases the mediation seemed to be more of a practical matter than an attempt to facilitate the intellectual access to the information. However, there were also examples of people undertaking research for others, for instance concerning genealogical matters or family stories.

6.4 The search for records at the administrative offices

6.4.1 Interaction with the journal

Since few of the employees except the registrars had access to the journal, the latter were the primary users and it was they who undertook the searches; partly on request from other employees or external users, partly as a feature of the registration process.

Searches in the journal could either be undertaken as free-text search or metadata field search. A combined search, using several fields was possible, for instance combining a word in the subject heading with a date. However, the search possibilities of ÄHS had limitations. An extensive free-text search was not feasible since the system only allowed searches with one word in each metadata field, not a combination of words or phrases. Signs like colons or hyphens were not allowed, which made searches for real property complicated since each property was designated a code according to the land registry consisting of a geographical location and a combination of numbers separated by a colon. Searching in textual fields required the entry of terms consisting of at least three letters. There are geographical place names in the area consisting of only two letters. Searches for those then required truncation; a solution not obvious to all the registrars. The
system was also case-sensitive. Another problem was that the metadata fields had a limited space for entries, other than the field for subject headings. This forced the use of abbreviations, often idiosyncratically made up by the registrars themselves, which led to an inconsistent use of terms. Detailed knowledge of the system and certain creativity was thus demanded to perform efficient searches.

The system was not entirely transparent, neither for registering, nor search. The function of the metadata fields was not obvious for the inexperienced registrars, who were not well initiated in the municipality’s decision-making processes and administrative routines:

“Then the headings [of the metadata fields] are a bit ambiguous. Say, this field is called sender/receiver. Well, how do you know which one you are searching? [...] And then we have the calendar, the handling process so to say. In the calendar we enter who has made the decisions; who has sent this; where to and what happened and... there and back. I don’t think that is very easy to understand, you have to do a bit of thinking. Date in, date out, well in the beginning that was very difficult. X [the chief registrar] showed me once how to do it, and now I have to do it by myself.” (Registrar 7)

The registrars showed somewhat varied search paths, but with a preference for searching words in the subject heading. When they had got a match a list of matters appeared, which then could be browsed to identify the relevant one.

“Tell me how you go about to search the journal? Which search fields do you use? Well, first I choose our own administrative office and then I search for a word mostly, if I don’t know the journal reference number. So I search the subject heading for, say it is about the X-school, so I enter X-school and then I get everything there is about it, every year. Or I can limit myself to certain years if I want. But most often I search for a word. In the subject heading? Yes. That’s the easiest way.” (Registrar 5)

The practice of searching the subject heading had led to redundant information sometimes being entered there just for convenience: for instance the name of the sender even though there was a specific metadata field for sender/receiver. Searching the subject heading seemed to be the most intuitive way of performing searches, particularly for the less experienced registrars who did not master all the system’s facilities:

“When you undertake searches in ÄHS, which search fields do you use? [...] well, we have a search function where we can search the subject heading, that’s most usual. Administrative office and subject heading. Let’s say that I want to check if there is a file on evaluation of the unit of Public Health, then is it easier for me to search “evaluation” instead of messing around with numbers and so. The subject heading is easier, just a search term. Then you often roughly know the year it was in question. Those who have worked here for a long time, they can almost recall the date a certain matter was current. I don’t because I have only been here for half a year, and then it is perfect to be able to just search for a word.” (Registrar 7)
Since the registrars also made up the subject headings, and thus were aware of how those used to be formulated, this could be a very efficient way of search. The way user queries were expressed also triggered this behaviour. As will be shown below, users seldom provided an exact identification like journal reference number, but often phrased their queries in general terms. However, the term provided by the user did not necessarily occur in the subject heading. The users could either have been mistaken, or were expressing themselves differently to the registrars:

“Of course, it can be difficulties sometimes, because... a subject heading looks in a particular way and what they [the users] say perhaps does not agree with any words in the heading. Then you have to take an extra look.” (Registrar 2)

This required the registrars to negotiate the query with the user to get more specific information or try other access points. Other metadata fields could be used or a combination of metadata fields. The skilled registrars often undertook more complex search combinations and tried several possibilities, even if they also favoured searching the subject heading.

“Tell me how you go about searching the journal? Which search fields do you use? I can search for... for the most part I search a word in the subject heading, or according to the classification code where certain types matters are entered under specific designations. Do you use that search possibility too? Yes, subject heading and classification code. I can also search for the official if I know who it is. There are all varieties. But mostly you search the subject heading.” (Registrar 2)

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“When you search the journal yourself, how do you go about it? Which search fields do you use? In a computerized journal it is the caption, the subject heading, I search for most often and in the first place. Then it is the sender, who has initiated it, sent something in... Date is of course important, if you know the time period roughly... [—] So in the computerized journal the type of matter is not so interesting, i.e. the classification code [...]. In some cases it can be, if for instance you want proposals, which has 910 and so on. You want to list a certain group.” (Chief registrar)

The classification code was used as a search entry by some, but not all the registrars. An obstacle was probably that the system only provided registration of the numerical code, not the full designation. This meant that to make efficient searches the registrars had to know the codes by heart, since it was not convenient for them to look them up every time they were going to make a search. In some administrative offices where the matters usually concerned a specialized area of business and the number of classification codes was limited, this could however be an efficient way to search:
“When you search the journal, what entries do you use then?
Well, if I know it is about, say walk and cycle paths, it is 512. I have the code directly, the classification code it is called. In other cases, it is the property unit designation; I think these are the most common. […] the codes you learn them. It has been the easiest way to make searches.” (Registrar 6)

The search entries and access points preferred by the registrars could be summarised as follows in table 6.2.

<table>
<thead>
<tr>
<th>Search entries</th>
<th>Access points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject in general terms</td>
<td>Free-text field (subject heading)</td>
</tr>
<tr>
<td>Journal reference number</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Proper name</td>
<td>Metadata field (sender/receiver, official)</td>
</tr>
<tr>
<td>- personal</td>
<td>Free-text field (subject heading)</td>
</tr>
<tr>
<td>- institutional</td>
<td></td>
</tr>
<tr>
<td>Date/Year</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Organisational unit</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Classification code</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Property unit designation</td>
<td>Free-text field (subject heading)</td>
</tr>
<tr>
<td>Geographical location</td>
<td>Free-text field</td>
</tr>
</tbody>
</table>

**Table 6.2 Registrars interaction with the journal**

The archivist had also access to the journal, which she used when action files were requested without the journal reference number provided. Users often provided date or section number as access points, but those were not searchable in the inventories since the files were sorted according to journal reference number. She also used the journal in some cases of requests about specific subjects. The archivists regarded the subject heading as a useful, but not sufficient access point. Combinations of access points and different tools were necessary and one of the most important “tools” was their own memory of location:

“So it is the subject heading you use as search field?
That’s what I primarily use, because if I have other information I don’t need the journal, then I access the files directly. But if I don’t know the exact subject and it perhaps is a bit fuzzy… they don’t want something specific, but… well, say
road associations in general. It has been a lot of that lately, and then it is
everything that relates to road associations and the municipality. [...] Then I use
the classification code. I don't know it by heart, but I look it up, roads, it should
belong under that code, and then I get the files.
So if it is a general subject you use the classification code, but if it a more specific
request you search the heading?
Yes, but I don’t use the journal much… or do I? No, if I have other information I
go directly to the files, and if it is something else I use the inventories, and I
hardly use them either…I have a visual memory, so I can usually recall where
things are, but if I can’t I use the inventory.” (Archivist)

The only external user who was claimed to use the journal, confirmed by
himself, was the journalist. He could be considered as an expert user with a
profound knowledge of various search paths. Other external users searched for
records primarily by approaching the registrars or the archivist, or the official
responsible for a certain matter. In some cases it was administrators like
receptionists or secretaries be who were the first contact the users made, who then
referred the question or the users themselves to the registrars. Administrators were
also often responsible for keeping recently created records available, like minutes,
accounts, or other administrative records within their domain of work.

In order to access records users seem to prefer informal search paths or
channels, primarily persons, to formal systems. To some extent this could be
explained by that the fact that formal search paths such as the journal were only
directly available to a limited group of people: the registrars, the archivist and a
few administrators and officials. However, if someone would like to access the
journal that would be possible, but according to the interviews, no one expressed a
wish to have direct access to this tool. More or less typical answers were:

"I think I can access the journal, but I don’t use it. Instead I trust, well my own
memory and X [the registrar]. It’s faster if I tell her that we took a decision in
the spring 2003 about this. Then it’s faster for her to pick it up [the file] than it
is for me to search the journal, because she picks it up immediately. This is a
normal situation. And besides, if we do have to search [the journal], it’s faster
for her.” (Administrator 3)

......

"Would you prefer to have direct access so you could search yourself?
Well, I think it could be difficult to search. It is of course a matter of habit, but
we haven’t been doing that [...]. Of course, they have great… they are very
knowledgeable about what has happened, and remember so… And these
subject headings, they are the specialists on them.” (Administrator 2)

The skills of the registrars and the perception that it was most efficient to have
them to perform the searches, were often referred to as a motive for not
undertaking searches in person. An exception was the administration of Planning
and Environment, where the journal was integrated with the business
management systems, one for building permits and one for environmental issues.
The officials thus had direct access to the journal, and could search for records by themselves:

“When you need to access records, do you search yourself or do you ask someone to get them for you?

No, I do it myself. I go to them [the registrars] if I can’t find myself, but usually I do.

Can you give me an example?

Well, the records here are mainly... they are kept in our archives. So you, by ECOS our journal system, find out the property unit designation for instance, or a name of a company... and then you go to the archives, which in case of environmental control is organized according to company names, you get the file and the record you want. And then, in certain cases we have... lately when we write a decision, it is registered and saved digitally as well as in the archives. So sometimes I don’t have to go to the archives, I can find it here.”

(Official 2)

This might indicate that if users had direct access to the search tools, they would use them more often.

6.4.2 Alternative search paths

To some extent, the employees created their own systems of access and retrieval. One example was keeping records in a physical order that made them searchable without any further registration:

“Do you keep any records here that not are registered?

Yes, matters concerning staff, decisions, I keep them gathered in a binder. How do you say, organized in a binder? I do not enter them [in the journal].

How do you search for them?

They are in chronological order; there are not so many each year. You have a clue about the year, but you can also get guidance from the salary system. And then there is a file for each person.” (Registrar 1)

Some of the officials preferred to create an archive of their own, with copies of important records:

“...I used to keep the committee records myself at least for a year, then I change them and keep certain minutes which I find especially important, like ‘here this decision was made and what was that based on, this will follow us for a long time’. (Senior official 1)

Others kept as little as possible by themselves:

“I am that kind of person that feels very safe in that this is a public business. I keep very few records myself; everything important is registered in the journal for me. This means that I have no need to gather my own [records]; instead I make a lot of use of the journal and my registrar.” (Senior official 4)
Some of the interviewees also seemed to use the minutes as a search path to the files:

“The section number is notated, and if I can get that it’s the easiest way to search, because there is... There is a whole year of minutes gathered in a binder, without enclosures, but if I read the minutes I can understand the matter as much that I can decide if I need to get the files, it happens, or if it is enough reading the minutes. Often it is enough reading the minutes. In recent years, we have also the minutes in the computer so we can search. That is a little help.” If I know that it was around spring 2003, it is just as fast looking there. (Administrator 3)

Since the minutes for recent years were published on the municipality’s website, this was a convenient search path. Some of the administrative offices were also trying to develop an “archive” on their domain of the network, with all the important documents of common interest like minutes, policies etc. This was considered as an “embryo” of an Intranet since a full Intranet function was not yet implemented.

6.4.3 Requested objects

The registrars’ experience was generally that external requests often concerned factual information, more seldom records. Usually they concerned on-going matters or dealings with the municipality, where the parties wanted to know how the matter proceeded:

“They may phone and ask... if they have written to us themselves, and want to know what has happened with the matter. But that’s mostly when they have a matter of their own [going on]. (Registrar 5)

The registrars used to answer questions like if an application or suchlike had come in to the municipality, if a decision was made or, when the occasion occurred, what other documents were registered in the matter, but questions about details in the handling process were referred to the officials. Requests for records as such, documents, were less frequent. However, two specific types of records were recognised and demanded by external users, namely decisions and drawings or plans. After a decisive meeting in any of the committees, the registrars used to receive questions about the decision and requests to see it. Sometimes users also required copies of the decisions, most likely persons who were more or less directly concerned by the outcome of the matter. Drawings and plans were the other type of records that users demanded to access personally. The content of those kinds of documents could most often not be mediated by other persons, but the user had to scrutinize them directly. They also had an instrumental value, for instance in case of reconstruction and renovation, thus copies were requested for further use. A third type of records that were also specially requested to some
extent were social registry files, i.e. clients wanted to take part of the documentation concerning themselves:

“If I’m registered in the social registry, if I know I’m there, then I can request my own records, my own file, but not my children’s’ or…

Does it happen that the clients request their own records?
Yes, now and then. They can get a free print-out [from the registry] once a year, but some get it more often than that.” (Registrar 7)

A more general demand of “records about” certain issues could also occur, usually concerning controversial and debatable matters.

“If we return to the public, do you have any opinion of what are the objects of their requests? Is it the answer of a question, a certain fact, or a specific record or copies of records?
Well, it can be a specific record actually, or a decision and then they often want a copy too. But it can also… some years ago there was something called the School facility report, it was about the close-down of schools, and that really engaged the people around. Then they often wanted copies of every comment that came in from the public, their opinions and such. And then they were informed that it would cost about 1000 crowns to get it, so maybe it would be cheaper to come here and have a look and choose what they actually wanted.” (Chief registrar)

A difference noticed between internal and external users, was that the former usually requested a specific file or a document, for instance a decision or a contract. Internal users who were familiar with the administrative process and the resulting records could more easily narrow their request to specific items. The employees rarely posed factual questions about the content of records, they preferred to take part of the records as such, but could ask about details like when a certain issue was current or which official had handled a certain matter. Those details could be found in the journal.

6.4.4 User queries

The general opinion of the registrars was that in most cases they could meet the users’ needs and were able to provide them with the requested objects even if at the start they could not always pin-point the exact items. A common trait of external users was that their queries were often a bit vague at first, even if it turned out that they actually had a specific demand. They wanted to see “everything” about something.

“Well, those who make requests from outside may often want to see… they don’t know exactly what they [can get]… they say ‘I want to look at everything about the Arena’ or ‘everything about the Ark’, and they don’t understand that there are 15-20 files. It may be something specific they are looking for, but at first they can’t really explain what […] If you can’t find out you have to take out a lot of records and that takes more time […] Can you explain how you go about trying to find out what they actually want?
Well, I try to ask what they actually want, if it’s something specific, and perhaps
narrow the field down so it wouldn't be so large. To try to get this: a certain time, if it's a contract or whatever they are after; to get a more exact match and find what they really want." (Chief registrar)

The queries were often phrased in general terms, users wanted to know about something or take part of records about something: a matter, a certain issue that was subject to decision in one of the committees or part of the municipalities' activities, or a specific subject. The requests could be specified with for instance proper names, time and location, but exact identification such as the journal reference number was rarely provided.

"Those who want to take part of records; can they provide the journal reference number?"
No, no. We get their names and we then have sender and receiver to go for, and then what it is about, and we register very much according to property unit designation, which is a very good search entry, [...] or they have the approximate time." (Registrar 6)

On the other hand, property unit designations were a frequent exact identifier when it came to requests regarding properties, planning issues or physical constructions, and in cases where those concerned the user's own property it could be provided without problems. Alternatively the address was provided, which also functioned as a search entry for properties. In general, specific subjects like persons, properties, buildings and institutions, were often subject to requests and could be identified by name or other details of identification like civic registration number or property unit designation, or at least described in general terms. Requests for specific documents or types of documents in those cases were also rather common, for instance drawings or building permit files or social registry files.

However, it sometimes happened that external users could provide a journal reference number, and provide it spontaneously. In those cases the users normally were involved in an on-going matter and had had previous contacts with the municipality.

"Does it happen that they can provide a journal reference number?
Yes, they may have a matter going on, and then maybe we have been in contact with them and they have got a journal reference number[...]." (Registrar 3)

"It has happened that someone has had a journal reference number, and then they have usually had a copy of a decision [...]. But it is not often, because the public... well, then it is not the first time they get her. Instead I think they are a bit more familiar when they start coming here and ask 'Yes, but can you get me this journal reference number?' It is not the ordinary people who do that. Perhaps then they can also provide the section number [for the minutes]."
(Registrar 4)

It was the registrars' experience that some negotiation and follow-up questions were usually required to get an exact identification.
Users could not be expected to have the details or even be aware of the registration procedures:

“[...] they don’t always understand such things. And of course, we can’t demand that someone who makes a request should have a denotation. But if they have a section number or a date, that facilitates the retrieval considerably. Do they provide this information on their own accord or do you have to ask for it?

Yes, some have this information. If they don’t you can ask, and if the say ‘Yes, I have a document here’, you can ask ‘Does it say anything about...’; and then you got an answer. But very often they don’t have anything, they have just heard or ‘know’ that there should be something.” (Chief registrar)

To make efficient searches, it was thus important for the registrars to make follow-up questions to pin-point or narrow down the subject of interest. Even if the users had a clear view of what they wanted, it was often necessary to negotiate the question to be able to make an exact identification that matched the access points in the journal. The information given by external users to identify the requested items (facts or documents) could thus be summarized as follows:

- Subject in general terms, e.g. “close-down of schools”
- Proper name
- Civic registration number
- Object in general terms, e.g. “the arena”
- Time/date
- Place/address
- Property unit designation
- Occasionally journal reference number
- Occasionally document type

As stated above, the registrars perceived that internal users to a larger extent requested specific items. However, that did not imply that they always were able to exactly articulate their requests or provide the exact identity of the item. According to the registrars even the employees could rarely provide the journal reference number:

“It is very seldom they have a journal reference number.” (Registrar 2)

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“They almost never ask for journal reference number, instead it is the subject heading, the subject area. They know approximately what it is about.”

(Registrar 4)

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“Sometimes they may have a journal reference number, but often you search for a word. You know what it is about. […] Mostly they don’t have a journal reference number.” (Registrar 5)

Usually the queries was “about” something, but often specified by time or type of document or, which was specific for the internal users, the administrative context, e.g. the particular decisive meeting when the matter was drafted, or the particular committee or official that had handled the matter. The most frequent
identity information given was subject, either in general terms or, more often, as a specific subject. User queries could also concern potential subjects, to find out if a certain issue or a similar issue have been handled before. In these cases the queries were more generally stated: “Do we have anything about this property, this person etc.”, i.e. not referring to a known item. On the other hand according to the interviews, purely topical queries did not seem to occur.

These observations were largely confirmed by the employees’ own recollections of their search behaviour. The journal reference number was seldom provided other than in exceptional cases, for instance when the official had a letter where could find the journal reference number. Most of the interviewees claimed that they hardly ever used the journal reference number to identify records.

“Can you provide a journal reference number, i.e. how do you put the question?
Well, ‘get what we did during the spring 2003. Check it out; it may be a little later’. I am very un-precise. I never provide a journal reference number. There is no need for me to learn the classification scheme. (Administrator 3)

The internal users often required records concerning a certain matter and were providing subject terms, i.e. what the matter “was about”, usually specific subjects like a particular event, a particular object, a place or a person.

“Can you give an example of how you put the question? What kind of information do you provide?
I try to be precise and say what I think is in the subject heading of the matter. I say ‘this concerns the X investigation; this concerns the Y donation of art, and I have had a question...’[...]I try, because I know that in the journal, and in the records, all matters have a heading, and then you try to put something searchable in the heading, so I try to use that.
Do you ever give more specific information, like the journal reference number?
No, never! Not a clue! I can say like this ‘it was probably in March 2005, it must been drafted for the committee’ or ‘it may have been in November 2004 [...]’. (Senior official 5)

However, the subject was often augmented with contextual information like time and occasion, e.g. a committee meeting.

“Can you give an example of how you ask for a matter?
I can either say like this ‘We had a council decision due to this citizens’ proposal in March’. And then she [the registrar] searches the journal and retrieves it. Or I can ask her to search a word or ‘The National Board of Health and Welfare internal control of the activity’. It is very rare for me to use a journal reference number.” (Senior official 4)

“other occasions, when you know exactly what you are looking for, do you provide the journal reference number then?
No, I don’t have the journal reference number, I just know what it is about and then I could say like it was up for the executive committee in 2002 or 2003 or... well something.” (Legal adviser)
This indicated that the original context, the administrative processes, was an important search entry for internal users. This was also confirmed by the fact that some of the interviewees seemed to use the minutes as a search path to the action files, as shown above. Each matter handled at the committee meetings was notated in a separate section. By entering a certain minute and a section number in the journal, the journal reference number could be identified and the file thus retrieved.

Several of the municipal activities were organized around specific subjects: social services were organized around persons; planning and building and technical services around various objects like properties, roads, bridges etc.; environment and health protection around properties and corporations (manufacturing industry, agriculture, restaurants etc). These kinds of specific subjects or objects were often the organizing principle for storage of records in the form of case files. They were also the usual subjects for queries concerning these matters, and in many cases the officials could exactly identify them by the special codes assigned to them:

“When you need to search something from the journal, how do you put the question to the registrar?

‘Do we have something about this …’ a property unit designation or a road or…

So you primarily search for an object?

Yes, often a road number... Yes, so it is. And then it becomes the search entry… or a bridge or whatever. People, private persons may have requested ‘We want the road closed for traffic’ or something, and how did we then act last time [the issue was current]? Then you usually search for the road number.” (Official 1)

These denominations were apparently more meaningful to the employees and used in their ordinary work tasks. They were thus easier to use and remember as search entries, than a journal reference number.

Even if the internal users had a fairly clear opinion about what they actually wanted, they still might have to negotiate their requests. One reason could be that the identity information given simply was wrong. The context where the decision was made or the time might be mistaken:

“[…] I have to say, and this applies to the officials too, it is difficult to know when some time has passed, when something happened. They say ‘Well, it was sometimes in the 80-s, around the beginning of the 80-s’, but it was perhaps in the middle of the 70-s it started. So you have to look through several years. It is easier when it is in the computer, but if it is not and you have to search manually, then there are suddenly huge amounts you have to go through before you hit the match. (Chief registrar)

Another reason might be the fact that the requested item actually was specific. There was a particular document that was of interest, but that document could be hidden in a larger context, e.g. a matter:
“[...] You often know approximately in what context it was, it could be a council decision, it could be a Culture and Recreation Committee decision and then I have to go there, but most often, the questions I have are mostly about something that has been a matter for the executive committee or the select committee here. Not always, but most often it is like that. [...] In connection with the budget there may have been a decision about a cost, and then I get a question about that: ‘what decision was made?’ Then I have to think ‘when did that occur? Was it a separate matter or was it decided with the budget?’ It could be a bit tricky; perhaps I have to talk to the secretary of the executive committee. He might have got the hang of it. He can remember "Yes, that was two years ago"," when it was present. I can then easier... I can help the registrar and tell her that it has to be in connection with the budget at this or that time, and then we might find it!” (Legal adviser)

Sometimes the context as such could be rather complex and the processes difficult to see through. The connection between records, for instance a specific document, and the matters or particular subjects were not always obvious to the users, and the choice to define a particular issue as belonging to one or another matter was to some extent arbitrary.

The information given by internal users to identify the requested items could be summarized as follows:

- Subject in general terms
- Type of document
- Proper name
- Civic registration number
- Object in general terms
- Object identity code
- Property unit designation
- Time/date
- Place/address
- Minute section number
- Organisational unit
- Official
- Decisive meeting
- Occasionally journal reference number

6.5 The search for records at the municipal archives

6.5.1 Interaction with the archives inventory

The municipal archives kept inventories of its holdings. The archives inventories were not disseminated outside the municipal archives, since the archivist judged the current state of them as inferior. The archivist claimed that the inventories were in such poor state that she would not provide them to the users other than in exceptional cases. Her opinion was also that users mostly did not
know how to utilize an inventory, “[…] they just turn the papers back and forth and get stuck on something else [than what they were looking for]”. She could not recall that anyone had ever demanded access the inventories. The interviewed users confirmed this statement. The answer to the question how they had located the requested materials were “I just asked X [the archivist]” (External user 2). In some instances she had used an inventory together with the users in order to find out what they actually wanted. For her own purposes she used the inventories primarily to physically locate the records.

### 6.5.2 Requests from internal users

As stated above, the documentation of requests to the municipal archives during the period 2002 – 2005 resulted in 1440 substantive requests. Some requests were in fact multiple-part questions consisting of two or more queries of different types, for instance a request for records combined with a fact-finding question. To make an analysis of the actual queries possible, these kinds of requests have been divided and treated as separate queries. Single requests for several records concerning the same subject or several records of the same type have on the other hand been treated as one query. This resulted in a final number of 1519 queries, 484 internal and 1035 external.

A clear majority of the queries from staff concerned specific items, i.e. the user could identify the requested item properly, 414 of a total of 484 queries, table 6.3 below. This was consistent with findings of e.g. Bearman (1989/90), and supported the registrars’ opinion that internal users often required specific documents.

<table>
<thead>
<tr>
<th>Requested items</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay-sheets</td>
<td>186</td>
</tr>
<tr>
<td>Decisions with enclosures</td>
<td>51</td>
</tr>
<tr>
<td>Action files</td>
<td>49</td>
</tr>
<tr>
<td>Others</td>
<td>128 (1-16 requests each)</td>
</tr>
</tbody>
</table>

**Table 6.3 Specific items requested by internal users**

The most frequently requested items were pay-sheets. The next two most frequently requested types of items by internal users were action files and decisions with enclosures, i.e. extracts from minutes. Those categories were also to
some extent overlapping and may serve the same purpose, namely to provide the facts about and the background to the political and administrative decision processes. The rest were occasional requests for various types of records. Some, for instance letters, could be a part of matters, but were defined as single documents. Overall personnel administration, i.e. in-house activities, generated most of the internal requests.

In general, these kinds of requests were not complicated to comply with. Even if in a few cases the requests could not be fulfilled (for instance if the records had not been delivered to the municipal archives or if the users had provided erroneous information), there were no doubts about what was asked for. The identification of the records had already been done by the users. In most cases the identification was exact: journal reference number or minute section number in case of matters and decisions, name and civic registration number in case of records related to persons, or property unit designation in case of records related to places/properties. In other cases the requested items were described fairly accurately according to time, place, subject in general terms (a phenomenon that occurred under certain circumstances, i.e. events and activities), or object in general terms (e.g. a building, a road etc.).

The information provided by the internal users to identify the specific items could be summarized as follows:

- type of document
- proper name
- civic registration number
- journal reference number
- organizational unit
- decisive meeting
- minute section number
- subject heading
- object in general terms
- property unit designation
- time/date
- place
- event
- activity
- distribution code (identity with in the accounting system, in case of pay-sheets)
- educational program, grade (in case of school reports and students’ medical records)
- occupation

However, the archivist’s opinion was that the users seldom spontaneously provided journal reference numbers and suchlike:
“Almost never I would say. Not from the administration either. The knowledge is in general rather low, even in the administration, because they call and ask for an agreement or something like that, and when you ask it shows that they are sitting with an extract from a minute and there are both journal reference number and section number etc. It is very seldom they spontaneously provide it; it is first when I ask for it. So I don't think they really understand the journal reference numbers, what they stand for. That’s a feeling I have. But of course, there are exceptions, the registrars know. They provide direct entries to the materials they ask for.” (Archivist)

Nevertheless, exact identification, even journal reference number, was given to a large extent. The reason was probably that internal queries to the municipal archives were often made with the help of the registrars or other experienced administrators, who might be able to identify the required items more exactly than the actual end-users would.

Of the remaining 70 queries, 28 regarded records but were not specific, 35 were concerned with facts regardless of sources, 5 were specifications of earlier requests, and two regarded records but were too fragmentary to be identified as specific or general.

Requests about unknown or non-specific items were in general concerning holdings of records “about” something, primarily a specific subject, like a person, a property, a place or an event, and something that had occurred in relation to that subject. Examples of such queries were:

“What do you have about NN, councillor in X, who recently passed away?”

“Everything about the property X [property unit designation].”

“…wants to read about all the turnarounds concerning the building and demolition of a footbridge over XX.”

Some requests could be more complex, referring to a course of events or an administrative process:

“Around 1968 a property, X, was connected to the municipal water main. The administrative office for technical services is now claiming that it’s a private pipe, not the municipality’s, so the new owner has to pay for a new connection. He claims that there was a meeting with NN, who was head of the town planning office back then. Are there any records about that?”

However, the queries as such were not difficult to assess. The information wanted was rather obvious, and could be identified by name, location, time and more specific identifiers such as the civic registration number and property unit designation, and often a certain amount of contextual information was given. The information provided by the internal users to identify the non-specific items could be summarized as follows:

- proper name
- civic registration number
object in general terms
property unit designation
organizational unit
time/date
place
occupation

The problem was how to provide the requested materials: were there any records; how were they going to be found; and, how to select among all possible records that could embrace “everything” about a particular subject? These kinds of requests demanded an inferential process. The records could not just be picked up from the shelves or looked up in the inventories, but the archivist had to assess what records that could possibly could satisfy the demand and what archives they would belong to. This was an iterative process involving recall of previous knowledge, accessing the journal and the inventory and a physical examination of the records themselves.

The few remaining queries from staff regarded specific facts: names, addresses, civic registration numbers, institutions, figures, numbers, time and events. The fact finding queries were generally close-ended, searching concrete answers to specific questions.

Examples were:

“The participants of the Committee of Culture and leisure in December 1999?”

“Which insurance company did the municipality engage in 1984/1985?”

“How many were salaried in 1986 at the Planning and Environment office, permanently and temporarily employed?”

However, the last query, simple in itself, was impossible to answer, or would at least have required a tremendous effort due to the fact that the pay-sheets were sorted according to civic registration number to be easy to retrieve, not according to organisational unit.

A few queries were seeking confirmation of a statement, and could be answered with a simple yes or no. A couple were however more openly formulated, referring to processes rather than specific facts, for example: “X is searching for her origin. Adoptive parents Y and Z.” (The request was issued by the Social services office on behalf of a client.)

Even this query was basically uncomplicated and could probably be answered with help of an adoption file, at least to some extent depending on the expectations of the user. None of the queries posed by staff appeared to require a more thorough interpretation of the purpose of the query.
The information provided to identify the records that could give potential answers to the questions were similar to the ones presented above, namely:

- proper name
- civic registration number
- organizational unit
- object in general terms
- property unit designation
- time/date
- place
- event (courses of events)

6.5.3 Requests from external users

Of the 1035 external queries, 728 were requests for specific items; 124 were requests for records without exact identification or questions about whether the archives had any sources on particular subjects, usually phrased as “records about”; 2 were questions about general holdings; 150 concerned facts regardless of the sources; 27 follow-ups and specifications of previous queries; and 4 were identified as requests for records, but the questions were too fragmentarily documented to be analysed.

The overwhelming majority were requests for school reports, 367 requests in all. Of those, 346 were requests from people who had lost their own school report and needed a copy. The remaining concerned copies of school reports from famous persons or requests in connection with genealogical research. In addition to that came 13 requests for registers of school reports, judged by the age of the items probably used for genealogical or local historical research. The second most frequently requested type of items were student registers; requested to some extent by party promoters specialized in organizing school reunions, but mostly by private persons in order to locate schoolmates. The following most requested items were census registers and minutes, judged by age for genealogical or historical research, and students’ medical records and vaccination certificates. The latter were, like school reports, of instrumental value for the individual person. However, medical records were in a few cases also requested for research purposes. Unlike the school reports, medical records were classified and access required permission from the subject. Other records primarily of current interest to users or their relatives were pay-sheets, paternity suits, adoption files and social registry files. Even if records to a certain extent were requested for cultural,

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1 According to Swedish law, school reports from municipal schools are open for access to the public.
historical or genealogical purposes, requests for personal and material purposes seemed to be dominate.

<table>
<thead>
<tr>
<th>Requested item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>School reports</td>
<td>367</td>
</tr>
<tr>
<td>Student registers</td>
<td>97</td>
</tr>
<tr>
<td>Census registers</td>
<td>47</td>
</tr>
<tr>
<td>Minutes (general)</td>
<td>46</td>
</tr>
<tr>
<td>Students’ medical records</td>
<td>25</td>
</tr>
<tr>
<td>Vaccination certificates, i.e. extracts from students’ medical records</td>
<td>17</td>
</tr>
<tr>
<td>Others</td>
<td>129 (1-14 requests each)</td>
</tr>
</tbody>
</table>

Table 6.4 Specific items requested by external users

Because of the often occurring requests for school reports and students’ medical records the archivist had found it necessary to take certain measures to facilitate retrieval, since she did not find the inventories to be satisfactory. School reports were arranged, and thus described in the inventory, according to school in chronological order. The only access point was thus the year of leaving school. As a remedy for this deficiency, every report was registered in a database with a reference to the physical volume, and searchable by personal name, civic registration number, school, year and grade. The students’ medical records were originally sorted according to school and educational program in chronological order. This was actually according to the original order the records were kept in at the schools before transfer to the municipal archives. To retrieve a specific item it was thus necessary that the user after identifying him or herself (or supplying a letter of attorney), would give the correct year and educational program, and the archivist had to browse the rather messy inventory to find the correct volume and then sift through the content to identify the actual records. To avoid this laborious task the records were re-arranged in order of civic registration number for each school, which deviated from the original administrative order. Since 1998,
however, the records are sorted in current order according to civic registration number, also at the schools.

Specific items were in general adequately described and could easily be identified by type of document, proper names (personal or institutional), civic registration numbers, property unit designation, place, time and subject of matter (i.e. a phenomenon that occurred under certain circumstances). In a few cases archival identification code or the journal reference number were provided, but in those cases the user had previously visited the municipal archives and wanted to use the same records again. Provenance, e.g. organisational unit, was sometimes referred to, but there was reason to believe that the users, mainly genealogists or local historians, were interested in a certain type of records from a certain place, not in the records-creator as such. The information provided by the external users to identify the specific items could be summarized as follows:

- type of document,
- proper name
- civic registration number
- educational program
- grade
- object in general terms
- property unit designation
- time
- place
- event
- organizational unit
- journal reference number
- archival identity code (in expectional cases)

Generally formulated requests for records, i.e. requests that could not be exactly directed to a specific item, could usually be defined as requests for “records about” particular subjects: activities, properties, events or courses of events, institutions, objects, persons, places or, in one case shown in the last quotation below, topic and types of documents. Some examples were:

"Looking for information about NN born 1891 in X, dead about 1936."

"Looking for information about [the property] X nr 6."

"Records about the inauguration of the X school 1952."

"Is there anything in the municipal archives about the mentally ill, in X 1850-1910?"

Some requests concerned types of records, for instance examples of registers of school reports, minutes, electoral rolls and census registers used for a study group
in genealogy. Finally, some requests required a processing of information from unspecified records to confirm certain facts, usually confirmation of work activities. The requests were usually concerning specific subjects, a specific person, a specific institution, a specific property etc., not general subjects or topics. The information provided by the external users to identify the non-specific items could be summarized as follows:
- proper name
- civic registration number
- object in general terms
- property unit designation
- time
- place
- event
- activity
- types of documents
- topic

A fair amount of contextual information could be provided. The most salient identifications were however proper names (personal or institutional), civic registration numbers, property unit designation, place and time.

External users also requested facts, answers to specific questions. The absolutely most frequent fact-finding questions were related to persons: addresses, civic registration numbers\(^1\), personal names, and to some extent time (date of birth or death). Questions about addresses and civic registration numbers were almost entirely concerning current conditions; the exception being a question about where a person was living in the beginning of the 20th century. Names, which were the largest category, were mainly requested for genealogical purposes, usually to identify absent fathers, or local historical research. The latter could be questions like “who was the mayor in 1944?”; “who were the teachers at X in 1950?”. A smaller number concerned current situations, for instance the owners of certain properties or absent family members. A small but distinguishable number of the queries were posed by persons who were adopted and wanted information about biological parents and siblings. The identifiers u external users provided in case of fact-finding queries were as follows:
- identifiers
- proper name
- civic registration number
- object in general terms

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\(^1\) Civic registration numbers could be used to find out addresses from the national registration, and that was probably the main reason why they were requested.
- property unit designation
- time/date
- place
- event
- activity
- organizational unit
- occupation
- educational program, grade

Even in case of the fact-finding queries proper names (personal or institutional), civic registration numbers/date of birth, property unit designation, place and time were frequent identifiers, but also events occurring at certain times for instance the close-down of a school, a placement in foster care, or a jubilee.

Fact finding questions were in general close-ended and answered by a simple statement of facts. However, even such questions could require an active mediation by the archivist to answer, depending on the information the user was able to provide. The following quotation concerned a request about the current address of a person, in itself a simple question:

“There was someone who was looking for a person, and only had the first name… and that she had been working at an old people's home in the 1950-s. Then you had to ask for more... We don't have any register where you can search for a first name, they are all sorted according to last name, so you have to try to figure it out somehow – 'Did you know somebody else who was working there at the time or...?' We managed to do it while this person [the user] was waiting, but I had to make several questions to think up any material at all that could be used to find the information [...]. We could then with the help of the national registration find the person, or I think we found three persons with that name [...]. (Archivist)

This query, as well as the query about employees at the Planning and Environment office above, illustrated one shortcoming of the present search tools. The inventories and the physical order of records only allowed for one access point, in this case the individual identified by last name or later by civic registration number, which was assumed to be the most common search entry. To access information about individuals by work place or administrative office was not possible. This also meant that it was hardly possible to reconstruct the activities for a certain time at a certain place, at least not without considerable efforts, since there were no indices to or cross-references in the inventories.

In another case, the query was straightforward and the user could provide a lot of contextual information, but still the request required several turns of information exchange before the answer could be provided. The following e-mail conversation took place:

Patron: "X-mark [subject heading]
I am looking for a property my grandfather & grandmother built in the 1960s. X

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& Y Z were their names. How can I get name and address of the present owners?
Archivist: It is possible that we can find the information, but we need some more information about your grandparents. Had they other names than X and Y? I also need their dates of birth. Do you know for how long they lived at the property they built in X-mark?
Patron: X born 1913-xx-xx and drowned in the lake 1967-xx-xx. Y born 1914-xx-xx. What I can remember was that you turned at the X-company, parked at a farm yard and rowed over the lake, if that could be of any help. I think it [the property] was sold to NN around 1970. It was a summer cottage with riparian right. Have heard that there is a road to the back of it now, is that correct?
Archivist: Can’t find any property with a cottage built in the 1960s, but the address to the land owner at X-mark 1:10, NN.
Patron: Have spoken to the land owner. Two lots were partitioned X-mark 1:7 and 1:8.
Archivist: NN owns 1:7. NN owns 1:8.

What can be learned from this exchange is that the user can propose a clear and distinct question, but still needs to clarify it to get an answer. The problem is not any vagueness or “fuzziness” of the user, but that the contextual information the individual finds important or tends to remember, is not necessarily suited for information seeking in formal systems.

A few queries related to processes rather than simple facts, for example:

“Mother, NN, was placed in a childrens’ home around 1944. Why?”

“Was taken into foster care as a child, want to know what happened before that. Sister NN also want to know [what happened].”

“What happened to the children NN in X, when their parents died in the Spanish flu?”

These questions related to somewhat complex matters. However, in cases where the archives were intact, it would be possible to provide the records, for instance social registry files or child-welfare committee records, which presumably could give the answers. Whether the answers provided were satisfactory would then be a question of subjective judgement.

6.6 Concluding remarks

This chapter has given an overview of the findings from the first case study, the municipality. After a contextual background the use of records, user groups and the search for records have been described.

At the administrative offices the primary users of records were the employees of the organization, not the least the registrars themselves. To what extent records were used was affected by work tasks and position. Officials with operational work tasks, for instance directly handling matters, used records regularly as a basis for decisions and actions, or due to the demands of their clients. Managers and
senior officials appeared to use records directly with less frequency, although there were individual variations, but they were dependent on information extracted and processed from records. Officials and administrators thus often acted as intermediaries, providing information from records to external clients or to other employees or political representatives.

The external users could, as well as the internal users, be both direct and indirect users. Sometimes they needed to access the records themselves, but often they submitted a question to the officials, who needed to consult records on their behalf to answer the questions. The external users could be parties in matters, or concerned by a matter, or by the municipality’s business concerning a certain issue. Others were individuals, groups or corporations who needed access to records or information from records, but who did not have a direct relation to the activities of the municipality, or other agencies with a legal interest in the municipality’s activities.

The users of records at the municipal archives showed a slightly different pattern than the users at the administrative offices. The same kind of users that were apparent at the administrative offices also occurred at the municipal archives, but the municipal archives were also frequented by researchers. However, the internal ratio between user categories differed. Compared to the administrative offices, the municipal archives seemed to attract a larger part of external users. Of those, a smaller part than at the administrative offices could be identified as having a direct interest in the municipality’s business. The users could also here be identified as direct or indirect. Indirect users were for instance politicians, senior officials or clients, i.e. citizens, provided information by other staff members.

The registrars were the primary users of the journal, since it was available to few other employees and not directly accessible for external users. Inventories of records were not created at the administrative offices, but after delivery to the municipal archives. The inventories were not disseminated out-side the municipal archives and mostly not provided to the users. Both the journal and the inventories could thus be seen as specialist tools, mastered only by the registrars and the archivist. However, the functions of the journal were only fully employed by the skilled and experienced registrars. Those were for example more prone to undertake complex searches than the inexperienced registrars, using several metadata fields and combined searches. Nevertheless, free-text search of the subject heading was preferred by all registrars, the skilled as well as the inexperienced.

The employees did not express any interest in accessing the journal or the inventories themselves. According to their experiences it was more efficient to ask the registrars or, when the occasion arose, to ask the archivist directly. However, users seemed to create their own, more informal, systems of search and retrieval to
some extent, for instance keeping records at hand in physical order, making up their own “archives” of copies of records, or using other records, e.g. minutes, as search paths to the records they needed. This might indicate that the existing formal representational systems did not fully correspond to the needs of the users.

The registrars’ experienced a difference between employees and outsiders. The first frequently did request records as such and specify items, i.e. they could identify the particular record or at least pin-point a type of records. The latter in general asked for information from records, particularly about the proceedings of certain matters. However, occasionally specific items were requested or a demand to access records about a certain issue or a subject occurred. At the municipal archives requests for records as such and particularly for specific items were predominant, both in the case of internal users and in the case of external users. A smaller amount of requests concerned non-specific items, i.e. unidentified records “about” something, or factual information. The information given to identify the requested objects differed a bit between internal users and external users, and between the users at the administrative offices and the municipal archives. However, a set of common identifiers could be outlined as shown below:

- subject in general terms
- type of document
- proper name
- civic registration number
- object in general terms
- property designation unit
- time/date
- geographical location
- organizational unit
- occasionally journal reference number

Formal identity codes like the journal reference number were rarely used, neither by external users, nor by internal users, but did occur occasionally. An exception was when files were requested by the administrative offices from the municipal archives through a registrar, who could make an exact identification of the items often by journal reference number.

The findings of this chapter will be further analyzed in chapter 8, together with the findings of the second case study that will be presented in chapter 7.
7. CASE STUDY 2: A SWEDISH GOVERNMENTAL AGENCY

In this chapter the findings of the second case study are presented. The chapter starts with an overview of the organizational, legal and historical context of the studied organization, its business procedures, recordkeeping organization and the artefactual intermediaries of interest for the search of records. Then follows an overview of the use of records and the user categories that could be identified in the study, and a description of how users search for records, which search tools they use, how they interact with intermediaries, and how they identify the requested records. This chapter will, together with the previous chapter, provide the basis for the analysis and discussion in chapter 8.

7.1 Setting

7.1.1 The Agency

The Swedish Road Administration (SRA) was the national authority with sector responsibility for the road transport system. SRA reported directly to the Government and was governed primarily by the Government's standing order (SFS 1997:652) and the budget document. The primary assignment of SRA was to develop the road transport system in accordance with the goals stipulated by the Parliament and the Government. According to the Parliament’s decision in 1998 the overall goal of Swedish transport policy was “to ensure a socio-economically efficient transport system that is sustainable in the long term for individuals and the business community throughout the country” (Facts 2005, p. 4). This included an accessible transport system, high transport quality, positive regional development, safe traffic, good environment, and a gender-equal road transport system. As a governmental agency SRA exercised public authority over citizens and other legal subjects, for instance by issuing driving permits, approving driving instructors, issuing driving bans, issuing exemptions from regulations etc. The activities of SRA also included actual handling in the areas of planning, construction, operation and maintenance of the national roads, and research and development in the field. n 2005 SRA had about 6600 employees and undertook activities all over the country (Facts 2005).

7.1.2 Historical background

The agency traced its origin back to 1841, when the Royal Board of Public Road and Water Constructs was established. In those days emphasis was laid on water ways, i.e. building of canals and locks. However, the development of modern communications during the 19th century outdated canals as means of transportation, and focus was directed to land transportation.
Since medieval times maintenance of roads had been incumbent upon the peasantry. In the 20th century this practice became untenable and the responsibility was transferred to municipal units, financed by taxation and performed by employed labour, with the Royal Board of Public Road and Water Constructs as superintendent. In 1944 the maintenance of roads was nationalised, and the Royal Board of Public Road and Water Constructs gained a more salient position. In 1967 a major reorganization took place and that could be seen as the starting point of the current SRA (Montelius, 1990). In 1993 the Swedish National Road Safety Office was closed down, and the responsibility for road safety, driving licences and traffic operating permits was taken over by SRA.

7.1.3 Organization

SRA was governed by a board of directors appointed by the Government, and the executive official was the Director-General. In 2005 SRA was organized into a main office and seven regional offices, as shown in figure 7.1 below. The regional offices were responsible for the maintenance of roads within their geographical area, and acted in certain matters as separate agencies. SRA had also two support and development divisions, Society and Traffic and Information and Administration (in 2005 renamed to SRA Support), which worked on commission and contributed with specific competencies; three business divisions; and three profit centres. The business divisions, i.e. Driving licences, Traffic registry and VUC, were national units working under public legislation. The profit centres were profitable units, undertaking commercial business assignments. Their customers were the SRA itself, other agencies, municipalities, private road keepers, and private companies. The Road Traffic Inspectorate and the Internal Audit reported directly to the board of directors. SRA worked as a process oriented and customer oriented organization, directed by the two main processes Support for travel by individuals and Support for transports by the business community. (Facts 2005; Årsredovisning 2004).

7.1.4 Recordkeeping organization

Because SRA was a governmental agency the administrative and decisive procedures were regulated by the Administrative Procedure Act (SFS 1986:223), and also by the Ordinance of Governmental Agencies (SFS 1995:1322). The recordkeeping procedures were regulated by the Freedom of the Press Act (SFS 1949:105), the Secrecy Act (SFS 1980:100), the Archives Act and Ordinance (SFS 1990:782; SFS 1991:446) and the statutes of the National Archives. Unlike municipalities, governmental agencies were under the superintendence of the National Archives. The recordkeeping activities of the agencies should be inspected and approved by the National or the Regional Archives, and retention plans had to be submitted to the National Archives for decision. The handling of
matters and registration of official documents were also subject to control of the Office of the Chancellor of Justice. In the beginning of each year a summary of open matters initiated by external subjects before 1 July the previous year should be presented to the Chancellor of Justice, with motivations why the matters had not come to closure.

Figure 7.1 SRA organization 2005 (Facts 2005, p. 40)

The main office, the support and development divisions, and the business division Driving licenses were together considered as one records creator, supported by the Documentation and Archives unit that was part of the Information and Administration division. The Traffic Registry, VUC, the regional divisions and Ferry operations were separate records creators and so was also Construction and Maintenance from the time it implemented a national structure in 2004. Previously it had a regional structure. Consulting services still had a
regional organization and it was not entirely clear if the regional units were records creators in their own right. At the Documentation and Archives unit three archivists and 8 registrars plus a few assistants were employed in 2005. The Traffic Registry and a couple of the regional divisions employed archivists. At the other regional divisions it was usually the registrars who were responsible for the archives and recordkeeping activities. Registration of official documents was decentralized, i.e. each regional office and the Traffic Registry registered their own matters. In the whole SRA 40 to 50 persons had privileges to register matters, and some additional administrative staff could make complementary registration (Förstudie Diarie- och arkivhantering i Vägverket, 2005). VUC, Construction and Maintenance and Consultation Services purchased recordkeeping services from the central Documentation and Archives unit.

The records from the Royal Board of Public Road and Water Constructs up to the reorganization in 1967 were transferred to the National Archives. At the main office the records from 1967 and forward were kept, together with the records from the now defunct Swedish National Road Safety Office 1967-1992, and older records from some smaller units that had not been transferred to the National or Regional archives. Records from local and regional units until 1992 were with some exceptions transferred to the regional archives.

### 7.2 The artefacts

#### 7.2.1 The journal

SRA computerized their journal in the 1980s. Before that the agency used a manual system based on pre-printed sets of registration forms as described in 5.2.4 above. Each set consisted of three copies, divided in four so-called strips. The first copy was kept in chronological order, the second according to name of the patron, and the third according to classification code.

The first computerized system was STADIS, implemented in 1985. This was a generic software for journal keeping in governmental agencies developed by the Swedish Agency for Public Management, see p. 85 above. STADIS was replaced in 1988 with Trip, a system designed especially for SRA, with a powerful search engine. Trip was run on a VAX-computer platform, with a command line interface. The content of the previous STADIS-journal was converted to the Trip databases. In year 2000, a Windows based interface was developed, and the databases were migrated to a Windows platform. All the computerized journals from 1985 thus became searchable in the new application. This application was called VVDiark, and was still in use during the study. VVDiark was implemented in the whole

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1 If not otherwise is stated, this section is based on observations and interviews with the head of Documents and Archives, the VVDiark systems manager, and the senior archivist.
organization, at the main office as well as at the regional divisions and local offices. VVDiark consisted of several databases: the journal, which was the largest module with about 83 300 registered matters in 2004; retention plans; the register of internal agreements, HKOver (about 200-300 matters each year); the register of documents from the EU, EUdias; the register of drawings of bridges and constructions received for control and approval (about 1 500 matters a year); a register of receipts for documents taken out of the archives; a register of accruals; and the archives inventories (Föstudie Diarie- och arkivhantering i Vägverket, 2005; Kurshandbok DIARK, 2001). The system was also prepared for an electronic archives module, but that was not implemented when this study was undertaken in 2005.

When using the system, database and organisational unit were first selected in a start view, and then views for registration, search, reports or statistics could be chosen. The registration interface, figure 7.2, consisted of a set of drop-down menus: File, Edit, Tools, Phrases (lists of pre-defined words and phrases) and Help; sheets for registration of particular details, and a set of metadata fields. Some fields were protected and the data automatically generated: journal reference number (1), registration date (2) and registering unit (3).

Some fields were mandatory: organizational unit (19), classification code (23) and subject heading (26). Variables were suggested by drop-down menus. Additional fields were optional:
• executive official (20). Names were provided by a drop-down menu linked to the addresses in the Outlook system.
• handling unit (21). The matter could initially be registered at one organisational unit, but sent for handling to another unit.
• object/project (22)
• matter for the Chancellor of Justice (24)
• secrecy (25). Section in the Secrecy act was provided by a drop-down menu.
• keywords (27). Keyword lists were provided by a drop-down menu where multiple choices were possible.
• comments (28)
• references to other related matter (29)
• referral or internal referral (30, 31)
• date of observation (32)
• date of closure (4)
• archived (5)
• reference to the complementary case management system Kundskap (6)
• feedback to customer (33)

The registration of documents was primarily undertaken in the sheet Correspondence. The metadata fields were
• sender/receiver (7)
• date of receiving/expedition (8)
• date of document (9)
• incoming/outgoing/annotation (10)
• type of document (11)
• archival retention code (12)
• external senders journal reference number (13)
• e-document (if digital documents were linked to the register post, the function was not available so far)
• third party if the matter were initiated by one party, for instance the County Administrative Board, but concerning a private person or another legal subject, i.e. the third party (14)
• date of birth of third party
• a checkbox if there were no documents in the matter when archived.

In case the matter resulted in a decision by SRA, additional data should be registered on the Decisions sheet: current number, type of decision (available from a drop-down menu, mandatory), date of decision (mandatory), unit (mandatory), decision maker (mandatory), annotations, and e-document. In case the matter resulted in an agreement or a contract, additional data should be registered on the Agreements sheet: current number, party (mandatory), agreement number, date of agreement, valid from (mandatory), valid to, annotations, and E-document. In case
the matter had received comments from the Chancellor of Justice, those should be registered under the Comments from the Chancellor of Justice sheet (*Kurshandbok DIARK*, 2001). The possibility of using pre-defined words and phrases, and lists of available names, units, objects etc., reduced the risk of errors and enabled a certain standardization of the registration.

7.2.2 WebDiark

VVDiark was available for the registrars, the archivists, and some administrative staff that registered new matters. All the employees had however access through the agency’s Intranet to a web application, where they could search the journal but not make registrations. This application was also available for external users, through a terminal in the library at the main office. The web application was a simplified version of the search view in VVDiark, as shown in figure 7.3.

![Figure 7.3 WebDiark interface](image)

Searches were first limited by choice of year selected from a drop-down menu (1) and a choice between all, valid agreements, referrals or open matters (2). The fields were then free-text (3), which rendered searches in all textual fields in the current database: executive official (4); journal reference number (5); date of registration (6); unit (7); date of document (8); and handling unit (9). No pre-
defined choices were provided here, and multiple choices were not possible, but the fields could be combined by the and/or-buttons.

7.2.3 Other systems

Besides the journal there were specific business management systems, where certain documents were registered and handled ("Försändelse Diarie- och arkivhantering i Vägverket." 2005). The most important were:

- CHAOS for managing road building projects
- BaTMan for management of bridges and tunnels
- Kundskap for handling customer relations
- The Traffic Registry, which actually is an organisational unit administering several registers, e.g. Vehicles, Driving Licences, and Commercial Traffic.

Although those were basically registers of official documents, only the Traffic Registry was known to the general public. The Traffic Registry was the function in SRA that generates the most transactions: 20000 incoming documents and 120000 outgoing documents each day, 6000 telephone calls each day, and 5 million self service transactions via telephone and Internet a year in 2004 (Försändelse Diarie- och arkivhantering i Vägverket, 2005). The registration was made in a journal system DIABAS, a legacy from the Swedish National Road Safety Office. CHAOS and BaTMan were primarily used for management of business activities, i.e. building and management of constructions. Kundskap was in 2005 a relatively new system, developed to capture customers’ opinions and questions in order to set up a national web-based customer service. However, it turned out that some of those contacts could initiate a matter, meaning risk of by-passing formal registration. Means of linking Kundskap to the journal must therefore be developed, and one step was making references to Kundskap from the journal. This was so far a manual procedure, where the official that received the question from Kundskap made a preliminary decision about whether it should be registered, and then forwarded it to the registrar who made the final decision.

7.2.4 The classification schemes

During its existence SRA had applied several classification schemes, see table 7.1 below. In 1967, when the current agency was established, the classification scheme used by its predecessor the Royal Board of Public Road and Water from 1961 was taken over.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>General administrations</td>
<td>0 General administrations</td>
<td>0 General administrations</td>
<td>AL General</td>
<td>AL General</td>
</tr>
<tr>
<td>1</td>
<td>Finance, personnel, administrative control</td>
<td>1 Finance</td>
<td>1 Finance</td>
<td>DR Maintenance</td>
<td>AV Fee financing</td>
</tr>
<tr>
<td>2</td>
<td>Scientific foundations</td>
<td>2 Personnel</td>
<td>2 Personnel</td>
<td>EK Finances</td>
<td>BY Building</td>
</tr>
<tr>
<td>3</td>
<td>Planning and projection</td>
<td>3 Planning of actions on the road network, projecting of roads and certain preparatory actions</td>
<td>3 Planning of actions on the road network, projecting of roads and certain preparatory actions</td>
<td>EV Private roads, bridges, railways</td>
<td>DR Maintenance</td>
</tr>
<tr>
<td>4-5</td>
<td>Road building and maintenance</td>
<td>4 Building</td>
<td>4 Building, procurement, control</td>
<td>FA Estates</td>
<td>EK Finances</td>
</tr>
<tr>
<td>6</td>
<td>Traffic and security</td>
<td>5 Bridges and constructs</td>
<td>5 Bridges and constructs</td>
<td>MM Machines and materials</td>
<td>EV Private roads</td>
</tr>
<tr>
<td>7</td>
<td>Stores and workshops</td>
<td>6 Maintenance</td>
<td>6 Maintenance</td>
<td>PE Personnel</td>
<td>FA Estates</td>
</tr>
<tr>
<td>8</td>
<td>Water and sewage</td>
<td>7 Material, stock, machines, workshop operation, properties</td>
<td>7 Material, stock, machines, workshop operation, properties</td>
<td>PB Planning/Building, roads and bridges</td>
<td>FO Vehicular mechanics</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
<td>8 Traffic</td>
<td>8 Traffic</td>
<td>PE Personnel</td>
<td>FT Driver’s qualifications and driving schools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 Other; cities, private roads, railways etc.</td>
<td>9 Municipality roads(^1), private roads and private roads entitled to governmental subsidies, private railroads, data processing, governmental subsidies for cycle ways, fire-protection instructions etc.</td>
<td>TR Traffic</td>
<td>MM Machines and materials</td>
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<td>PE Personnel</td>
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<td>PP Planning and projecting</td>
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<td>RE Traffic registry</td>
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<td></td>
<td>SA Community planning</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
<td>TR Traffic and road safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YT Commercial traffic</td>
</tr>
</tbody>
</table>

Table 7.1 The classification schemes.

\(^1\) This rather peculiar caption was supposed to embrace “Abstract and theoretical issues, thus not active participation in research that should be referred to development, see 023. Under this caption journal clippings about research findings and suchlike should be registered.”

\(^2\) Roads built and maintained by the municipalities, but funded by governmental subsidies.
The scheme, called activity register, was based on the decimal classification system and divided into 10 main groupings 0-9. The basic structure was that the main groupings were divided into ten subgroups, which in turn were decimally divided. However, not every grouping is fully divided. Caption 2, 3, 6, 8 and 9 were left open, probably because the amount of matters concerning these issues were presumed to be small, and some of the other subgroups and sub-subgroups were vacant. I.e. a matter could be given a one, two or three digit code. The scheme seemed to be constructed on a mixed basis of division. 1, 3, 4-5 and 6 were constructed on a functional basis, 2 on a topical, and 7 and 8 reflected objects handled by the agency. Finally, the sub grouping of 0 consisted of a mix of all three. The scheme was complemented with an alphabetical index over the subgroup captions.

In 1970 the classification scheme was replaced with a new one, aimed to better suit the new agency’s activities, but the decimal system was still used. The scheme included a concordance with references to the old classification codes. To some extent the changes implied a regrouping and a more granular division of existing groups, for instance separating finances and personnel and introducing another sub-grouping, i.e. a four digit code. The former main group 2 was abolished, while some matters, bridges and constructs and maintenance, were apparently considered so important or extensive that they required their own main groups. All main groups were divided into subgroups and further on, none was left empty. Some of the subgroups were still vacant, making an extension and adaption to new circumstances possible. The functional basis for division was perhaps a bit more dominant in this scheme, with exceptions of 5 and 7 that concerned certain objects.

This scheme was in use until 1982, when it was replaced by a similar scheme. At top-level the changes were that procurement was added to group 4, and that group 9 was extended. The latter primarily covered matters concerning subsidies to roads maintained by other actors, but also the more deviant subjects data processing and fire-protection instructions. The reason for the extensions was probably that these matters had gained importance during the period and had to be emphasized in the classification scheme, but without breaking up the general structure. The scheme was divided into, in some cases, up to three decimals, however several were left vacant. From 1983 the last decimal was abolished for several, but not all, of the sub-groups. This was acknowledged by handwritten annotations in the printed scheme, i.e. a new plan was not issued.

These changes seemed to be a sort of ad hoc-solution, and called for a more thorough revision. In 1985 the scheme was thus changed again. The main groups were coded by letters instead of digits, but for the sub-division the principle of decimal classification was kept. The codes were made up by the first letters of the Swedish captions, and were probably designed to better serve as mnemonic aids.
Similar systems were also implemented in other governmental agencies at the time, for instance the energy producer Vattenfall, which at the time was a public service company (Huring, 1999). The main groups were listed according to the alphabetical codes, thus the order did not reflect any hierarchical or relational structure. The subgroups were traditionally coded by figures. Compared to the previous ones, the scheme was simplified by only fixing the highest level of subdivisions, e.g. AL 00 General, AL 10 Organisation until AL 99 Other. Matters that should be registered according to the codes were listed, but not coded. Another apparent change was that the scheme was complemented with a built-in retention plan.

This feature was kept in the extended version of 1993, still used in 2005, which was based on the same structure as the previous scheme. The main difference was that certain new main groups were added due to changes in the agency’s field of competence and changes in legislation. The alphanumerical principles made it possible to avoid some the constraints of the decimal system, i.e. the limit of ten groups. In the current scheme 16 main groups were created and coded alphabetically. Some details that could be recognized were that a subgroup AL 15 EU matters was added. Building of roads, bridges and tunnels was now separated from planning and given a main group of its own. Totally new groups were AV, FO, FT, RE and YT, which were established because SRA took over tasks from the closed down Swedish National Road Safety Office in 1993. The main groups roughly represented the business areas of SRA, but still a combination of principles for classification seemed to be applied. Thus the captions were at first sight not mutually exclusive, which was dealt with by the provision of very thorough instructions to the registrars. For other categories, however, the schemes were not entirely transparent. The need for and possibility to add new groups to the scheme, without breaking the general structure sometimes resulted in illogical and inconsistent solutions. One example was the creation of a subgroup AL 65 Road and traffic historical issues between AL 60 Internal audit and AL 70 Automatic data processing.

VVDiark did not include any thesaurus function or concordances between classification schemes. Comparisons had to be done manually. However, at least on the top level the captions seemed to be consistent. The changes seemed to be due mostly to changes in activities and field of competence, rather than changes in terminology. The older classification schemes also tended to be more detailed, while the latest one was more general with fewer fixed sub-groups.

7.2.5 The archives inventory

The agency had inventories of its holdings, although they were not complete. Inventories of records from 1967 to 1986 inclusive were completed, but more recent
materials were not entirely described. The main office, the regional offices and the local offices kept inventories of their respective holdings as hardcopies in binders, but the journal system, VVDiark, also contained a module for archives inventories that were supposed to replace the paper-based inventories. The inventories were set up based on the traditional form, which structure was kept in the VVDiark archives module. However, there was no function for writing introductions, only the inventory forms. The introduction thus had to be made separately, if the inventories should be complete according to the established practice.

The records were described according to the general archives scheme. The agency had, however, issued more detailed guidelines, so called inventory plans, where the sub-sections and series were defined. The purpose was to facilitate the descriptive work, and to acquire similar inventories in the whole organization. The inventory plans were up-dated at intervals, due to organizational changes, changes in activities and competence, which thus cause changes in the production of records. The inventory plans were integrated with VVDiark as drop-down menus in the registration view.

The annotation field was for instance used for information about the records' physical form, e.g. In boxes, or for cross-references between series or between archives. The last could for example be references to the archives from preceding or succeeding records creators. Annotations were also used in some cases to describe the content, e.g. when occasional volumes deviated from the series in general or in case of series with a mixed content. This was also applied for series of action files, where the classification codes were annotated, or series of case files, where for instance object identity codes and location were added, see figure 7.4 below.
**Figure 7.4 VVDiark Archives inventory sheet**

1) Records’ creator, 2) Series’ caption, 3) Series’ identity code, 4) General remarks, 5) Place, 6) Volume number, 7) Time, 8) Annotations
7.3 The use of records

7.3.1 Internal use of records

Since the archives and the registrars' function at the main office were joined in the same organizational unit, no absolute distinction between the users of the different functions could be made. Requests were often put to the registrars, and if they concerned older materials or records that were maintained separately, like technical documentation of bridges, the requests were referred to the archivists. At the regional office the registrars maintained the archives, and at the local office two administrative assistants handled the journal and the archives. Due to the distribution of work and decisive competence between the main office, the regions and the local offices, the use of records and the user categories differed to some extent.

On a general level, staff were identified as the main users of records:

"I did some surveys of that [the allocations of users] before, and it showed to be an absolute majority of internal users. Of course, it depends on how you count. If you have a contractor, they are per definition external because they are not within... they do not work within SRA. Periodically it can shift, but the normal user who searches for information is 'internal". (Senior archivist)

The senior archivist pointed to the fact that according to the Public Procurement Act (SFS 1992:1528) the agency commissions project, e.g. building and maintenance of roads and other constructions should be purchased on the open market. The parts of the public agencies' business that could be exposed to competition should be organisationally separated and treated equally as private corporations. The contractor could thus be one of the agency's own profit centres, i.e. actually a part of SRA, but having a seller – customer relation to the agency. When the informants referred to internal users, they usually meant the personnel at the actual location, "those who work here". Contractors, even if they were the SRA Construction and Maintenance unit, were considered to be external.

The registrars at the main office were assigned to serve different organisational units. The allocation thus differed between the internal and external users they had contact with, depending on the type of matters handled by the units. However, everyone recognised staff as a user group. The registrars claimed that they often served the staff with decisions or the records of a matter that had resulted in a decision, i.e. the files, either as basis for similar matters or when a previous client had brought up a matter again:

"[...] the officials want to have old decisions as basis for new decisions". (Chief registrar)

"..."

"Well, it is often when somebody [a client] has come back, who is not happy with the decision or appeal, and wants to look at the old records". (Registrar 2)
“It is always someone who gets a matter and there is someone who says ‘yeah, we talked about this for so and so many years ago and then we had this and that’ [...]”. (Registrar 7)

This was confirmed by the officials, particularly those who worked directly with the exercise of authority, i.e. making decisions that affected individual citizens. When a decision was questioned or for some other reason referred to, it was considered necessary to go back and check the circumstances of the case. Looking back at previous matters or a certain type of decisions, could also be a way of drawing knowledge from earlier experiences; to see how things were handled to ensure consistency in the decision process:

“[...] claims for damages [...] we try [to collect] our previous decisions and those we get back from the Office of the Chancellor of Justice on the public domain [on the server], to use as a material for comparison. Well, I use that rather a lot, earlier decisions [...]”. (Legal adviser 1)

The officials seemed to regard this habit as a practicality, to facilitate their own work. Continuity and predictability were however important aspects of the rule of law, so the re-use of records also contributed to the fulfilment of the agency’s obligations against the citizens.

The officials’ needs for records were often generated by requests by others, for instance when presenting matters and assignments to senior officials and managers, or occasionally by the director-general or the board. This could often take the form of presenting reports and summaries, and preparing drafts as basis for meetings. However, the needs for records were not the least implicated by requests and appeals from the citizens. Exercising of authority, e.g. denying operating permits or claims of damage, laying down conditions for driving licenses etc., could result in appeals from the parties concerned. Another field of business that often caused appeals was procurement. When a vendor, a contractor or consultant was chosen, the competitors should be informed and given the possibility to make an appeal within 11 days. If that occurred, the records had to be scrutinized again.

“We have relatively small needs to go back and search [the records] in general, on the assumption that everything goes well. We can say that it happens in two cases. It is after the closure of procurement, and then we have a lot of questions from the other contractors. [...] The other case is if we get an appeal from the court, ...that we have to answer in court. [...] It can also happen, which we have been spared from mostly, that we get an appeal on damages, which can occur at least a year after a procurement. Then we have to investigate what has been said; often it is claimed that something has been handled the wrong way, whatever that can be. [...] So, it is when there is an external request about something, and it is often a legal matter.” (Official 2)

The follow-up of an action, especially when things claimed to be wrongly handled or when for instance disagreement on terms of contracts occurred, was
undertaken, with lesser building were registrars, of building senior primarily administrators, which resulted in correspondence. Thus, this was also true in the case of senior officials and managers, who otherwise claimed that they used records to a lesser extent than officials with operational work tasks:

“What kind of records do you search for?
It can be records concerning a separate matter. If someone calls and is upset about something, which happens when you work with the exercise if authority, then I used to find out who was the executing official, what correspondence has occurred and suchlike. Then I get in touch with the official and we talk it through. It is very seldom I have to go down to the archives to retrieve some records.” (Manager 2)

The journal in this case was used as a surrogate for the actual records. Another type of follow-up that also involved senior officials and managers, as well as administrators, was in connection with audits. Audits required the retrieval of primarily financial records and agreements, but also documents like minutes and correspondence.

The handling of matters and exercising of authority were, however, only parts of the agency’s business, which to a large extent consisted of actual handling. Due to the mission of the SRA, the central tasks were planning, projecting, construction, building and maintenance of roads (or rather to provide basis for the activities, since they were not necessarily performed by SRA itself), and to ensure traffic security. The latter included for instance issuing of permits and driving licences, which resulted in matters, but also research and development and dissemination of knowledge to society. This required gathering of information from various sources and the creation of a profound knowledge base, but did not seem to cause particular use of records. The information was rather created or gathered for the current purpose, and often stored in different databases. The content of the databases was used regularly, and could be regarded as records in the sense that it was created as a result of the agency’s activities. It could thus be said that records were used, but not in the sense of retrieval of files and documents or interaction with the registrars or the archivists.

Another type of actual handling which required use of records according to the registrars, the archivists and the officials, was in connection with building, rebuilding and maintenance of roads and other constructions. Before an activity was undertaken, it was often necessary to identify valid agreements with contractors, and what general agreements should guide a procurement. The actual building of roads then, from the planning phase to final inspection, resulted in a rich documentation: geotechnical data, calculations, drawings, contracts and agreements etc. Each separate building project constituted an object, in these cases the distances in question, and the documentation was sorted in case files for each object. These files were “live documents” in the sense that they were used regularly by engineers and project leaders etc., and complemented anytime a
change was undertaken. The files had a long-term value and should be preserved forever. Even “old” objects, files that were delivered to the provincial archives, were frequently accessed. These activities had also legal implications since they involved intrusion in other parties', i.e. the property holders', rights. Beside the necessity to consult technical documentation, they also required regular examination of contracts and agreements to clarify rights of ownership and disposal and possible liabilities to other parties.

7.3.2 External use of records

The staff’s use of record could also be triggered by external requests, i.e. external subjects acted as indirect users. However, external users could also appear as the direct users of records. Based on the interviews with archivists, the registrars and officials, and analyses of documented requests to obtain official documents, several categories of external users that had different purposes could be identified.

Of the external users, journalists seemed to be conceived almost as the archetypical users by some of the informants. When asking the head of the section for Document and Archives, who had several years of working experience as a registrar, who requested records the answer was:

“Well, it is very varied, but the ones you mostly came across as a registrar were journalists, digging journalists […]. (Manager 6)

When reflecting upon it, she admitted that the most common users however were the agency’s own personnel. When studying the matters concerning requests to obtain official documents that were registered in the journal, media (newspapers, magazines, radio and television) did occur, but not most frequently. Journalists or Media in general, were mentioned by most of the registrars and archivists even if they did not always regard them as the most important user group. Some of the officials also stated that sometimes they were contacted by journalists, and that they might have to get information from records due to that. The purpose could be the traditional covering of the agencies activities, for instance when an incident had occurred. A recent example when the interviews were undertaken was the presumed use of Chinese granite as road filling, something that was considered as ethically and politically dubious. It also happened that the purpose was to get factual information, for instance about the state of the roads, traffic conditions and diversions, i.e. information created in the daily course of work at the agency and stored in various databases. A related user category was news agencies, commercial enterprises that subscribed to certain information on behalf of their clients.

The “everyday users” of records, were however private persons or corporations (business enterprises or associations) that were parties in a matter or concerned by the agency’s activities for some reason, i.e. acting as stakeholders. The latter could
for instance be property holders that were affected by building and roadwork, and wanted to take part of planning material etc. The first mostly involved parties in on-going matters, who needed information about the proceedings of the matter. According to the registrars these requests could often be directly answered from the journal, i.e. what actions had so far been undertaken, or by referral to the executive official who presumably could give more detailed information. The person who had made the request did not necessarily demand any records, but made the registrars or the officials to consult records in order to give an answer. Requests could also be made about completed matters that had come to a decision. Those requests often concerned recent decision where the parties wanted to take part of the motivations behind the actual decision, and in some cases make an appeal. This was rather common in matters of procurement where appeals had to be made within 11 days after decision. Vendors who had not been accepted then demanded copies of the accepted tender for comparison with their own and as a basis for a potential appeal. However, registrars claimed that requests of the competitors’ tenders in general, not only the accepted ones, had increased. The reason seemed to be that vendors used their competitors’ work as a knowledge base for future biddings. Until the final date of the bidding the records were classified and the names of the tenderers could not be made public, but it happened that vendors tried to get hold of each others’ tenders or tried to find out who their competitors were, for instance by giving up a competitors name and asking if “their” tender was received by the agency or wanting to check a detail.

Even if current matters were subject to the highest number of requests according to the registrars, it also happened that older, closed matters were of interest. In those cases the users often wanted to access the records themselves or get a copy of a certain document. The need to discuss the matter with an official in those cases was not so conspicuous. For instance the requests could be made by private persons or other legal subjects that had earlier obtained a decision from the agency, that provided them with a certain right or advantage, and which they had lost. This could be a permit, a license, an agreement etc., which was necessary to present as evidence of the obtained right. An example that appeared to be recurrent was driving instructors and traffic inspectors who had lost their certificates. Usually those requests aimed to get proof of a decision in favour of the subject in question. However, it also happened that the issue was to prove an unfavourable treatment.

“We also have some of those opinionated persons, persons who have been ignored, feel that they have been ignored or badly treated for instance in matters of procurement, and almost have made it an end to... well cause the agency trouble, digging out records and so...” (Manager 6)
To what extent these kinds of incidents actually occurred is difficult to say, but they were recognised by most registrars and archivists. They were at least regarded as an annoyance, causing unnecessary work, and in some instances had gotten out of hand into threats and harassment against individual officials.

Another category of users that were concerned in the activities of SRA was other agencies. They could act as parties in matters like any other subject, i.e. registering and testing vehicles, claiming appeals for damages etc. However, they could also have a closer involvement with the SRA. For instance collaboration between SRA and Swedish Rail Administration concerning transport infrastructure was frequent or between SRA, county administrative boards and local governments in community planning matters, which implied an exchange of information and records. The SRA could also be subject to investigations by other agencies like the Parliamentary Ombudsman, the Chancellor of Justice, the National Board for Public Procurement, the administrative courts etc., and in those cases required to provide records.

Nevertheless a certain amount of requests came from subjects who did not have a party relation to the agency, but needed records or information from records kept by the SRA. A category that of course could be said to have a relation to the agency, but in this case did not act as a party in a matter, was consultants and contractors who had been accepted to undertake work in connection with building, re-building and maintenance of roads and other constructions. They needed constant access to maps, drawings, metrics and calculations etc. for operational purposes. Even contractors with other patrons occasionally had a need and a responsibility to access these kinds of records, for instance to identify how cables and water pipes were drawn. Another group with interest in similar materials was property holders, who for different purposes wanted to find out what records existed about their property:

“There can be private persons who know that they can buy this information from the National Land survey, for instance a map of a certain area, but that they can also get it from us, perhaps not as good but at a cheaper cost according to the Ordinance concerning Service fees. And people, not all but many, are conscious about that. They know that ‘it was a road building site in connection to my residential area’ and that means that […] SRA marked this residential area on their plan […]” (Senior archivist)

Beside plans, drawings and technical documentation it was also claimed that property holders requested agreements and decisions about compensation for intrusion. These types of records could be used for various reasons, e.g. to clear out the technical and environmental conditions of the property, or to establish the actual right to a property and the boundary between neighbouring properties in case of a sale or a conflict, or for pure practical purposes like reconstruction work or installation of geothermal heat. However, this material could also have a
cultural value. Occasional local historians and genealogists requested the records, but primarily private persons:

“[…] tourists for example, who come back and buy summer houses. Here lived perhaps, how shall I say, their ancestors a couple of generations back, and they don’t know so much and want to find out about the area and so on. Then they are interested in the roads, where they went, and where the properties were located”. (Registrar 7)

A few of the archivists and registrars mentioned researchers as users, who apparently were not frequent visitors but turned up now and then. This was also the case when it came to students. In both cases their primary fields of interests were supposed to be construction, traffic security and environmental issues. The traditional scholar was not mentioned at the agency, but the records delivered to the provincial archives had to some extent been used by historians interested in communications and roads.

Other agencies also used records or information from records due to their own business, not only in relation to the SRA. Police, courts, the National Tax Board, the Enforcement Administration and the Social Insurance were example of agencies that sometimes required information from the SRA to in performance of their own activities. Agencies involved in community planning, i.e. local governments and county administrative boards, were also relatively frequent users of records. An example was city plans for municipalities decided by the county administrative board. A copy was sent to SRA and was preserved there, while the municipalities in some cases had disposed of their copies and the county administrative boards filed them according to date of decision, thus they were difficult to search. Instead the plans were requested from the SRA, who claimed to keep them in a systematic order that was easier to search.

7.4 The search for records

7.4.1 Interaction with the journal

When searching the journal, the search interface, see figure 7.5 below, was used. Searches could be undertaken according to two principles, free-text search or metadata field search, or a combination of those two. Searches in the free-text field (1) rendered searches in all textual fields in the current database. The metadata fields were

- year (2)
- journal reference number (3)
- sender’s journal reference number (4)
- sender/receiver (5)
- object/project (6)
- date of registration (7)
- date of document (8)
- date of observation (9)
- unit (10)
- executive official (11)
- handling unit (12)
- date of closure (13)
- archived (14)
- matter for the Chancellor of Justice (15)
- keywords (16)
- feedback to customer (17)

Matches were listed below the search fields, and when clicking a selected match the details of the matter were shown in a separate view.

![VVDiark Search interface](image)

**Figure 7.5 VVDiark Search interface**

The registrars frequently searched the journal, partly as a consequence of requests from others, such as external users or employees, but primarily as a part of the registration process. When receiving an incoming document by mail, fax or e-mail, the registrars had to find out if it belonged to an open matter or if a new matter should be initiated. In both cases the document should be registered. The same occurred when employees sent documents for registration, but in those cases it was generally clear to which matter it belonged. The matter just had to be picked
up from the journal. However, use of the journal as a means to locate the physical records was almost exclusively done on behalf of other persons or to supplement a file with dispersed documents. The archivists also had access to VVDiark and used it partly to answer fact-finding questions from clients like what date a final inspection of a certain length of road was performed, which could be recalled from the journal; partly to locate files in the archives; but also as a source of information as such:

“I want to check up on what is going on in certain matters and certain fields, what decisions are made, project that is going on and issues like that”. (Senior archivist)

The journal could thus be used not only as a tool for searching and controlling records, but also as a tool to keep track on what was going on in the organisation.

If the journal reference number was available, the registrars used that and searched the metadata field for journal reference number since it gave exact matches. Otherwise, all the registrars preferred to make searches in the free-text field:

“…if I don’t have the journal reference number I always start with that [the free-text field]. I pick out the most relevant thing if I have a subject or something. I start with that I find most relevant, what I think you should have put there [in the subject heading]. Then you have to juggle a bit sometimes.”
Registrar 5

“…since we have free-text search and can truncate, I think it is easy to get hold of the matters.
So you prefer to use free-text search yourself?
Yes, I think that is easy. Every word is searchable.” (Chief registrar)

Free-text search seemed to be the most convenient or obvious search option for the registrars. Partly this was enhanced by the powerful search engine that made it possible to search for every sign or symbol in the whole database. The free-text field was also conveniently placed at the top of the search view. However, the registrars were also knowledgeable of more advanced search procedures like combining free-text search with the metadata fields, to narrow down the queries or when undertaking more complicated searches:

“[…] I use the free-text [field], I do, and sometimes with combinations. If for example I know that I am looking for something that is situated in the old Älvsborgs county, then I search for… in the journal we can search for units, and each local office [located in different counties] is a unit, and then I combine the [free-text] search with the unit. And sometimes I can search for a property unit designation and the year, from 1992 when the database starts until now, or maybe just a year if I know it is that year.[…] Or if I know that it was a certain official that worked with this matter, than you can search for that […]. So as I said, it is often combinations, but mostly free-text [search], it is. (Registrar 7)
The possibility of making Boolean searches was also recognised, at least by the more experienced registrars:

“You can truncate and make combinations, and write ‘and’, ‘or’, or ‘not’.”
(Chief registrar)

Some recurring routine searches were not performed by using journal reference number, like the regular requests from a news agency about disbursement of damages and disciplinary matters concerning personnel. Those searches were undertaken by using a fixed set of fields, however they were not standardised but individually defined by the registrars:

“We have among others a news agency, which faxes every Monday, asking for lists of every disbursement for damage in the previous week. And then it is very important that we have been careful and added traffic incident, damage, chips as key words, and that the secretaries who register the disbursements actually use the word disbursement [in the subject heading], otherwise it is very difficult to find.” (Registrar 1)

The registrar thus used a combination of the free-text field and key words. Another registrar used the combination of free-text field “disbursement” and the metadata fields unit and date. Both of them regarded the result as accurate and satisfying.

None of the registrars seemed to use the classification code as a search entry for current matters, only for obtaining statistics from the journal. The classification code was not an option for metadata field search, but could be searched in the free-text field. The classification codes were registered in the journal, but not the full captions, which made them less useful as access points. The senior archivist, however, claimed to use a classification code as the main entry when performing searches in the journal:

“Mostly, I search for classification, classification code in combination with year and some kind of search term, and then I can make a rather quick delimitation.”
(Senior archivist)

The reason might be that classification decided the order of the files when archived. The closed files were organised according to classification code and then according to current numbers. Depending on context, records registered in the journal could also be organised differently, and it was necessary to figure out how to be able to retrieve the records.

“When it is about a usual matter of some kind, then you usually start with ... you try to figure out how it is classified if it is registered in the journal. From that you try to find it in the journal, to see how it was handled, if it was part of a project or not. If it has been part of a project you can imagine that it is described differently in the inventory, so the classification is important.” (Senior archivist)

Projects, for instance a bridge construction or the building of a a length of road, were considered as separate objects and assigned an object identity code that was
registered in the journal. The whole process of construction and building did, however, generate several matters. First it generated the initiation of the project, which constituted a matter, then a preliminary study, which constituted another matter. If it was decided to go on with the project, an investigation was undertaken as a separate matter etc. Those were held together by the object identity code, and the files arranged and described according to object.

The classification code was of importance for the archivist, but made less sense to the registrars as an access point. The archivist had thus learnt to master the classification scheme as a search instrument, because it had relevance for how the records were organized in the archives and listed in the inventory. More complex searches in older materials, which required that the registrars went back to the paper based journals, could also render a need for the classification schemes:

“And of course, you have this when we have to search the old journals, the chronological journals on paper. Then you don’t have much to hold on to /[…]/ you have to go back and look at the classification and find out what class it belonged to. You have to look at old indexes and classification schemes, and only since 1960, when I started, they have been changed several times. Sometimes not so much, but still... And then you just had... the search system was your finger you flipped through them with. And of course, today when you are looking for an agreement that was signed in the 50s or 60s, you first have to know what it was about. You can’t just go in and enter ‘agreement’...”
(Registrar 7)

This demanded a thorough understanding of the journal system and the relation between the classification schemes and the journal, and how different classification schemes were related to each other.

However, the registrars mostly found search and retrieval to be fairly uncomplicated, even if they sometimes had to “juggle a bit”. An explicitly pronounced deficit experienced by several of the registrars and the archivists, was that searches could not be delimited to time intervals, only to discrete points of time. People often had an approximate idea of when something had occurred, but not always the exact date or year. Nevertheless, if the required document existed, it was assumed it would be found sooner or later. However, a search of the journal was not always straightforward. The use of pre-defined options for metadata, pre-defined phrases eligible for the subject heading, and some automatically generated metadata rendered a possibility of standardisation and a consensual description of matters and of records. Still, there was room for individual and sometimes idiosyncratic registration behaviour that might cause trouble:

“[…] then it is this that we act differently, that we use different keywords and everything. […] I want uniformity all over. I do, then it will be easy for everyone to find [matters], because it can happen that they can’t find [anything] at the other regional offices since they don’t understand that we are using different words, so to say. I want to have more control.

But don’t you have a pre-defined list of keywords that you use?

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Well, it is like that… it is said that if you often use a word, you should add it to the keyword list, and then it becomes a lot of words added to the list.” (Chief registrar)

“…What I miss most of all when it comes to search entries, is uniform metadata in the SRA. [---] even in different systems in the SRA you have different metadata, which means that you can’t enter and search in another system because you don’t know what to search for. [---] the local offices, every one used different concepts because they came from different cultures, where every [local] administration had had their own culture with their own concepts. And there were people from the different local offices almost falling out with each other because they didn’t understand what they were talking about. And then they were talking about the same thing, but called it different things…”  
(Registrar 7)

The registrars who primarily handled matters of an homogeneous character did not regard this as such a problem when making registrations, but others admitted that it was difficult to always be consistent and that some matters were ambiguous and difficult to assess. Most of the registrars and archivists recognised that inconsistencies in terminology affected search and retrieval, and it was regarded as the main problem when performing searches in the journal.
The access points and search entries preferred by the registrars could be summarized as follows:

<table>
<thead>
<tr>
<th>Search entries</th>
<th>Access points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal reference number</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Vehicle registration number</td>
<td>Free-text field</td>
</tr>
<tr>
<td>Senders’ journal reference number</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Date</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Year</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Subject in general terms, e.g. “tender”, “damage claim”, “disbursement”</td>
<td>Free-text field, Metadata field (keywords)</td>
</tr>
<tr>
<td>Proper name</td>
<td>Free-text field</td>
</tr>
<tr>
<td>- personal</td>
<td>Metadata field (sender/receiver, official)</td>
</tr>
<tr>
<td>- institutionen</td>
<td></td>
</tr>
<tr>
<td>Organisational unit</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Object identity code</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Object in general terms</td>
<td>Free-text field</td>
</tr>
<tr>
<td>Geographical location</td>
<td>Free-text field</td>
</tr>
<tr>
<td>Property unit designation</td>
<td>Free-text field</td>
</tr>
<tr>
<td>Document type</td>
<td>Free-text field</td>
</tr>
</tbody>
</table>

Table 7.1 Registrars’ interaction with the journal

7.4.2 Interaction with WebDiark

The web application of the journal, WebDiark, was not publicly accessible over the Internet, but available for external users by a terminal at the main office. However, external demands to search the journal were very rare. Several of the registrars could not recall any such occasions, and the only examples given were journalists. WebDiark could be accessed by all employees through the intranet, but appeared to be used with varying frequency. The registrars appreciated, depending on the requests they got, that knowledge of the journal varied considerably between the employees:
“Some use it and some not. It happens that you get a print-out from their WebDiark, where they have searched and found the matter they want, marked with ‘I want a copy of this decision.’” (Registrar 3)

“Some do. Some do not even know how you do it, so you have had to give them instructions. […] But many are really good at it. Generally I think the ones who I keep in touch with know the deals. The ones who keep-up least are perhaps the managers.” (Registrar 4)

Some registrars, however, had the opinion that employees rarely used the journal before they requested records. Since the registrars had different areas of responsibility and served different organisational units, they might have experienced different types of requests. Some units were less involved in the direct handling of matters and had less need to retrieve records registered in the journal, and were thus less experienced users.

That employees used the journal to a varying extent was also confirmed by themselves. All of the interviewees were, however, aware of the existence of the WebDiark, but were either more or less inclined to use it. Some claimed to use it often:

“[…] we have the journal on the [Intranet]. Everyone is not authorized to make changes, but we can read everything and that is excellent. So I use that rather frequently.” (Legal adviser 2)

Others used the journal less frequent or in some cases not at all. The reasons could be that their work did not involve the handling of matters, but for instance actual handling like planning, building and maintenance, or in-house functions like accountancy or personnel management. These functions of course had a need for records, but not necessarily those kinds that were registered in the journal. Another reason was an actual preference (or an established convention) for using other channels, for instance to approach the registrars directly or use help from co-workers, for instance administrators.

“In your work, do you need to consult records?
It happens, but relatively seldom and I always take help nowadays. I do very little search by myself. […] I have difficulties with the journal. I go to the secretaries. […] well, she [the secretary] is much cleverer at searching than I am, that’s why I ask her.” (Manager 5)

Even if the informants had knowledge about the possibilities of the journal, they sometimes preferred assistance with more complicated or time consuming searches:

“When you need to consult these contracts, how do you manage?
I talk to my secretary. I can, if I am just going to check up a journal reference number for instance when I am to sign an invoice, then I can enter the [Intranet] and search for it. It works! […]

Do you ever approach the registrars’ function or the archives and request records?
Then I use to call [the secretary]. She has good connections.
But do you identify the information yourself, this and that contract, this and that journal reference number, and then ask her to find it?
It varies. It depends… on how much I know and if I have lack of time.”
(Manager 7)

That searching the journal was time consuming and that efficient search required certain skills was emphasized by several of the interviewees. It was not considered to be a prioritized task to learn to master the search tools. It was rather seen as something that rivalled to the actual work tasks:

“How come you don’t search by yourself?
[…]I would be able, I know I can enter the computer and find things, but when I do I’m stymied. ‘What shall I do now? Why doesn’t it work?’ Then it says ‘Advanced search’ and then I try once again and I don’t find anything, and then I give up. We have such an enormous amount of computer systems that you should master, and you can’t grasp all the details… there is no time for that.”
(Official 1)

At the regional and the local offices the close proximity to the registrars and their willingness to provide services (the service aptitude of the registrars was generally recognized in the organisation), also encouraged the employees to seek help: “[…]we are spoiled having the registrars’ function nearby us”. (Manager 3)

As shown above, the journal was used with various frequencies by the employees. A recurring form of use, even for occasional users, was to find out who had applied for vacant positions, but in general the journal was used in connection to the performance of the actual work tasks. The employees primarily undertook simple searches to identify a certain fact or a specific item. The preferred access point was the metadata field for journal reference number. If the employee had access to journal reference number, that was the most efficient way of retrieving the matters. However, the purpose of using the journal could also be to find out the journal reference number of a certain matter, and then other access points were necessary. Besides using the metadata field for journal reference number, the free-text field was frequently used. More experienced users also used combinations, for instance delimiting a free-text search with time or unit. A usual entry was also one’s own name, to search for oneself as official to retrieve matters one was handling or previously had handled.

Although the WebDiark had a rather simple interface it was not transparent to the users. The occasional and inexperienced users apparently had difficulties identifying the accurate access points and entering the correct terms.

“The few times I enter [the journal] I find it very difficult to… the access points that exists, there is no help-text. You don’t get any help how to for instance enter a journal reference number, if it should be colon or a space, or what figures there should be, which makes it… well, I have never learned that.”
(Manager 5)
Even more fluent users had some doubts about the accuracy of the access points:

“I often use journal reference number, and I use year as an access points, and then free-text search. Then there are some other fields that I don’t find really stable. For instance there is ‘unit’ and there is ‘official’, and there you get a bit uncertain. Even if you use abbreviations you can spell differently and so, and then you miss something. So as I said, it is year, number and free-text search. That is at least not ambiguous.” (Manager 2)

The WebDiark offered less standardized search possibilities than the original VVDiark, and left open for individual trial and error to a larger extent. The aim was probably to provide the employees with a less complicated interface, but at the same time confronted them with problems they were less skilled to handle.

The search entries and access points used by the employees could be summarised as follows:

<table>
<thead>
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</tr>
<tr>
<td>Subject in general terms</td>
<td>Free-text field</td>
</tr>
<tr>
<td>Date/time</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Proper name</td>
<td>Free-text field</td>
</tr>
<tr>
<td>- personal</td>
<td>Metadata field (official)</td>
</tr>
<tr>
<td>- institutional</td>
<td></td>
</tr>
<tr>
<td>Organisational unit</td>
<td>Metadata field</td>
</tr>
<tr>
<td>Document type</td>
<td>Free-text field</td>
</tr>
</tbody>
</table>

**Table 7.2 Employees’ interaction with the journal**

### 7.4.3 Interaction with the archives inventories

The VVDiark archives inventory module contained a specific search interface, see figure 7.7 below, which contained a free-text field (1), and metadata fields for records’ creator (2), series’ identity code (3), volume number (4), time interval (5), series’ caption (6), keywords (9), journal reference number (10), place (8), object/project identity code (11).
Figure 7.7 VVDiark Archives inventory search interface

The searches could be limited to closed or still growing series. The metadata field for journal reference number was supposed to connect the inventories to the journal, but that function was not in use and the metadata field was thus not valid. Searches in the metadata fields generated a list of matching series (12). When choosing one series, the inventory form was accessed. Free-text search generated matches in the inventories as such, if the words occurred at all, for instance in the annotation field.

The archives inventories were not commonly known by the users, neither by the internal users nor accordingly by the external users. Unlike the journal they were not accessible through the intranet. The purpose was to publish the inventories on the intranet in due time, but according to the senior archivist they needed to be updated first, both at the main office and at the regional divisions and local offices. At the regional and local offices, inventories were still used primarily in the form of hard-copies.

The inventories mainly functioned as work tools for the archivists and to some extent for the registrars. The senior archivist could recall one occasion where a private person of his own accord had asked to see an inventory, in that case to identify potential records concerning expropriation or usufruct of his property. The normal routine was rather that when someone visited the archives, either an
internal user or an external, and made a request that needed elaboration the archivists showed the inventory as a basis for discussion. There were however a few exemptions among the internal users, the employees of the agency. Some areas of business had long-term topicality, or actions undertaken had long-term consequences. Such an area was community planning, and the officials engaged in those matters had from time to time a need to request materials from the archives. They had acknowledged the function of the inventory and learned to use it, however with some assistance from the archivists occasionally:

“Can they read the inventories; understand how they should be used?
Yes, but they do not always understand the series system. [---] They reach a certain level, they are not interested in details, just want to get their information quickly.
Does it happen that you discuss the inventory together with the user to find out what they want?
Yes, definitively. It has happened several times that you have tried to explain that ‘this is organised like this and that means that you can’t find it in the exact order you want, because…’. They may think that the easiest way would be that it would be chronologically organised. They know that ‘this happened in 1984’, and then you have to gently explain that ‘well, in thirty years hardly anyone will remember that it was in 1984’. Instead we can find it if we know that it concerned the main road 50 outside Falun, for example. That is something concrete that historically… in the administration, that remembrance will remain much longer than when it happened in time. So you have to sort that out. Some may think that this, to them… in their minds it was a tremendously important event, that you in 1984 got a big important decision through or something, which they remember in the administration right now, but if we classify it according to that it will be unsearchable in the long run.” (Senior archivist)

Another area that had a long-term application and caused a frequent retrieval of records, were geotechnical measurements. Geotechnical data were of great importance in the planning, building and re-building of roads, and very costly to collect. Once the measurements were taken, the data could be re-used over and over again if it could be retrieved. These records were in some cases so old that they were delivered to the provincial archives in the region. Engineers specialising in geotechnics had a recurring need to collect geotechnical data from the records, and had thus cracked the code of the inventory. The importance of the data and the frequent use of them were an incitement to learn to retrieve the records on one’s own. It was regarded as more efficient than going through somebody else.

“When you search for the records, do you use the inventory by yourself? You don’t have to approach someone and ask them to help you?
No, I do it by myself. That’s correct. [---]
Do you ever contact the registrars to obtain records?
No, not anymore, but in the beginning to find out where the stuff was and so. So I have had much contact with [the registrar].” [---]
Do you find these inventories functional? Do they provide the right access points?
I would have preferred that they were digitized, so that you just could have search for the length of road and get it out [the data]. They ought to be
[digitized], to make it easier. But, now I know how it is laid out, and if you know that, it's fairly OK, but… If you haven't been there and searched for it could be a bit tricky, I believe.” (Official 8)

The use of the inventory and the process of understanding it was a kind of trial and error. It required a familiarity with the records as such to fully grasp the structure of the inventory. The search for the records was however a part of the analysis and processing of data.

“When you search for records is it specific items, a report or so, or is it single facts you are looking for?

“It’s parts of records. You can say it is drawings and texts. So it’s not a separate item, but part of a record. Our construction records, the large objects, well it could be 15 binders with texts and drawings, and it is parts of them you want then.” (Official 8)

It was necessary for the user in question to browse through the material to identify and extract the relevant data himself. The search could not be satisfied by a simple request to the registrars or archivists.

The more complicated searches generally concerned older materials or documents not registered in the journal, e.g. documentation of constructions. At the main office these searches were undertaken by the archivists, but at the regional and local offices the registrars were responsible both for the current journal and older materials in the archives repository. This meant that the registrars had sometimes to perform real complex searches.

“[…] sometimes the legal advisers are looking for certain things, when one or another old matter turns up. They have for instance one now that they are dealing with. We have even had to go back to the people who worked with it [the old matter], and that were some who were born in 1995 [sic!] we got hold of. I mean the persons are dead since long ago, but they [the jurists] found some. We had to pick up old personnel registers and suchlike. They were not sorted according to civic registration number, and sometimes not […] in alphabetical order either, and we didn’t understand what kind of order it was, you can’t figure it out and it doesn’t say. So it has been difficult to search, we have just been flipping through them, looking for a name. […] They said very little, we were happy if we could find a year on the list. Well, they were filed according to year, so we know what [year] it was, but the document itself didn’t say anything. So that can be difficult. (Registrar 7)

Requests for older materials generated a certain amount of manual searching and actual browsing through the documents. It also necessitated undertaking the searches in several steps, using different tools: first making an assessment of the actual request to establish the subject, then connecting the subject to the classification scheme to identify the potential classification code; further searching the inventory to find the relevant series and pin-pointing the physical item, a box or a binder were the documents were stored; and finally searching it through to pick out the requested document.
7.4.4 Alternative search paths

The records as such, their physical order and their location could also function as a search tool. When realizing that for instance personnel files were stacked in a certain shelf and sorted according to civic registration number, the users could easily orient themselves:

“[…] there are people from Personnel for example, who know exactly what files they should have, and they enter [the repository] and pick up the material themselves, and they have so to say been authorized by us to do so.” (Manager 6)

The administrative offices also kept current records temporarily in their own repositories, for instance financial records. These were connected to the accounting system Agresso, which was the main means of accessing these records. Agresso as such contained records, the factual accounts, but verifications and other documents of significance for the understanding of the accounts were preserved as hard-copies. These were only referred to in the system by a specific identifier, which governed the physical order of the records. When a need for a specific record occurred, it was identified in Agresso and then physically obtained from the storage.

It could be said that a similar function was provided by certain specific business management systems, whereof two of the most important were CHAOS, the system for management of road building projects, and BaTMan for the management of bridges and tunnels.4 They were actually tools for process management, not just systems for storing information and documents. However, management of documents was an important feature of the systems. CHAOS stored textual documents as word- or pdf-files, drawings in CAD-formats or as pdf-files, and images, and contained functions as name conventions, metadata tagging, management of versions, check-in and check-out of documents, and management of authorities. CHAOS contained 47 metadata elements in order to provide searchability, traceability of actions, and control of the building process. Searches in the system could be performed in the metadata fields or according to document title. (Förstudie Diarie- och arkishantering i Vägverket, 2005) BaTMan (Bridge and Tunnel Management) was the equivalent system for managing bridge and tunnel constructions, but was based on a different platform and with different structure. BaTMan contained textual documents and digital images of drawings, i.e. not the drawings as such. They were created and stored in CAD-systems, and finally printed out as hard-copies for permanent storage. None of these systems were considered as Electronic Records Management Systems or an archival system,

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1 If not otherwise stated, this paragraph is based on interviews with the systems managers.
(c.f. MoReq, 2002), just applied for temporary purposes. When a building project was finished, the drawings and the other documentation were printed out as hard-copies, and organized in the archives repository as objects equal to the particular road distances, bridges or tunnels that were built. Each object was in the system given a unique identity in the system, a code according to a certain convention. The objects were registered in the archives inventory, but in order to identify details about individual records you had to search the systems.

Several of the interviewees also demonstrated special registers or databases, often in the form of Excel spreadsheets, to facilitate the administration of records they were responsible for or that they frequently used in their work. These could be personally developed registers for individual use or more elaborated applications shared by a group of employees. An example was the management of agreements with contractors:

"You don’t have a special system to register agreements? Is that made in the journal? Yes. But then, well specifically we have this, you can say an administrative help to keep track of them so you know where they are, because it is rather a lot. I will show you... [Demonstrates the database.] First we have a so called common domain [on the server], a ‘share’, where we who work here in this division can read and store documents, and you have different authorities. There are the actual documents we work with, and then we have an administrative part, an Excel-sheet where I note the journal reference number, what it is about and where it is. If someone else is going to do further work on it, then I make a note of that because then I know that it is with say ‘Anna’. And when she has finished and I have sent it away, I write that down so I can keep track of it. It would be almost impossible otherwise, because there are so many documents. But this is just for us in this division. Nobody else looks at it, it’s an internal procedure. But, well we keep track of things." (Official 3)

Each individual agreement was thus registered as a matter in the journal and the signed agreement was filed at the registrar’s office, but the drafts were stored in digital form. Hard-copies of the signed agreements were further gathered in binders at the interviewee’s office. If someone was interested in the agreements concerning a certain subject or a particular contractor, the agreement could be identified in the register and the drafts or the hard-copies could be accessed, or the original agreement with enclosures could be obtained from the registrars with help of the journal reference number.

Keeping copies of records either digitized or in binders, seemed to be a rather common way of making them accessible. In some cases this was regarded as a satisfactory substitute to the original records, and a more convenient way to obtain the information:

“[...] the records I need are the binders with agreements on maintenance packages. It is so organised that one set [the originals] is preserved at the registrars’, but I also keep one set in a storage room here outside. In 99 times out of a 100 I’ll go to the storage room."
Are the binders organised in any particular order?
Yes, they are. It is a very good order nowadays, because […] I have made a list of contents and put on the wall, so I can go directly in and see ‘I want maintenance area Kungälv’, and than there is a number, which I also have on the binder…”

So the access point is the maintenance areas?
Yes, it is the maintenance areas. That’s what I work with. (Official 1)

As shown above this phenomenon could be managed in a well organised way, providing a structure the employees found functional for their purposes and that could be shared by others. But it could also be the result of individual habit, for instance storing copies of records on one’s own hard disc drive. Sometimes this resulted in an idiosyncratic order, only accessible by the individual employee if even so:

“[…]I have once made a catalogue structure in the computer, and that has gradually grown and become more ramified, well it grows almost like a cauliflower. And that means that I have to use the search functions [in Windows] to find because of the amount of documents and that the catalogue structure I created is not good enough. That is my absolute opinion, and I have not either the steam or the energy or the knowledge to make it better. (Manager 2)

This problem also occurred on a collective level, in the shared areas at the SharePoint server, where the separate divisions, working groups, projects etc. had a space for their common activities. In these shared spaces documents of general interest for the group were stored, but seldom according to any ruling principle. The internal document management had also been criticised in the process of ISO 9001 certification. This behaviour implied the risk that among drafts, working materials and copies kept for convenience, also correspondence and completed documents, i.e. records, could end up not being captured in the formal systems.

7.4.5 Requested objects
The general opinion of the archivists and the registrars was that external users either were requesting a specific fact, i.e. the answer on a particular question, specific records or copies of records, or more generally records without specification about a certain subject. The registrars considered that they often received fact-related questions concerning on-going matters, which they generally referred to the officials for further handling, while they received requests about records to a larger extent when it came to matters that were closed, but there were exceptions to the rule. A more curious example was given by the archivist responsible for the documentation of bridges and tunnel construction. She had been approached by the presenter of an television quiz show that was popular at the time, who wanted to know which bridge in the country that was the broadest,
as theme for a quiz question. The question was difficult to answer exactly, however, since it was a matter of definition.

Purely topical requests were assumed to be rare, the exceptions were possibly local historians with a general interest in a geographical district or academic researchers investigating a particular problem, however the latter had an assertive opinion of the kind of information they were looking for. General information seeking did not appear to be undertaken through records. A voluminous amount of information was accessible through the official website, which also provided help from an interactive agent, and also through the customer service support. To some extent this could be assumed to relieve the registrars from more “trivial” questions. The basis for that information might be records, but the records were not approached directly by the end-users.

The general opinion of the registrars and the archivists was that internal users were a bit more specific in their requests than the external, even if there were variations. This was probably due to the fact that they were more knowledgeable about what to expect, and that they had the possibility to do research themselves before approaching the registrars or the archivists. The employees requested specific facts, specific records, but more seldom unspecified records, although the question “do we have anything about that?” could occur. The employees themselves claimed that they primarily turned to the registrars’ function or to the archives when they needed to take part of the records as such, or rather, when they approached the registrars they requested a file or other records even if the purpose was to check a certain fact.

7.4.6 User queries

However, even if the users had a specific information need, they were not always able to articulate the requests in such terms that the requested items could immediately be identified. When requests concerned records that were results of matters the primary identification object internally was the journal reference number, but this could not be expected to be a matter of general knowledge. According to the registrars, external users spontaneously provided their names, but not always since they had right to anonymity, and the subject in general terms, what the issue was “about”:

“Mostly they say who they are, [and] the type of matter. But if they have gotten a letter from us, then you could ask: ‘can you see if there is any journal reference number?’ and then it is easy. And they who have been in touch with us before, they are a bit more skilled so they know… they read it out directly.”
(Registrar 1)

Persons who had recurring contacts with the agency had learnt the procedures and provided journal reference number on their own accord, since this was the
most efficient way to identify the matter. This was the case with contractors and vendors, for instance, who had taken part in procurements, and who had gained experience in requesting tenders from competing firms. (Another group that had learnt the trade were the “opinionated persons”, who “…used to have long lists…” (Manager 6). To a large part, the types of matters handled by the agency were also recurring and routinely managed. The two most frequently occurring types of matters were concerning vehicle registration, 2100000 matters/year, and driving licence registration, 1200000 matters/year (Kartläggning av Vägverkets ärenden, 2005). Even if the journal reference number could not be provided, the matters could easily be retrieved with help of vehicle registration number or civic registration number, i.e. information the concerned individuals normally were able to recall. Requests concerning the customary handling of matters might thus require a bit of negotiation, but could usually be effected without problems.

Many requests were nevertheless not related to matters, at least not to current matters. The activities of the SRA were to a large extent organized around certain objects or projects, i.e. mainly roads and other constructions. The records were also registered and organised according to these objects, making up case files, and coded according to certain conventions. If matters were concerning such objects, e.g. in the case of procurements, the object code was annotated in the journal. The archivists and registrars also received a certain amount of requests concerning those objects, however not always in terms equivalent to the agency’s own conventions for naming the objects or registering the records. An example was the documentation of bridges, which was organised and registered according to a certain code assigned to each bridge, consisting of the county code, a capital letter of the county where the bridge was located and a current number. The employees of the agency generally knew the bridge code, or could find out themselves through the business management system BaTMan, but hardly any private person was familiar with that code system:

“When you receive requests about this material [the bridge documentation], is the bridge code provided?
Well, that is rather renowned now so… there can be cases when someone, well someone from the public that doesn’t work with bridges. They have of course a bit of difficulty finding out the bridge code…
What information can they provide then?
Well, ‘it is close to…’ they say. ‘I would like to know something about a bridge right outside Bräcke’, they can say. Then you have to think ‘in which county is Bräcke?’, because the bridge codes are based on the county code and a number as they are built. So you have to start from there, the county.” (Archivist 1)

Even consultants and contractors were not always aware of the bridge codes, at least not in their first contacts concerning a particular object:

“How can a request from a consultant sound like?
Well, it can be like 'We are going to rebuild a footbridge in this or that municipality, and we would like to know if there are any metrics? Maybe they don’t even have any bridge code. Sometimes they have it, if not you have to enter the bridge peoples’ BaTMan, and try to find it out.’ (Archivist 2)

The common information provided to identify the requested records were the type of object or occasionally its name, location, and in case of consultants often the type of documents. The archivists or registrars had then to search the systems to identify the particular objects and then the inventories to locate the records. A complicating factor was the amount of material, each bridge construction generated a huge documentation and the particularities were not always registered. This was clearly the case with older records, where the details had never been entered in BaTMan or the preceding system. Search for records thus required a certain amount of manual browsing to find the exact records or even to establish that they existed at all. Road building objects were in a similarly way organised according to the distance between two geographical locations where the building took part, coded by a number. The records could be sorted and registered in the inventories of the regional and local offices in various ways: chronologically according to date of closure, according to road number or according to object number. In some cases the inventories were complemented with indices with the alternative search entry points, and in case of changes in naming and numbering with the previous denominations.

However, the primary identification users provided was generally a geographical location, but not necessarily the one making up the name of the object.

“The opening question can be ‘What do you have about the road between Svenstavik and Östersund, the re-construction of the E14?’ Then we report back 'This is what we have', ‘Well, then we want this...’, and then you had to go down and get it. [...] If the object was called Svenstavik-Östersund, you are right on. But it can happen that they refer to a place called, say Näs, ‘What happened at the construction of the road at Näs?’. Maybe Näs was part of a larger construction project called, let’s say Hämösand-Sundsval, construction of E4, with the working title ‘Torsbodavägen’. Then you have to figure that out. Looking at maps, realising that it was located here or there, and then it probably would belong to the construction object between those to main points. The geographical locations are always important, if it is not about a person or a vehicle.” (Senior archivist)

Because of the aggregated level of the inventories, the individual items and types of records tended to be hidden in a larger context, not always transparent even to the archivists.

The information provided by external users to identify the requested object could be summarized as follows:

- subject in general terms, what the matter was about, for instance “tender”, “appeal”, “traffic operation permit”, “damage claim”
· proper name
· civic registration number
· vehicle registration number
· geographical location
· object in general terms, e.g. road or construction
· time/date
· property designation unit
· type of document
· occasionally journal reference number
· occasionally object identity code

The employees preferably provided the journal reference number, if it was available and appropriate, since that was recognised as the most efficient way to retrieve the files. According to the registrars, employees could often provide journal reference number, but in some cases used the subject or the party in the matter, or the remitter. The registrars at the main office primarily served employees with records from the latest two years; requests concerning older materials were referred to the archivists. The senior archivist claimed that there was a time aspect involved in the phrasing of questions. When the requests concerned recent records the users could mostly relate them to a particular matter or naming the specific item, but as time went the memory failed and the requests were more likely to concern records “about” something, or were phrased like “what did the Director-General decide in...?” instead of “I’m looking for a letter from the Director-General from...”. Thus requests concerning elderly materials could be less specific, even if the requested object was a specific item.

At the regional and local offices the picture was a bit different. Although the employees occasionally used journal reference number, the business involved operational tasks concerning construction and maintenance to a larger extent, thus only a few of the employees were directly involved in the handling of matters. Instead the records were connected to objects, even if certain records were registered in the journal as well:

“They [the purchasers] may not use the journal reference number, instead they may say that it is about Axvall-Varnhem road number this or that. Then I can find it anyway. So they may not always have the journal reference number, but the name of the object or sometimes they may have the object identity code.”
(Registrar 8)

This was confirmed by the purchasers themselves:

“Well, if you have the journal reference number you try that, but often it is the object code [...] we often go down since the registrars’ function is just below us, and probe. If you remember the name and suchlike and when it was done it used to be found. So, we are not that formal. (Official 2)
The general opinion was the employees mostly related records to an object at a certain place and to phenomena that had occurred at a certain time, but that identifying the exact items often required some negotiation:

“When the employees need to consult records, do they put the question so clearly that they are directly retrievable? No, many times we have to ask. Most often we... there are some, but in most cases we have to ask. Because we know the structure, how it [the archives] is organised. Many times you have to, as we have several, you have to search several archives. We have 1944 to 78, and before that the Road Engineers’ records, and then we have 79 to 91 and from 92 until now. You need to know that! Can you give any examples on how they put the questions? Well, they may say that they reconstructed a road that went there or there [...] Then you have to ask what road it was, and sometimes they know, most of them who work here know which road or find that out. And the year, you have to ask what year it was, during what time period. That’s what you ask for basically, the concrete [information][...]. An agreement that was signed sometime ‘I think it was about then, it was probably that road’, and then you have to ask the name of the person who they had made the agreement with and what property it was. And then you have the problem that the owner of the property has changed, so you have to search another way...” (Registrar 7)

The employees primarily related the records to the work process and the objects, for instance “the reconstruction of...”. However, even if the employees phrased the requests in terms of general subjects or the objects in general terms, it was often specified with time, location, type of documents and sometimes unit or executive official. The citation above however showed another complication in retrieval of records, namely that circumstances changes and the particulars that were registered when the matter was initiated or when the documents were drawn up, might have been obsolete or fallen into oblivion. The agency could have made an agreement with a certain property holder concerning disposal of land and usufruct, but in course of time the owners and even the land parcelling might have changed. To find information about a current phenomenon it may be necessary to track a course of events back in time. This is another example of cases in which the requested items might be hidden in a larger context or even in another context than presumed.

The information given by internal users to identify the requested items (facts or documents) could thus be summarised as follows:

- subject in general terms, what the matter was about, for instance “tender”, “appeal”, “traffic operation permit”, “damage claim”
- type of document
- proper name
- civic registration number
- vehicle registration number
- geographical location
• object in general terms, e.g. road or construction
• time/date
• property designation unit
• organizational unit
• occasionally object identity code, e.g. construction object or project

7.5 Concluding remarks

This chapter has given an overview of the findings from the second case study, the governmental agency. After a contextual background, the use of records, users’ search for records, the search tools they used, interaction with intermediaries, and the identification of requested records have been described.

The primary users of records were the employees of the organization, especially officials involved in the process of handling of matters and exercise of authority, and employees with operational work task like building, construction and maintenance. The primary reasons for use in the first case was to follow-up certain matters, or to draw experience from similar matters. In the latter case the employees had a more or less continuous need for technical documentation and legal agreements. The need to consult records was often driven by another party’s demand, for instance requests from outsiders or senior officials’ and managers’ need for information. The use of records was thus affected by work tasks, position and the distribution of work between the different organizational units.

The most frequent external users were, according to the registrars, subjects that were parties in matters or directly concerned by the activities of the agency, for instance property holders affected by construction work, i.e. stakeholders of the business of the agency. A category of users that had increased in recent years were vendors involved in a tendering procedure, who often claimed to take part in their own and others’ tenders to make appeals or to collect information about competitors. However, a fair amount of the users did not have a direct relationship to the agency, but needed for different reasons records or information from records kept by the agency. These users seemed to be more frequent by time, i.e. making up a larger part of the users of older materials. In those cases they also acted as direct users to a larger extent, accessing the records as such, while external users of current records more often received information through the mediation of an official.

In contrast to the municipality, the employees of the governmental agency had access to the journal system, although in the form of a simplified web application with fewer access points than the original journal. This accessibility seemed to encourage a certain use among the employees, particularly among those who were directly involved in the handling of matters and had a need to follow up earlier decisions. A few also seemed to use the journal as a means to keep track of what
was going on in the organization. Other employees seemed to prefer to approach the registrars directly with their requests, or develop their own systems for search and retrieval. Nevertheless, the primary users of the journal were the registrars themselves, either as a part of the registration procedure or when providing services to other employees or external users. The journal system, but not the web application, also included a module with archives inventories. Archives inventories also existed as hard copies. Whatever the format, the archives inventories were almost exclusively used by the archivists and some registrars that were responsible for the archives function of their unit. Only a few employees, with a regular need to access records from the archives, had learnt to use the inventories by themselves, instead of relying on the archivists and registrars.

The registrars that were interviewed were occupied more or less full time with registration duties, thus they had gained certain skills and experience and could master most of the functions of the systems. Some differences, depending on experience and to what extent their regular tasks required more complex searches, could be recognized. However, if the exact journal reference number was not available the registrars in general preferred free-text search, but sometimes combined it with searches in metadata fields. The employees also used the journal reference number, if available, when undertaking searches in Webdiark, otherwise free-text search was preferred. Similar to the findings of case study 1, the archivists and the registrars found that internal users made more specific requests than the external users, and more often wanted access the records as such. External users often required factual information concerning on-going matters or recent activities, but were more likely to want to access the records when it came to closed matters and older materials. Because of the possibility of accessing the WebDiark, internal users could sometimes provide journal reference number when making requests. External users with recurring contacts with the agency also provided the journal reference number, but in general external users phrased their requests in more general terms.

A set of frequently occurring identifiers, used by both internal and external users could be identified, as shown below:

- subject in general terms
- proper name
- civic registration number
- geographical location
- object in general terms
- time/date
- type of document
- property designation unit
• vehicle registration number
• occasionally journal reference number
• occasionally object identity code

The findings of this chapter and the previous will be further analyzed in the next chapter Analysis and Discussion.
8. ANALYSIS AND DISCUSSION

In the following chapter the findings of the case studies will be discussed and conclusions will be drawn from the analysis of the empirical findings. The purpose of this study is to investigate the information behaviour of users of records in two active organizations with a focus on the interaction between users and intermediaries in the search process. Previous research, as shown in chapter 2, has indicated an ambiguous utility of artefactual intermediaries and a preference for informal search paths, particularly a salient role for human intermediaries, and a general preference for specific search terms and access points on behalf of a topical approach. It has also shown a significant difference between experienced and inexperienced users in their search behaviour and their interaction with search tools and records as such. Further, use of records tends to be purposive, i.e. records are used when they are needed as such, not randomly as just one possible type of information source among others. This indicates that their particular properties as records are of value for the users. However, the previous studies have with few exceptions mostly focused on use of non-current records in archival settings for some kind of research purpose, professional or amateur. The ambition here is to discuss these issues from the perspective of information behaviour in contemporary administrative settings. The findings of the case studies presented in chapter 6 and 7 will be analysed with help of the analytical framework proposed in chapter 4, consisting of activity theory informed by archival theory and theories of information behaviour. The findings are based on interview data, organisational documentation and observations from the settings, collected according to the methodology described in chapter 3. The contributions the thesis can make to the professional field and to research in archives and information science will further be discussed. Finally, the limits of the results of the thesis and what new questions for forthcoming research it has brought about will be considered.

8.1 Revisiting the research questions

As was stated in chapter 1 and can be concluded from the overview of previous research in chapter 2, little research has been undertaken concerning use and users of records, or search for and access to records, neither in general nor from the perspective of archives and information science. The overall aim of this thesis was to fill the gap and gain a better understanding of the information behaviour of users of records. Since both professional and academic archival discourse has primarily been concerned with the use of non-current records in archival repositories, particularly with emphasis on use for research purposes, scholarly or amateur, this thesis has focused on a contemporary organizational context.
The research aim has been accomplished with the help of the following research questions:

- How are records used in contemporary organizations?
  - in what context and for what purposes are records used?
  - what user categories can be identified?
- How is the search for records mediated?
  - what intermediaries are used in the search process?
  - how well do the features of the artefactual intermediaries serve the users’ information needs?
  - what is the role of human intermediaries?

The purpose of the study is also to make a further contribution to theory development in the field by combining a social theory framework with concepts from archival theory and information science and to provide a conceptual model of the information behaviour of users of records that can form the basis for further research.

8.2 Case descriptions

The context of the study was two Swedish public organizations: one mid-size municipality and one governmental agency. The municipality provided a wide range of public services, from child care to city planning and physical infrastructure, thus impacting on the citizens’ every-day life. The business of the municipality was therefore of general interest to the citizens, and various categories of users could be assumed to have interest in accessing official documents. The governmental agency had a more limited area of obligations and field of competence. However, the agency chosen as a case had a national commission and dealt with transport and communications infrastructure, issues with a large impact on individuals, trade and industry and the environment. It could thus be assumed that a wide variety of citizens had interest in its business. This was partly the reason for the selection of cases, and the assumptions proved to be accurate as will be shown below.

Both were rule-based organizations, in that their business performances and decisive processes were regulated by law and political decisions to a certain extent. The municipality showed a more complex structure, consisting of a political level, an administrative level and an operational level. The municipality was organized in several politically appointed committees governing the performance of the organisation, but also the administrative functions had a decisive competence of their own or delegated from the committees. The governmental agency, although it was made up of several units with various status, competence and geographical range, had a more straightforward command structure governed by a board and primarily ruled by the Government's standing order and the budget document.
The businesses of the organization could in both cases be divided into three main activities:

- the exercise of authority, i.e. making decisions that directly affected individuals or other legal subjects;
- in-house activities like administration, accountancy, maintenance of property etc.;
- actual handling, the actual performance of the organization’s obligations like teaching, nursing, construction etc.

A substantial part of the business, although not quantitatively pre-dominant, was undertaken as handling of matters, resulting in decisions.

The regulations also had impact on the recordkeeping practices. Both organizations were subject to the Freedom of the Press Act, the Secrecy Act, the Archives Act and Ordinance. This meant that their activities should be documented, resulting in so-called official documents that should, with some exceptions, be made available to the public. Official documents should be registered, kept in order and finally described, which meant that the organizations had had to implement instruments for the control of records like the journal and the archives inventories, as well as some other systems with functions for records’ control. These instruments were also the main tools for search and retrieval for records and according to the intentions of the Freedom of the Press Act should be subject to the service of the public as well as to internal administrative efficiency.

The municipality had a common journal system for the administrative offices, with the exception of the office for city planning and environment. Matters concerning planning and building were registered in a special system designed for those kinds of matters, which were subject to a special handling procedure according to the Planning and Building Act. Matters of environmental control were also registered in a special document management system that also included digitized documents. The final records from the handling process were, however, filed as hard-copies. Those two systems were available to the officials, and used in the handling process. The main journal, ÅHS, was accessible by the registrars, the archivist and some administrators. There was no public interface available to the external users. Searches in the journal were thus almost exclusively done by the registrars. Archives inventories were made up after delivery to the municipal archives and available there as hard-copies in binders or in word-format, the latter however only for internal purposes. Inventories were not disseminated to the administrative offices. The inventories were thus used mainly by the archivists.

The governmental agency had a journal system especially developed for the agency that was used in the whole organization, at the main office as well as at the regional divisions and the local offices. This was available for the registrars, the archivists, and some administrative staff that registered new matters. A simplified
web application, with search functions but no functions for registering, was accessible through the Intranet by all employees, and it was also available to the public by a terminal at the main office. The accessibility seemed to encourage a certain use among the employees, but this was unevenly spread. Archives inventories, although not complete were available as hard-copies at the Documentation and Archives unit at the main office and in a special module in the journal system, but not accessible through the web version. The inventories were thus available to the staff who had access to the journal, but were in fact primarily used by the archivists. The regional and local offices kept inventories of their own repositories, available as hard-copies at the registrars’ offices, but at least some were also digitized. The ambition was that all inventories should be available through the journal system.

At the municipality each administrative office had a registrar, who sometimes also had other administrative duties, and another employee assigned responsibility for the recordkeeping. After a certain time, records were delivered to the municipal archives that was physically separated from the administration and made up a separate division of the municipal administrative office. This implied perhaps less integration with the administration, but also meant that the municipal archives had a “sign on the wall”. It could appear more visible, and it seemed to attract a certain amount of external users. At the governmental agency the archives’ and registrars’ functions were integrated, belonging to the same organizational units and physically located together. The municipal archives kept records from the 1860s, and was therefore of interest for user categories such as genealogists and local historians as well as users of more current records for other purposes. The governmental agency had delivered most of the records from its predecessors to the National or regional archives. This implied that it mostly attracted users with an interest in the agency’s current business, however user categories with other motivations occurred and among them genealogists and local historians.

8.3 The information behaviour of users of records as part of an activity

As was established in chapter 4, the overall theoretical framework that will guide the analysis is activity theory. According to this a social practice can be described as an historically and socially situated activity defined by a motive in order to reach an outcome and containing the components subjects, objects and tools. What these components represent is dependent on the level of the analysis: whether it concerns the activity systems as a whole, activities and sub-activities, or tasks within the activities. Activities as such could for instance be objects of other activities or provide tools for them (Engeström, 1987, p. 88). However, the components could be identified on each level. The information behaviour of users
of records could be described as a part of an activity, i.e. subordinated to a more overruling activity in more complex and enduring activity systems. The focus of this analysis is the actual information behaviour process, thus the overall activity systems and neighbour activities within the activity systems are more scantily described. The relationships between the information behaviour process and the overruling activities are, as will be explained, highly significant. The elementary model of an activity as presented in figure 4.1, thus serves as a basis for the analysis. The findings of the case studies will be discussed with the help of this model.

8.3.1 Motives – the need for records and the purposes of use

Activities are motivated by needs that are supposed to be fulfilled by the result of the activities (Leontiev, 1978). Activities are thus always purposive. Needs are also the underlying cause of information behaviour (Wilson, 1999). Previous research (section 2.1 above) has shown that the use of records was purposive, i.e. motivated by specific needs. To identify the actual motivations of the users of records on an individual level would require a comprehensive study with deep-interviews and is not the focus of this study. However, on a general level it is possible to discuss motivations and purposes of the use of records.

The overall motive for the municipality and the governmental agency was to effect political decisions, either established by law and governmental orders, or by resolutions from the assembly or the elected committees. Ideally each function and each member of the organizations should contribute to this overruling objective, while fulfilling their work tasks. The need for records would thus occur as a consequence of the work process. The purpose of the internal use of records could primarily be identified as supporting the conduct of business, either in the form of administrative handling of in-house functions as personnel, maintenance or finances, or in form of handling of matters or executing decisions, or when undertaking operational work in the form of actual handling. A commonly stated purpose of use was also to support decision-making and actions. Records were used in the task of administering, planning, investigating, deciding, executing decisions and delivering services. Records were also used in the process of administering the handling of matters, for instance during registration to ensure that documents and actions were correctly registered, belonging to the right matter or that similar matters were registered in the same way. The organizations also needed to show accountability, i.e. compliance with rules and regulations, political decisions and commitments to other parties. This was generated by the business activities of the organizations, and was often part of their business transactions. The distinction between business purposes and accountability purposes according
to Shepherd and Yeo (2003), p. 54 above, did thus not seem entirely consistent or applicable in those cases.

There were nevertheless a few indications that internal users could use records or data from the representational systems for more personal reasons. Such reasons could be rather material, like consulting personnel files to establish period of employment or wage-conditions for personal benefit. However, a rather common purpose was to find out who had applied for a new appointment or, more rarely, to keep track of what was going on in the organization in general. These purposes were work related, but not directly related to the employees’ work tasks. They were generated by personal interest, curiosity, or a need for control. In the last case the purpose could be seen as gaining personal benefits, while in the others the purpose were more to get information or enhance knowledge for its own sake.

The purposes of the external use of records, as could be derived from interviews and the user queries, were mainly pragmatic and material, to gain personal or business benefits. To a large extent the purpose of external use was to establish a certain status. This generated a need for copies of school reports, medical records, decisions, and permits, and so on, i.e. documents that could be used to ascertained specific rights, often in relation to a third party. Records could also be needed as input in operational activities, either for personal or business purposes. Plans and drawings, for instance, were needed when undertaking reconstruction work and contractors, estate agents, academic researchers and media etc. needed records or information from records to accomplish their work-processes. A related purpose of use was educational activities, where records were used to accomplish special assignments. Records were also in some cases needed as a product for sale by agencies that provided specific information to their customers.

Records or information from records could also be needed in the process of controlling an on-going matter or in an appeal, but also to control and scrutinize the activities of the organizations on a more general level like policy issues, or, in the case of the municipality, the political decision-making process. Within Swedish archival discourse (Ds U 1981:21; Johansson, 1995; SOU 1988:11) effecting control over public institutions has sometimes been emphasized as a motivation for citizens’ and the media’s use of records. This could occur in case of certain issues pursued by interest groups, or occasionally in case of (mostly unpopular or controversial) actions affecting large groups of citizens, like the close-down of some of the agencies’ activities, planning issues or larger infrastructural projects affecting population and environment. Records were also needed in the continuous control concerning certain matters that were undertaken by other agencies for the purpose of exercising superintendence over the studied organizations.
The purpose of use could also be to gain knowledge and understanding. This roughly corresponds to Shepherd & Yeo’s (2003) notion of cultural purposes, which included “acquiring or augmenting an understanding of an organisation, or of aspects of society or the wider world” (Shepherd & Yeo, 2003, p. 156), cf. p. 54 above. However, to refer to those purposes as cultural could be a bit misleading. Finding out one’s own origin, locating friends and relatives, or looking up celebrities’ school reports could hardly be considered as a cultural activity in a more narrow sense.

The observed needs for records could be summarized on an abstract level as:

- material, to ascertain benefits and rights;
- operational, to provide input in practical activities, personal or business related;
- accountability, to maintain control of the agencies or to show compliance with rules, regulations and commitments;
- knowledge-enhancing.

8.3.2 Subjects – users and human intermediaries

The subjects of particular interest in this study were the users of records and the human intermediaries, i.e. registrars and archivists. The role of the intermediaries will be further discussed in section 8.4.3 below.

The institutional context of the case studies, Swedish public organizations, entailed specific groups of users of records in both organizations. According to the legislative framework (SFS 1949:105; SFS 1986:223), official documents should, with certain exceptions of classified records, be available to the citizens and it should be possible for citizens information to access systems and search tools used by the organizations. The organizations were thus in principle obliged to provide the same services to external users, citizens and legal subjects, as to internal users, i.e. employees. This meant that the organizations had to meet the requirements of a wide range of users.

A variety of user groups, internal as well as external, could be identified in both organizations. They could act as direct or indirect users, and indirect use by one party meant direct use by another who acted as a mediator between the records and the end users. However, Pugh’s (2005) definitions of direct users and indirect users, cf. p. 54, did not seem to work as analytical concept in these case studies. Identifying indirect users according to her definition was almost impossible and of little relevance in this context. Direct users are here defined as persons who consult records as such, while indirect users obtain information from records through the mediation of another subject without actually dealing with the items.

The primary users of records in the organizations were staff, i.e. internal users, particularly employees involved in operational activities: handling of matters,
actual handling or in-house operations like accountancy or personnel. Senior officials, managers and decision-makers like board members and politicians seemed to use records directly to a lesser extent, but were dependent on summaries, reports and drafts from other employees, i.e. they were to a large extent acting as indirect users. The internal use of records were thus affected by task and position, however, individual variations occurred. User groups that were not immediately recognized by the interviewees, but who frequently consulted records, were the registrars and archivists themselves. They were the primary users of the journals and archives inventories, but they also accessed the actual records frequently. That was often on behalf of others, i.e. in their role as intermediaries, but also to support their own work tasks: follow-up with previous actions, making comparisons, checking facts etc. In many cases the subjects thus acted both as users and intermediaries, and the relationships between these two roles could be very complex.

External users could act in many roles: as parties in matters or in other ways concerned by the business of the studied organizations; as independent users of records or information such as property holders; as parties in relation to other subjects; and to a lesser extent as students, genealogists, local historians etc. Most external user requests concerned recent records, often belonging to on-going or recently closed matters. The external users in those cases were often acting as indirect users, requesting facts that could be provided by the registrars or the officials, i.e. their requests were mediated by employees of the organisations. In the case of older records, the users more often requested to access the actual records, thus acting as direct users.

External users could be defined either as stakeholders of the organizations or other users. The stakeholders, individuals or legal subjects, had a direct relationship to the studied organizations’ activities. Primarily they were parties in matters, but they could also be directly concerned with the business of the organizations for other reasons. In case of the municipality, examples of such issues were city planning or decisions with a general impact on the citizens. For the governmental agency infrastructural projects with environmental impacts and intrusion on property played a similar role. The citizens or other subjects were directly affected by the agency’s decisions and activities, which generated a need to access records or information from records in order to exercise control or ascertain rights or material interests. Other agencies with superintendence over the organizations could also be said to belong to the category of stakeholders.

The other large category of external users requested access to the organisations’ records or information from records, but were not in a direct relationship with the organisations as such. Those users could be said to be taking advantage of the “availability of comprehensive information” guaranteed by the Freedom of the
Press Act. To a large extent this group was using records for material or operational purposes, either as private persons, as occupational users or as legal subjects. For example they could be individuals requesting copies of school reports, medical reports or certificates that ascertained them special rights; property owners in need of information about the status of their properties; or estate agents or vendors requesting technical documentation about buildings and constructions. The media could also be considered as such a user category, as could persons engaged in formal education and professional researchers; however the last category was small. A certain number of genealogists, local historians and suchlike also occurred, but those were a minor category. Finally, particularly in the municipal archives, a group using records for pleasure, recreation or plain curiosity could be identified. This group included for example persons using records to locate old friends or to find information about celebrities.

The user categories were to a certain degree dependent on the activities undertaken by the organizations or organizational units. In environments with a large element of exercise of authority the predominant user category was parties in matters, with need for information about on-going matters, decisions in closed matters, or records supporting complaints or appeals. In other business areas, other user groups, not necessarily with a direct relation to the organizations, dominated. Subjects according to the activity theory framework that were identified in the case studies could thus be summarized as follow in table 8.1:

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff</strong></td>
<td><strong>Stakeholders</strong></td>
</tr>
<tr>
<td>- registrars</td>
<td>- parties involved in matters</td>
</tr>
<tr>
<td>- archivists</td>
<td>- other subjects concerned by the business of the</td>
</tr>
<tr>
<td>- administrators</td>
<td>organizations</td>
</tr>
<tr>
<td>- officials</td>
<td>- other agencies controlling the business of the</td>
</tr>
<tr>
<td>- managers</td>
<td>organizations</td>
</tr>
<tr>
<td><strong>Decision-makers, “patrons”</strong></td>
<td><strong>Others</strong></td>
</tr>
<tr>
<td>- politicians</td>
<td>- individuals, groups or legal</td>
</tr>
<tr>
<td>- director-general, board</td>
<td>subjects requesting records in other capacities</td>
</tr>
<tr>
<td></td>
<td>than having a direct relationship to the</td>
</tr>
<tr>
<td></td>
<td>organizations</td>
</tr>
<tr>
<td><strong>Auditors</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Table 8.1 The subjects**

The subjects could act as direct or indirect users, and they could act as both users and intermediaries, providing records or information from records to the
actual end-users. External users were to a large extent those stakeholders in the organizations’ activities, but a significant part were users in other capacities. There was also a temporal aspect: the older the materials, the larger the amount of users with no party relation or other direct relations to the organizations.

8.3.3 Objects - the records

According to activity theory, human activity is directed toward objects. “When people design, learn, or sell, they design, learn or sell something” (Kaptelinin, 1996, p. 66). In this context the objects are per definition the records.

As a bureaucratic system, Swedish public administration is based on written documents, which makes records a central component in the handling of business matters. The Swedish concept handling is etymologically derived from the verb handla (act), like the Latin actus is derived from agere. The meaning of handling would thus be equivalent to record, in the sense that the concept implies originating from an activity. However, in every day-language the term is considered as synonymous with document, which is also the term chosen as the established English translation of the word (e.g. Public Access to Information and Secrecy with Swedish Authorities, 2004). This is not an entirely satisfying solution since document, as noted in section 4.1.1 above, is usually given a more narrow technical meaning, leaving out the theoretical implications of the concept of records.

Still, the concept is defined in the Freedom of the Press Act, one of the constitutional laws:

“A document is a presentation in writing or images but also a recording that one can read, listen to or comprehend in another way only by means of technical aids. A document is official if it is held by a public agency, and according to § 6 or 7 is regarded as having been received or drawn up by a public agency” (SFS 1949:105, chapter 2, section 3).

The definition is rather technical and could in principle embrace all kinds of representations, e.g. publications or objects of arts etc., and the transactional nature or connection to activities is not recognized. The scope is, however, restricted to the business of the public agencies by other sections of the law. No distinction between current records and archives is made in the legislative framework. According to the Archives Act the official documents of an agency compose the archives of that agency (SFS 1990:782, section 3), which means that official documents become archives as soon as they are generated. The use of the word document does not restrict the legal span to documents in the sense of fixed information units. Information stored in databases that is gathered or used in the conduct of the agencies’ business falls under the definition. The public is entitled to compilations of information in databases if they can be made by the means and methods the
agencies have at their disposal, so called potential documents (Gränström et al., 2002, pp. 34-36), i.e. the official documents do not have to be existing information objects. In this case the transactional connection is almost totally absent. The “recordness”, i.e. the evidential properties, is not connected to the documents as such, but to the fact that the information is captured by the agencies’ information systems (Hänström, 2007). The concept of official documents has been established to serve other objectives than archival theory, and the legal definition is not entirely consistent with the concept of records. However, considering the whole legal framework governing the handling of official documents, which establishes a contextual relation to the agencies’ business activities, official documents can be equated with records.

However, the conceptualization of records within the organizations was ambiguous. Some of the interviewees seemed to identify records with paper documents, and for instance not consider information in business information systems, like the ProCapita systems for handling data on individuals at the municipality or the systems for managing road building projects and construction of bridges and tunnels, as records. This was probably underpinned by the fact that the information was printed out as hard-copies for long-term preservation. The resulting paper-based files were thus acknowledged as the records, while the information in the systems was considered as working materials. The consequence was that the information in the systems that in a legal sense constituted records, was not captured in general systems as the archives inventories and that only the persons working with them had full access to the content. This was contradictory to the ambitions of the law, affecting the searchability of records, and thus access and transparency, negatively.

Records possess several properties and can serve different functions. Different properties of records were requested by the users. A general observation was that internal users to a larger extent requested records as such, while external users more often requested factual information. There was also a temporal aspect involved. The registrars in both organizations claimed that external users in general requested factual information in connection to on-going matters or current activities, but when it came to closed matters or older records the actual documents were demanded. External users, however, were less inclined to pin-point the exact items. Instead they usually requested records “about” something, even if they were referring to specific items. The observation that requests concerning elderly materials more often involved records as such was augmented by the documentation of the requests to the municipal archives, which primarily kept records that were more than 10 years old. A clear majority of the requests, both from internal and external users, concerned documents as such, mostly specific items. A significant example was copies of school reports. Internal users requested
in general specific files or specific documents, even in case of recent materials. They rarely requested factual information from the registrars or the archivists. Internal users were more familiar with the administrative and decisive processes and the records generated by those, and could thus more easily identify the records of relevance, even if they also to some extent requested records “about” something. User could also request types of documents, independent of source or content, however this was seldom occurring.

The requested objects were thus either information or documents, in the form of
- factual information
- specific items
- non-specific items
- types of documents

This could be attributed to the inherent properties of records according to archival theory: information value, evidential value, and intrinsic value. Records are carriers of information, but what constitutes their “recordness” is their function as evidence of transactions. They also have a material representation, they are objects. These properties were integrated and inherent in the actual records, corroborating each other. For different uses, the different properties were emphasized, however often interwoven and overlapping each other, due to the complexity of the records concept.

8.3.4 Tools - the means of mediation

The organizations in the case studies provided tools for search and retrieval for records. The most prominent were the journal and the archives inventory, which could been defined as formal representational systems, providing surrogates of the records in a more or less abstract and condensed form. Besides the formal representational systems, i.e. systems that were developed to manage and control records and to facilitate search and retrieval, the employees of the organizations to a large extent relied on “self-made” informal systems that could be more or less elaborated and structured, individual or shared by a group. To some extent this could be explained by the fact that the formal representational systems were not directly available to all users.

Internal users often relied on their own or others’ personal knowledge of records and their locations. They were familiar with the administrative processes and could recall when a certain matter was at issue, or when certain matters or events should have taken place, who had been involved in the process, and what records that should be available. The same occurred in a few cases with experienced external users, who knew what records existed, how they could be identified, and where they should turn to get hold of them. Frequent users
developed a kind of expertise concerning their field of interest, and a direct recall by memory was often the fastest and most efficient way to access records.

A significant finding particularly in case study 1, was that some employees systematically used records as a search path to other records. Minutes were used to identify and locate files and records concerning certain matters. Each decision was noted as a separate section in the minutes, and the records that were used as bases for the decisions could be identified with the section number that was searchable in the journal. Records other than minutes were also used as search paths to other records, but less systematically. Records to some extent consist of contextual relations, cf. section 4.1.1 above. As parts of processes and chains of events records are linked to each other in more or less intricate networks. This is what Nilsson referred to as the “linkage value of records” (Nilsson, 1983, p. 33). Records thus often lead to other records, and to get the full picture of an issue it was necessary to follow those leads, which was occasionally recognized both by internal users and by external users. It was for instance a common procedure in genealogical research, but could occur anytime the request concerned more complex or processual issues.

The need to have easy access to records sometimes resulted in employees creating their own “archives” with copies or drafts of records of relevance to their work, either as hard-copies or in digital form. These could be more or less systematically organized, personal or shared by a group, and sometimes complemented with registers. Employees also sometimes created “help-registers”, e.g. Excel-sheets or simple databases, to certain kind of records of special relevance, for instance agreements. The physical arrangement of records in a logical order, chronological, alphabetical, according to civic registration number etc., also functioned as registers in themselves. The physical and visual memory of tangible objects in a certain deposit or on a certain shelf seemed to be an important means of access. This possibility of searching and locating records was not available via digital systems, something that could be considered as a deficit and perhaps one reason behind the reluctance of some users to use formal systems.

Certain business management systems with inherent search functions could also function as means to access records, and were in some cases formal substitutes for the journal, e.g. the social registry, the Pro Capita-system managing contributions to the elderly or persons entitled to social support, the systems for handling of building permits or environmental control, and the accounting systems. Those systems included functions for registering certain types of records and giving them a unique identity that guided the physical arrangement, thus making them retrievable. Other systems also included references to records and search functions, for instance systems for project management. Those systems were not directly connected to the storage and retrieval of the physical records as such, but required mediation through the journal or the archives inventory. I.e. the
records could be identified with help of the business management system, but had to be searched and located with help of other systems. However, in certain business areas, for instance planning and building, where records and the handling of records were strongly integrated in the work process, specific systems, some with document management functions, had been developed rather early. Some of those were actually substitutes for the journal. Employees had direct access to those systems, as they were their primary work tools, and seemed to use them to retrieve records. To what extent they could fully utilize the search functions (or the system’s functions in general) was not intended to be established in this study. As shown in previous studies by Gunnlaugsdottir (2006) and Singh et al (2007), users of electronic records management systems only used a small amount of the functions of the systems. Users tended to limit themselves to the functions they perceived as most convenient and to those they had learnt to use when introduced to the systems.

Neither of the organizations had published their journals or inventories on the web at the time of the investigation. External users could not access the representational systems other than by intervention by the registrars or archivists, even if they had a formal right to access them by request. External users had thus less possibility to learn and master the systems, and for the occasional user this was impossible. The only occurrence of requests to access the journal seemed to be from journalists, who could be assumed to be expert users, familiar with the administrative procedures and the function of the journal. At the municipality, the journal was directly available only to a limited group of people: the registrars, the archivist and a few administrators. Other employees who wanted to access the journal had thus to approach primarily the registrars, who performed searches on their behalf. At the governmental agency, the employees had access to a modified version of the journal through the Intranet and utilized it to various extents. In particular, officials involved in the handling of matters seemed to have use of the journal and had learnt to handle the functions. Direct exposure to the systems thus generated a certain use, however not automatically. The users had to experience a direct need to search the system, and motivation to acquire skills to master the various functions.

Inventories were rarely requested on behalf of the users themselves, but could be provided by the archivists as a basis for identification of the requested items. At the governmental agency the inventories were kept as hard-copies at the main office, and by the registrars at the regional and local offices. Digitization of the inventories had begun, and a special module of the journal system was prepared for the archives inventories. The inventories were primarily used by the archivists and to some extent by registrars or administrators who were assigned responsibility for the archives, but also in a few cases by employees or contractors
with a profound need to access records and thus had learned to master them as search tools. The archives inventories of the municipality were kept at the municipal archives accessible by the archivists, but not disseminated in the administration or available to external users except by request. Very few examples of external users interacting with the inventories were given. In both organizations it had only happened in a few isolated instances that external users asked to access the representational systems.

To summarize, the search paths and means of mediation identified in the case studies were

- personal knowledge
- other records
- personal collections
- physical arrangement
- personal registers
- business management systems
- the journals
- the archives inventories.

8.3.5 The outcome – the use of records

A basic feature of records is their information content and records are in general frequently used to obtain facts. Information from records was used continuously by the employees of the organizations for planning, performing of operational tasks, investigations, presentations, decision-making and in follow-up activities, either because of their own cognitive and operational need, or on demand by citizens, colleagues, senior officials, managers, politicians or other agencies.

External users often requested facts in connection with on-going matters to find out how the matter proceeded. However, information from closed matters or other types of records was also needed by external users. At the municipal archives users appeared to request information about persons to a large extent: addresses, civic registration numbers, personal names, and time of birth or death, either for currant circumstances or genealogical or local historian research. Other areas that generated a significant interest in facts were properties, constructions, and time; when a certain event had occurred. At the governmental agency the interest focused on vehicles, constructions and properties, e.g. ownership of a certain vehicle, the direction of a certain road distance, or the conditions of a certain property.

An important form of use of records seemed to be as a means of reconstructing past actions and events. This form of use could be distinguished from basic fact-finding like picking up a date or a name. It involved a more complex processing of information and making inferences from records to reconstruct previous actions
and processes, while fact-finding in general was not necessarily aimed at reconstruction. What actually had happened and how it had happened was of salient importance in those cases. A recurring motive for using records that was brought forward in the interviews with employees in the organizations was “to see what we did last time” or “to see what we said before”. The reason behind this kind of use was probably to get guidance in the decision-making process, but also to ensure continuity in the actions undertaken and consistency towards the subjects of the decisions. Thus records often served as basis for decisions and actions, although their use to establish precedents was not explicitly referred to. The process of follow-up of actions and decisions, for instance due to complaints or appeals, or the handling of legal claims also involved reconstruction, or investigations of damages and incidents.

Reconstruction was also an element of external use of records. This could occur in the process of scrutinizing or controlling the handling procedure of a matter, for instance as a basis for an appeal, or to find out the background to certain decisions or agreements. Examples could be procurement, disposal of property, or decisions with a profound impact on the life of individuals, such as adoptions and child-custody cases. Historical research including genealogy and local history was further involving reconstruction of the past.

In some cases internal users undertook a more systematic use of previous matters and decisions in order to obtain knowledge and regain experience, for instance by collecting certain types of records, like decisions and agreements, for continuing reference. It is noteworthy that no one claimed to use records for a general knowledge enhancement. General information seeking or knowledge enhancement would require knowledge about potential sources, extracts from several sources and processing of the information, which was considered too time consuming to undertake in connection to ordinary work tasks. Knowledge enhancement was thus only concerning specific cases or types of matters. A few indications of external users employing records to regain knowledge were also identified. This was done particularly in connection with procurement, to use competitors’ tenders for future reference.

Perhaps the most vital form of use was, however, to verify that something was said, had happened, was decided, done, or agreed upon. All other forms of use

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1 This meant that the documentation of the organizations work processes and decisive processes were incomplete, in contradiction to the demands of the Administrative Procedure Act, which negatively affected the transparency of the organizations. That is an argument for the records continuum approach, advocating that not only the originating context but also the continuing maintenance and use of records should be documented in descriptive systems (e.g. Cunningham, 2000; McKemmish, 1994).
could be said to involve a verifying component, but particularly when records were used to prove rights and liabilities and to show accountability verification was needed. Decisions had to be made on an accurate assessment of the circumstances, thus they had to be based on documentary evidence. Applications for benefits or home assistance would for example be supported with financial statements or medical records. The organizations had to show that they had acted according to the law, executed political decisions and fulfilled obligations to other parties, in answer to appeals and legal claims. External users used records to a large extent to ascertain that they were subject to certain rights or complied with specific requirements, for instance that they had certain educational qualifications or permits to undertake certain activities, e.g. traffic permits, and building permits etc. It could also be necessary to verify ownership and disposal rights of real property, to establish family relationships, e.g. paternity suits, or to confirm facts for various reasons: material purposes, operational purposes, or of personal interest. Verification was also an important component of research, academic as well as amateur.

Records could also be used as objects, i.e. as physical items, even if that seemed to be rare. This kind of use was for instance applicable to pictorial records with a specific motif used to illustrate certain themes, or types of documents used as examples or illustrations. Similar findings were recognized by Gilliland-Swateland (1998) in an educational environment. In those cases the physical attributes of the records were of value to the users, but the intellectual content and the contextual connections were of less interest. I.e. the records were not supposed to be used to gain information in a cognitive sense, in contrast to when records were used for fact-finding. A photo of a city landscape could for instance be used to localize a certain building or to target a certain event in time, i.e. providing factual and evidential information, but it could also be used just as an illustration of a city landscape.

Based on the discussion above, the use of records could be abstracted to a few basic forms:
- fact-finding
- re-construction of past actions and events
- regaining of experience/knowledge
- verification
- illustrating and exemplifying

8.3.6 An activity model of the information behaviour of users of records

Based on the discussion above a specific model of the information behaviour of the users of records, figure 8.1, can be constructed. The model is built on an activity theory framework, supplemented with components from Wilson’s (1999) model of
information behaviour: (information) need, (information) use, and the users’ interaction with information systems and other sources (including other people).

Figure 8.1 An activity model of the information behaviour of users of records

The need for records was generated by a task or accomplishment of any kind; it might be related to work performance or personal aims, but with purpose to achieve something. The task was a part of a more comprehensive activity, for instance construction of a bridge or doing genealogical research. Irrespective of category, users always had a purpose with their use. The reason why users requested records or information from records was to accomplish something; to fulfil a need. This need could be generated by legal and material circumstances, or by recreation or pleasure, but the use of records had a purpose outside itself and was embedded in an overall activity. The need for records was constituted as purposes of use, which motivated a search process involving subjects, the users and human intermediaries, interacting with each other and the objects, in this case the records, with the help of a set of mediational means, the tools. The outcomes, if successful, resulted in the use of records as a means of task accomplishment. The information behaviour process is what Engeström (1987, p. 88) referred to as instrument-producing, i.e. its outcome generate instruments, tools, for other processes.

The focus of the model, as well as of this study, is the actual search process. These components of the model representing the focal search process are highlighted and extended in figure 8.2.
Figure 8.2 The focal search process

The figure is informed by elements of Saracevic’s model of information search interaction, figure 4.3 p. 57 above. Saracevic pointed to a prominent component of the search process by addressing the importance of the human intermediary. However, activity theory demands the recognition of a wider socio-historical context. The interaction between humans and artefacts can not be analyzed in isolation (e.g. Kaptelinin & Nardi, 2006; Nardi, 1996). Figure 8.2 is further more elaborated and addresses more complex relationships between the parts in the search process than Saracevic’s original model, even if those are only faintly outlined. In Saracevic’s model the interaction was undertaken between users, human intermediaries and information systems, while the information as such was left out or was considered implicit in the information systems. There is reason to treat the information, in this case represented by records, and the information systems as analytically separate. The aim of the interaction with the systems is to access the actual information, not the system as such, and the users also interact directly with the information. The characteristics of the information obviously affect that interaction. Furthermore, in the case of records, the systems and the records were most often physically separated. In real-life practice the search for records or information from records could involve a multitude of interactions and iterations depending on the complexity of the need, the characteristic of the requests, the characteristic of the search tool and of the records, and on the amount of subjects involved. The search for records could involve several instances of
mediation and several relationships between the different agents in the process. The actual end-user (a client, a manager etc.) required information from an official, who requested the records from the registrar, who translated the user query to the access points of the journal and got a set of potential matches. The exact item had then to be identified and its location established and the actual files or single documents retrieved, usually by a physical browsing of the containers. It could also turn out that the requested records had been transferred to the archives function, and the request thus had to be forwarded to the archivist, who first had to identify the items in the inventories and then locate them physically. Depending on how successful the searches were or how complex the users requests were, the process could require several iterations.

In the following sections the interactions between subjects, objects and tools, i.e. users, records and the human and artefactual intermediaries will be further analyzed.

8.4 The act of mediation – the interaction between users, records, human and artefactual intermediaries

This section will focus on one part of the search process, namely the interaction between users and intermediaries. Emphasis will be put on the relationship between the users’ information behaviour and the formal representational systems such as journals and archives inventories, and the role of the human intermediaries.

8.4.1 User queries and the features of the representational systems

Both case studies showed that users of records could often provide extensive information to identify the objects they requested, however they did not always provide this information spontaneously and they were not always able to identify a specific item or provide information that exactly matched the access points of the representational systems. The identifiers provided differed a bit between the two cases, between external and internal users, and between users of current records and older materials. Nevertheless a set of common identifiers provided by most of the users categories could be observed, see table 8.2 below. The most frequent identifiers given were subject, either in general terms like “close-down of schools”, “building of a new arena”, “tendering” or “claims for damages”, or as an identified specific subject – a person, a property, a construction etc. In both cases the subjects were often specified by time location, and type of document. This is consistent with findings of previous research in information science in general (e.g. Bates et al., 1993; Cole, 1998; Wiberley Jr. & Jones, 1989), and in archival research (e.g. Bearman, 1989/90; Duff & Johnson, 2001; 2002; 2003; Orbach, 1991; Stevens, 1977), cf. section 2.5 above. They showed that requests often concerned a specific subject.
identified by a proper name. According to the registrars in both of the case studies, external users could often provide an exact identification in the form of name, civic registration number, property unit designation or vehicle registration number. Direct access points such as journal reference number were rarely provided by external users, although it did sometimes occur. Those cases usually concerned parties in on-going matters who had previously been in contact with the organizations, or persons with recurring requests that had learnt the procedures, or more skilled users like journalists. The same applied to identifiers such as the organizational unit or executive official.

<table>
<thead>
<tr>
<th>Identifiers</th>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject in general terms</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Type of document</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Proper name</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Civic registration number</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Object in general terms</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Object identity code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- property designation unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- vehicle registration number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- other e.g. road number, construction object, project</td>
<td>x</td>
<td>Occasionally</td>
</tr>
<tr>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time/date</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Geographical location</td>
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<td>x</td>
</tr>
<tr>
<td>Administrative context</td>
<td>Exceptionally</td>
<td>x</td>
</tr>
<tr>
<td>Journal reference number</td>
<td>Exceptionally</td>
<td>Occasionally</td>
</tr>
<tr>
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<td>-</td>
<td>Exceptionally</td>
</tr>
<tr>
<td>Topic</td>
<td>Exceptionally</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 8.2 Identifiers provided by users**

To a certain extent internal users used the same identifiers as the external users and often requested records about a subject, either in general terms or a specific subject. Compared to external users the internal users more often requested
specific items, i.e. specific records, and less often requested factual information. Thus they provided the type of record as an identifier more often. Document type could be used in a limited way to narrow down the search queries in the journals, e.g. by limiting the search to agreements, referrals or decisions. However, it was mostly used as an identifier in a second instance, when the matter first had been identified and the details were displayed.

Another difference between internal and external users was that the former often referred to the administrative or operational context: e.g. the particular decisive meeting when the matter was drafted, the particular committee, official or organizational unit that was responsible, or projects or work tasks that were undertaken. Thus, the original context, i.e. the administrative processes and the work processes, was an important access point for the internal users. They acted within the processes, and their view was thus shaped by the process. They connected the records to the activities undertaken and the decisions made. In the municipality the minute section number was particularly used as an identifier of records. This reflected the specific working procedures in municipalities, where the decision making and thus the handling of matters was often undertaken in the politically assigned committees or in the assembly. The minute section number was also annotated in the ÄHS system.

A difference that could be recognized between the two cases was that at the governmental agency the registrars found that employees were more often able to provide the journal reference number than the registrars at the municipality. This was also confirmed by the employees themselves. This was probably due to the fact that the employees of the governmental agency had access to the journal through the Intranet and could thus identify the exact item before approaching the registrars. Otherwise, the search queries and the information given to identify the requested items were similar in both organizations.

To what extent the identifiers provided by users were matched by and searchable in the journals or the archives inventories varied. The journals provided item level access to records and contained a rather wide set of access points. Nevertheless, several of those were of administrative character, not designed for searching other than in exceptional cases. What was registered in the journal was also largely external attributes of the records such as dates, sender/receiver etc., not information content other than could be described in the subject heading or represented as keywords. The access points in the different journal systems is summarized in table 8.2 below.
The main search entry in the journal was free-text search of the subject heading, and successful matches thus required that the given subject had been entered and that it matched the wordings of the original registration. The VVDiark’s keyword function also provided a form of subject access. Proper names were searchable if the names concerned a party in a matter or the executive official. Then exact matches could be made by metadata field search in VVDiark and ÅHS, and in the latter case also in WebDiark. Civic registration numbers were not registered in the journals due to privacy legislation, but could be used in other systems or could be used to govern the sorting order of case files regarding individuals. Subjects and
events could often be connected to a specific location and a specific time. If location was annotated in the subject heading or was a part of the name of legal subject that was a party in a matter or a third party, it could be searched in the journal, otherwise not. Time and date were access points in the journals, but only in relation to the handling of the matter or the dates of the records, i.e. the time frame of the administrative process. This was not necessarily the same as the time frame of the subject that was of relevance to the user.

With a few exceptions, for instance in the case of a recurrent retrieval of a specific type of matters or when searching the old manual journals, the classification code was not used as an access point. The classification schemes were basically used as a control instrument in the process of handling of matters and to connect matters of the same type to each other. This allowed for making statistics and to get an overview of the performance of the organizations. The classification was also the basis for the physical storing of the files, i.e. the files concerning matters of the same type were physically kept together. So when accessing a specific file or a document, the item had first to be identified in the journal, then the actual records could be physically located with help of the classification codes. The classification codes were registered in the journals and thus searchable, but the full captions of the classification schemes were not registered, only the alpha-numerical codes. The users, in this case primarily the registrars, had thus to either know the codes by heart, or look them up in the classification scheme, which could be inconvenient. In the governmental agency’s web version of the journal, classification code was not an available option.

The archives inventories provided access to the records through a set of hierarchical structured access points: records creator (i.e. organizational unit); series (type of records) registered according to the general archives scheme; time; and occasionally additional information such as classification code or journal reference number, civic registration number, geographical area, object identity code or property designation unit entered in the annotation field. Often these were given as intervals, with only the first and last item in the volume annotated, and sometimes abbreviated. In cases where the inventories were kept as hard-copies the only way to access them was first to identify the correct records creator, and then to browse the inventory to locate the potential item of interest for the user. The computerized inventories made it possible to perform an “horizontal” search through the different inventories with help of the access points of records creator, series’ identity code, volume identity code, time interval, series’ caption, keyword, location, and object identity code. Of those, the records creator (i.e. organizational unit), time and series’ caption (type of records) could correspond to identifiers provided by users, while the rest could be considered as administrative metadata used for the management of the records. However, the availability of free-text
search allowed for a more extensive search, including the content of the inventories. Nevertheless, the basic problem remained, namely that the search entries must match the wordings of the registered information, and whether the information had been entered at all. In accordance with Swedish practice, the additional annotations were rather scarce.

8.4.2 Contradictions and tensions

According to activity theory contradictions are inevitable due to the dynamics of activities, but also the primary agents of change. Engeström (1987) established four types of contradictions within the organizations: primary contradictions within the components of the activity; secondary contradictions between the elements of an activity; tertiary contradictions between different developmental phases of an activity; and, quaternary contradictions between activities and neighbouring activities, or between activity systems. The findings of the case studies showed several examples of contradictions and tensions in the organizations that impacted on the information behaviour process.

First of all there was an inherent tension within the representational systems, as they were supposed to serve various purposes. As can be concluded from chapter 5 and the findings from the case studies in chapter 6 and 7, the journal and the archives inventory primarily functioned as tools for administrative control, however they also were meant to be the basic tools for search and retrieval of records. Both the journals and the archives inventories represented records as collective units, as aggregates, but from different perspectives. The journals were merely representing the administrative and decisive processes of the organizations, not the records as such. The records were a part of these processes, a final residual, but not the main object of the registration. The journals had an hierarchical structure, where the records were registered on the lowest level. Even if records were registered on item level, they were accessible as collective units primarily held together by the matters.

Archival description has at least three purposes: to serve as an instrument for management and control of records (maintain order, prevent loss and disruption); to describe context and intrinsic relationships; and finally, to function as a search tool (Nilsson, 1983, pp. 50-51). The first purpose has often had primacy. These purposes are, if not entirely contradictory, at least incongruous, and are difficult to fulfil within one single instrument. The management and control function further reproduced existing structures. The way inventories were made up, according to the versions of the general archives scheme that were implemented in the organizations, had a steering effect on how records were denominated and related to each other. Even where changes in the activities and thus in the creation of records of the organizations continuously occurred, the residual records had to be
integrated into the existing system. The dynamic contextual relations between the records and the records’ generating processes and the relationships between different records were therefore not captured in the inventories. This was further augmented by the structure of the general archives scheme and the inconsistencies inherent in the scheme, which has been previously addressed in section 5.1.4 above. Further, the search function was less developed. The archives inventories represented the records in an hierarchical structure with the starting point being the records creator, and the records then described according to formal criteria, i.e. basically types of records, with the addition of certain metadata. The search possibilities were thus rather one-dimensional and these traditional Swedish archives inventories which were implemented in both organizations, emphasized the control of physical items.

Secondly, there was a discrepancy between the user queries and the features of the representational systems, as was described in section 8.3.1 above. The identifiers the users provided could to certain extent be matched by the access points of the journals, although primarily only with the help of free-text search. With the exception of the journal reference number, the metadata fields were primarily used in combination with the free-text search to specify the queries. To what extent exact matches were possible depended on how the records were described: what terms the registrars had used when registering the records and how thorough they had been; and how the registrars interpreted the user queries and adapted them to the registration conventions. The paper-based archives inventories only corresponded to the identifiers provided by users to a limited extent. The computerized inventories provided a more comprehensive search possibility, by allowing direct search for the identifying information. However, for successful matches it was required that the information had been annotated at all, which was not always the case, and that it was explicitly written out. The formal denominations given to records, i.e. series’ captions or object identities, were also often abstractions, comprising various kinds of documents and information, not immediately identifiable through the inventories. It was thus necessary to have a previous knowledge about what kinds of records were created in the various processes and how they could be represented in the inventories.

Thirdly, a tension could be observed between the activities of the users, i.e. the tasks they were performing, and the representational systems. Apparently, several of the internal users did not experience the systems as adequately supporting their work tasks. The journals were primarily developed to support and document the process of handling of matters. At the governmental agency, officials directly involved in the handling of matters seemed to have learned to use the web version of the journal, however with individual variations, since this had direct relevance for their work. Other employees, working with other assignments had less use for
these kinds of tools. If their work was not supported by specific business management systems that contained functions for information or document retrieval, this resulted in the creation of personal, more or less informal systems for records retrieval, such as registers and collections of copies of relevant records. They created systems with access points more meaningful to them and supposedly better suited to their needs. The archives inventories in both organizations were based on formal criteria according to the general archives scheme. They were more loosely connected to the actual business, even if the sub-division of the scheme was adapted to the specific conditions of the organizations. The structure and function of the inventories were thus less meaningful to the users, who with certain exceptions had difficulties in connecting their activities to the way records were represented in the inventories.

It can be assumed that there were even greater contradictions between the representational systems and the activities of the external users, since the systems were developed as administrative tools for the records creating organizations. The external users were involved in activities and activity systems of their own, with specific purposes and characteristics. They needed records or information from records when they were performing tasks in their work or accomplishing business activities, in their private life situation, when they were pursuing political interest, or for educational, cultural or recreational activities, which the representational systems of the studied organizations were not designed to support. This was an example of contradictions between different activity systems.

Paradoxically, the systems were also aimed to enhance the transparency of the organizations by providing access to the official documents that were generated within the business processes. The implementation of the systems was generated primarily by exogenous factors, not by experienced needs of the organizations. Current legislation required registration of official documents and that records should be arranged and described and inventories created. The governmental agency had been subject to a more detailed regulation since its start, according to statutes and governmental ordinances concerning the archives management of governmental agencies, and controlled by supervision and consultation with the National Archives. The Swedish Agency for Public Management played an important role when it came to registration by issuing guidelines and later by developing a computer software application for journals. The regulation of municipal recordkeeping had been less profound; but nevertheless the municipality had implemented similar systems. An impacting factor seemed to have been the recommendations concerning registration and the classification schemes developed by the federation of rural municipalities and the federation of towns, later the federation of municipalities. The issuing of pre-printed forms and later the development of computer software had also had a steering impact. The
archives inventories were based on examples from the governmental sector, and disseminated by textbooks. The examples given in those seemed to have functioned as models and been considered as almost mandatory. The representational systems in their current shape would probably not have been developed and implemented on the organizations’ own authority. This can be seen as another tension between different activity systems.

Finally, there was a temporal aspect that created contradictions between the representation of records and the search for them. Partly, this was a contradiction between the reason why records were created and why they later were used. Records were created and initially used as parts of the business processes of the organizations. They were usually registered and described according to their original purpose and the context within which they were created. Later they were used for other purposes, in other contexts, sometimes with no bearing on the originating activity. The access points provided did thus not always support the identification of the requested objects, since the users had no connection to the original context. However, the temporal aspect also involved changing circumstances and changes in behaviour and practice. This included for instance exogenous factors like changes in administrative division, change of names, changes of ownership of property etc., or changes in linguistic usage. Subject headings, keywords, parties in matters etc. could become obsolete and forgotten due to such changes.

Further, the internal practices changed, for instance by the implementation of new classification schemes and inventory plans, but also by informal and perhaps obscure changes in registration and description procedures and by the use of different conceptual apparatuses. A concrete example is large construction projects or infrastructural projects that went on for many years, generating several matters and sometimes involving several organizational units. The building of a new arena could start with a matter named “Exploitation of XX”, referring to a land lot. Later it would be specified as “Building of new arena”, and further on matters concerning the arena would be referred to by the actual name given to the site. The latter would probably be the most common denomination used when searching for records concerning this subject later on, but the name could also in due time be changed. Without knowledge of the historical background, there is a risk of overlooking records from the early stages in the process.

All forms of contradictions defined by Engeström could thus be observed in the case studies. The contradictions and tensions were to a large extent “solved” by evasion, i.e. the users avoided the formal representational systems they found inadequate for their needs or too difficult or time consuming to use, and instead relied on informal systems and human intermediaries.
8.4.3 The role of the human intermediaries

In both of the case studies informal ways of access, particularly human intermediaries, were preferred as search tools and search paths to records, except by the registrars and the archivists themselves. This could be a matter of personal preferences, knowledge of the available opportunities, or lack of easy access to the formal systems for search and retrieval. What could be established was that the physical access to the formal representational systems was restricted, and that general knowledge about the features of the journal and the archives inventory was low. The use of artefactual systems thus required a profound element of human mediation, which often took the form of a negotiation process to make the users’ queries match the formal representational systems.

The experiences of the registrars and archivists in both organizations, were that external user queries were often a bit vague or comprehensive to start with; they concerned “everything” about a certain issue. The initial request was seldom a specific item, even if it occurred that users requested specific documents or types of documents. Internal users more often requested specific items. Nevertheless they were not always able to give an exact identification of the item, e.g. a journal reference number or an object identity code. This did not, however, imply that the users had a vague opinion of their needs, but that they could not or were reluctant to pin-point the actual item. The requests could often be formulated in general terms as “records about” something, or that they wanted to know something about something. It was thus necessary for the registrars to make follow-up questions to narrow down the subject of interest. Even if it mostly turned out that the users had a specific demand and often a clear view of what they wanted, it was often necessary to negotiate the question to be able to make an exact identification. The query had to be adapted to match the access points in the systems, for instance to adapt a subject expressed in general terms to the assumed wordings of the subject headings in the journal or to the hierarchical structure of the archives inventories, or to adapt the common denomination of specific subjects to the naming conventions or identity codes used for registration. A complicating factor in the specific environment, Swedish public organizations, was that users were entitled to anonymity and did not have to disclose the purposes of their requests. The desire of anonymity and privacy could in some cases be the reason behind vague and extensive requests. The intermediaries were not allowed to pursue the purposes of the users and had thus to balance between the users right to anonymity and their right to access official documents in their aim to identify the requested objects.

When asked, the interviewees did not express any wish for better access to the systems. This could be due to ignorance, habit, convenience or a confidence in the skills of the registrars and archivists, and the services they provided. It also confirmed the findings of several studies that human intermediaries and person-
to-person interaction were preferred to formal information systems (e.g. Byström, 1999; Cross, 2001). Employees did not in general regard search for records as a primary work task, instead they preferred to refer the requests to the registrars or archivists. This behaviour seemed to be rendered particularly in two different, almost opposite, instances. The first concerned “trivial” requests of known items where prompt and efficient service was of value, i.e. matters of routine that should not interfere with the core business. A usual opinion was that the registrars were much more efficient and that it was quicker for them to do the search. The other was in case of more complex searches that involved a certain amount of problem solving that required a dialogue and where the specific knowledge of the registrars or the archivists was of value. This could be seen as a result of the division of labour in the organizations. Most informants emphasized that asking the registrar was the most efficient way of obtaining records.

The registrars and the archivists possessed a specific professional knowledge, which among other things involved search and retrieval of records. The most obvious was that they had developed skills in using the search tools, i.e. they had mastered the representational systems, although, to a varying extent. Different levels of abilities to use these tools could be observed among the registrars. For instance inexperienced registrars or part-time registrars were less knowledgeable about all the functions of the systems, which were not self-evident. However, when the search for records was more integrated in the work tasks an increased will to make their own searches could be observed. In case study 2 for instance, officials who were directly involved in the handling of matters were more keen to use the journal on the intranet to follow-up earlier decisions or to identify items they later requested from the registrars. Also when the search for records involved an analytical process to identify potential information of interest, a need personal involvement in the search and to use the formal representational systems seemed to occur.

An important aspect of the registrars’ and archivists’ skills was that they were also constructing the representational systems to some extent. Registrars were registering records in the journal, thus adding the metadata that made them searchable. Most importantly, they were creating the subject headings which were the most common access points when searching the journals. The search entry preferred by the registrars was journal reference number, since that gave an exact match in the system. However, that was only occasionally provided and most often not spontaneously given, even if the user had access to a journal reference number. The second choice was free-text search, particularly of the wordings in the subject headings. Free-text search seemed to be an intuitive way searching the systems, and was also triggered by the framing of the user queries. Since the registrars had constructed the subject heading and they knew the usual wordings, this was a
rational and often efficient means of access. However, this practice also led to individual solutions and idiosyncrasies, particularly in the municipal organization where no standardized terminology was suggested or available in the system. At the governmental agency the journal system contained a set of pre-defined choices of subject headings and keywords, thus supporting some uniformity, but even in that system individual adaptations and interpretations were possible. This meant that different individuals and different units could behave differently, thus reducing the transparency of the systems. It also implied that the systems were sensitive to changes: personal and organisational changes, and not the least changes in linguistic usage. The archivists made up the archives inventories, and were thus familiar with the content of the archives and how it was represented in the inventories. Still, even the inventories were impacted by individual interpretations and temporal changes. There were no functions for capturing these kinds of changes and adding them to the representational systems in either of the organizations: no comprehensive thesauri, no general systems for cross-references or concordances between the various versions of journals, classification schemes or inventory plans etc.

The knowledge of the intermediaries was not limited to technical skills as using the search tools, but, more importantly, involved contextual knowledge about the administrative processes and organisational history: who had done what, where and when? What records were generated in those processes, and how were they represented in the journals or archives inventories? And furthermore, how should things have been done if the proper procedures had been followed? User requests could sometimes be vague or too wide, “everything about” a certain issue, or the requested object could be inadequately described (at least from the perspective of the intermediaries, the users’ descriptions might make perfect sense to the users themselves). The registrars and archivists had thus to narrow down the question to a searchable concept, fitting the structure of the representational systems (or their own knowledge; sometimes records could be located by remembrance). However, even specific requests might require the intervention of human intermediaries. Depending on the collective and contextual characteristics of records, single items, documents or specific factual information were connected to a larger context, a matter, an object etc., and rarely described individually. To locate a single item it was thus necessary to identify the originating context, and not the least, to understand how it was described in journals and inventories. This context was not always recognized by the users, and in time not always obvious to the registrars and archivists due to changed circumstances and changes in practice (for instance the implementation of a new classification scheme), cf. section 8.3.2 above, thus requiring a bit of investigative work.
8.5 Discussion

Previously in this final chapter the findings of the case studies have been analyzed to elucidate the information behaviour of users of records in contemporary administrative settings. The chapter was opened by returning to the research questions outlined in chapter 1 and a description of the cases, providing a synthesis of the findings a starting point for the following analysis. Here will follow a discussion of the most significant results of the analysis.

8.5.1 The characteristics of use and users of records in contemporary organizations

A conclusion of the review of previous research in chapter 2, was that use of records was a purposive activity. This is confirmed by the results of this study. The reason why users requested records or information from records was to accomplish something; to fulfil a need. This need could be generated by legal and material circumstances, or by recreation or pleasure, but the use of records had a purpose outside itself and was embedded in an overall activity. Internal users, or the organizations as such, and external users were participating in different activities and aiming at fulfilling certain tasks or accomplishments, which rendered a need for records. The need for records was manifested by various purposes of use. On an abstract level these could be material, operational, for the provision of accountability, or knowledge-enhancing. To accomplish the task, the records could be used to provide facts, to re-conduct past actions and events, to regain experience or knowledge, to verify something, or as objects to illustrate or exemplify something.

Users of records could be analytically categorised in various ways. A categorization of users that has been found to be worthwhile in this study is defining them according to their relationship to the organization. A first division could be made between internal and external users. The most frequent users were internal, mainly the staff of the organizations, but due to the specific contexts also included politicians, board of directors and auditors. They used records primarily to fulfil their work tasks, but in a few cases also to fulfil personal needs related to the work situation. However, use of records was often triggered by others’ needs: clients, managers, politicians or other co-workers. This was particularly the case of registrars and archivists, who were the prime users of records, and especially prime users of the representational systems. They also used records for their own purposes. Internal users thus often served as intermediaries as well as direct users. Correspondingly other employees were indirect users, relying on others’ direct use.

Depending on their relationship to the organizations, external users could either be defined as stakeholders or as other users. Stakeholders had a direct
relationship to the organizations and an interest in their activities. The most prevalent stakeholders were parties in matters. Other stakeholders were citizens or legal subjects that were not in a party relation to the organizations, but more or less directly affected by the activities of them, or other agencies with superintendence over the activities of the organizations, e.g. the Chancellor of Justice, the County Administrative Board and the National Board of Health and Welfare. However, a major group were users in other capacities than stakeholders, namely individuals or other subjects that were using records or information from records kept by the organizations without having a direct interest in their activities. Private persons, occupational users and legal subjects could act both as stakeholders or as other users. Yeo’s (2005) distinction between self-directed users and professional users was thus not applicable on the findings. The category of other users, i.e. non-stakeholders, seemed to gain in importance over time, i.e. they made up a larger portion of the users when it came to older materials. The temporal aspect of records’ use and users has previously been acknowledged by Borglund (2008), who found that use of records varied to temporal rhythms in organizations. In the first temporal structure, where records are used for their primary purposes, the use and users were known or could be predicted. Thus information systems (or recordkeeping systems) could be designed to support those. In a second temporal structure, both use and users were to some extent unknown, which implied that methods have to be developed to capture potential requirements of users to create systems that supported long-term access to records.

The categorisation of users into stakeholders - not stakeholders is a specific feature of the organizational context, depending on whether users had a relationship, for instance a party relation, to the records-creating organization. It would probably not have the same relevance for users at archival institutions. The most frequent external users appeared to be individuals, private persons, occupational users or legal subjects using records for more or less pragmatic reasons. These findings diverged from the view represented by previous research and theoretical conceptualizations of users referred to in chapter 2 and 4. Previous research has defined users according to occupational background or research purpose, as scholars, amateur researchers, students, or professional groups as lawyers and journalists (Conway, 1986; 1994; Duchein, 1983; Hallam Smith, 2003; Principe, 1982; Roper, 1982); or according to skills and personal features, i.e. as experienced users or novices (Prom, 2004; Sexton et al., 2004a; Yakel, 2002; Yakel & Torres, 2003). Pugh (2005) and Conway (1994), cf. p. 54, have provided more principled definitions of users: as vocational and avocational users; and as occupational users, academic users, personal users, avocational users. Obviously missing in those categorizations were users with a personal, pragmatic or material need for records, which made up a considerable portion of the users in both of the
case studies. These could be included in Yeo’s (2005) categorizations of users as self-directed users, occupational users, and educational users. However, Yeo’s categories seemed too extensive to show any significant characteristics of the users, and did not capture the specific variations between the users in the studied organizations. Neither of the categorizations seemed entirely applicable on the findings of the case studies.

Records could be requested in primarily two different forms, as information or as documents, i.e. physical objects. Users could request factual information, specific items, non-specific items or types of documents. The reasons why users needed to access the records as such instead of relying on references to factual information could be several. One potential, but not confirmed, reason could be that users might not want to disclose their actual purpose of using records, i.e. identifying the exact information they wanted. Another reason might be that their information need was not clearly defined. The user was interested in information “about” something, but had a vague opinion of what facts exactly. This could be the circumstance in more unprejudiced investigative work, research or educational assignments. More complex information needs also generated a need to analyze, interpret and make inferences from records. I.e. the users had to process the materials themselves to arrive at the desired results. Furthermore, certain forms of information could also be difficult to mediate, for instance pictorial records, plans and drawings. It was often necessary to access those directly to be able to use the content. However, a primary motivation to request the actual records seemed to their “applicational” use, i.e. the need of a specific document to solve a certain problem (Pugh, 2005, p. 42). This could be the case for example when using plans and drawings in building and reconstruction work, or when needing a copy of a school report when applying for higher education. Another motivation, overlapping the previous, was the fact that records as such thus possessed certain inherent qualities that made them valid as evidence. They could serve as proof in order to establish or confirm certain facts or status.

The different forms of requested objects could be attributed to the inherent properties of records according to archival theory: information value, evidential value, and also so called intrinsic value, cf. p. 41 above. However, it was not possible to observe a simple correspondence between the requested objects, information or documents, and the inherent properties of the records. Even if records are primarily used as an information source, i.e. to obtain factual information, the fact that the information is picked up from records contributes to its authenticity and it can be used to reconstruct past actions and events, to confirm or verify status. This means that the evidential properties may be highly relevant even if the user only requested information. At the same time the use of records as evidence always involves a transfer of information between different parties. Users
who requested records in the form of documents did not necessarily put greater emphasis on their evidential properties. They could request documents as physical objects, illustrating or exemplifying something. That is these records could be used merely as illustrations, without reference to the originating context. Records could also be applicational in other aspects. The content could for instance be too complex, too comprehensive, or requiring an analytical process to be obtained, thus difficult to mediate through another party. Or, it could be necessary during certain circumstances to take part of or present the actual record, the document, as evidence of a given status. It is thus not possible to draw conclusions from the findings about which properties of the records that were most important in the individual cases. What can be established is that the records were mostly of value because they were records, i.e. integrating these different properties that augmented each other due to the complexity of the concept of records.

8.5.2 The ambiguous value of artefactual intermediaries

The analysis of the findings from the case studies has shown that users approached records in various ways, sometimes directly but usually with the help of an intermediary. In cases where users approached records directly, they still had to identify and locate the items of interest with the help of their memory, or by inference based on previous knowledge, or guided by the physical arrangement of the records. Search for records was thus always mediated in some sense. In this section the mediation with help of artefactual intermediaries will be discussed.

The journals could be said to give fairly comprehensive access to records, even on the item level, but only for records related to the handling of matters. Most records were created and captured in other systems, digitized or manual, often accessible only by those who were working with them, which impacted on the transparency of the organizations as mentioned in section 8.2.3 above. Business management systems contain records, according to the law and to archival theory, but are not always considered as such by the officials. They were not explicitly mentioned when need for and use of records was accounted for. Instead, the business management systems were seen as supporting the work process, and, secondly, as search tools for accessing the resulting case files.

To get an overview of the totality of records in the organizations other instruments were necessary. The archives inventories could function as such tools, but both organizations applied post hoc description. The inventories were created after delivery to the archives function, which could occur several years after creation in spite of the intentions of the Archives Act, which meant that only the permanently preserved records were captured. The archives inventories also provided less access points than the journals, and their hierarchical structure required an indirect approach; the requested object had to be identified and located
through a “detour” by the records creator and the series’ structure. Digitized inventories allowed for a more direct search, but so far those were not generally made available to the users. It was thus necessary to have prior understanding of the descriptive system and the relationship between the individual items, or the factual information, and the aggregated units that were described in the archives inventories.

The classification of records could have provided an access point based on the fields of activities of the organizations. This would probably make sense to the members of the organizations, since to a certain extent they identified records by the administrative process or work process they belonged to. It could also provide a sort of subject representation that could be valuable to external users and that has sometimes been proposed in archival discourse (e.g. Beattie, 1989/1990; Danielsson, 1995; Stevens, 1977). Use of the classification scheme would also give a more structured access to the records, balancing the irregularities and idiosyncrasies in the wording of the subject headings and the discrepancies between the descriptions of subjects in general terms and the formal naming conventions and classification codes used by the organizations. Unfortunately, the full potential of a classification scheme as a search tool was not recognized in any of the organizations, and not implemented in the systems.

According to Yakel (2003) archival descriptions like inventories, and by analogy journals, constituted surrogates representing the actual records. However, representation included an act of interpretation and selection, thus adding a filter of historically and socially influenced ideas, values and knowledge between the users and the records. As Wartofsky (1979) stated, anything could represent anything as far as an agreement upon the meaning of the representations could be made. As can be concluded from the previous analysis, the features of the representational systems were not transparent to most of the users, i.e. there was a lack of agreement about the meaning of the representations. The analysis showed that the correspondence between the users’ queries and the access points of the formal representational systems was ambiguous, and that mediation by registrars and archivists and a negotiation of the users’ requests were often necessary to retrieve records. The identifiers users provided matched the access points of the representational systems only to a limited extent. The most commonly provided identifiers, particularly by external users, like proper names, civic registration numbers, property designation units etc., originated outside the administrative processes of the organizations. Such identifiers were generally known and meaningful to the users, in contrast to internal identifiers like journal reference numbers or object classification codes that had no actual meaning beside the management of the activities of the organizations. In cases where the more meaningful identifiers were incorporated into the systems or served as basis for
registration or storing of records, the systems appeared more transparent and the search functionality was increased.

In one of the studied organizations, employees had access to a simplified version of the journal through the intranet. This was used to a varying extent, but above all by employees who were directly involved in the handling of matters. In a few cases it was also observed that users who had a specific and recurrent need to consult older records had learnt to use the archives inventories. They could be assumed to be experienced users who had learnt to master the tools, but they could also be involved in an analytical process to identify potential information of interest, thus requiring access to the representational systems as such. It can thus be concluded that if users were exposed to the systems they learned to use them, if the systems were supporting their work tasks. If not, the users created their own informal systems that they believed better suited their needs, or relied on human intermediaries when they needed to consult records.

The ambiguous correspondence between users and the representational systems can be seen as an example of contradictions and tensions in the organizations and in the process of information behaviour. Contradictions are a significant component of activity theory; inevitable results of the dynamic structure of activities and agents of change. Several forms of contradictions were observed in the case studies:

- inherent contradictions within the representational systems
- contradictions between the user queries and the representational systems
- between the activities of the users and the representational systems
- between the activities of the external users and the activities of the studied organizations
- between different activity systems, for instance manifested as exogenous impacts by legislation and the activities of the organizations
- temporal contradictions between the result of previous activities and the purposes of current activities.

8.5.3 The significance of human intermediaries in the search process

A significant observation in both of the case studies was a preference for informal systems and a reliance on human intermediaries in the search process. The search for records often required several instances of mediation: the opening question required an initial negotiation to narrow it down to a specific request that would match the journal or the archives inventory. In case of the archives inventories, the archivists then often had to use various registers and systems to identify the entry in the inventory; then searching the inventory for the exact location of the records; and finally browsing through the files to retrieve the particular item of interest. The use of artefactual systems thus required human
intervention. This implied that the human intermediaries were indispensable in the search process, and that perhaps the most important search tool was the conceptual apparatus used by users and intermediaries to reach a common understanding.

The preference for human intermediaries could be seen as a part of the division of labour within the organizations. With a few exceptions the employees of the organizations did not consider search for records as a primary work task, and external users had limited direct access to the records even if they would have preferred to search themselves. The registrars and archivists possessed specific skills and knowledge, which made it more efficient to use their services than to perform own searches. This was partly because the registrars and archivists had learnt to master the representational systems, but also, and more importantly, that they possessed a profound contextual knowledge. The human intermediaries possessed a certain amount of domain knowledge, which was very important in locating records. This also comprised what Yakel & Torres (2003) referred to as archival intelligence. This concept consisted of three components: knowledge of archival theory, practice and procedures; an ability to reduce uncertainty and ambiguity when solving problems; and so called intellective skills, the ability to understand representations and the relationships between representations and what they were representing. This was particularly important when it came to more complex and process-oriented requests. The registrars and archivists had an understanding of the administrative and political background, of the records creating processes and of the relationship between records and their contexts, and between individual items and the aggregated compilations that were used to describe records in the journal and the inventories. The knowledge of the intermediaries was not only about facts that would be possible to capture and document in a system, but also a sort of “tacit” knowledge that formed the basis for problem solving and new conclusions. It can be assumed that the inferential character of the use of records made this ability of great value in the search process. The importance of internalized contextual knowledge as a prerequisite for good user services has been acknowledged by e.g. Anthony (2006) and Duff & Fox (2006), see section 2.3 above.

The interaction between users and human intermediaries could be seen as a negotiation process where the users' requests have to be adapted to the existing access points in the representational systems. A model of the negotiation process was presented in table 4.1 p. 58 above (Taylor, 1967). According to that the negotiation process involved several phases corresponding to the levels of users' information needs, where the intermediaries had to intervene in several ways to help the users to identify their need, to clearly express it, to concretize it to a question that could be adapted to a query that matched the information system.
However, the negotiation process seemed to have some specific features when it came to search for records. Compared to Taylor’s (1967) model, users of records had at least reached the second phase and often the third, before approaching the agencies or the registrars’ or archives functions. This was probably due to the fact that the use of records was a purposive action, aimed at achieving a specific outcome. The need for records was in most cases already conceptualized when the users made their requests. This can be assumed to be a specific feature of the information behaviour of users of records, and distinguishing search for records from general information seeking and search for other kinds of information sources. Another feature of the negotiation process was that only a limited amount of potential objects corresponded to the requests, due to the fact that records are unique and most often could not be replaced by other records or other information sources, at least not if their evidential value is of relevance to the users. This also meant that the registrars and the archivist could not choose between objects to find the one most suited to the characteristics of the users, their skills and abilities etc., but had to identify the specific objects that would fulfil their actual needs. Contrary to the claims of e.g. Long (1989) and Tibbo (1995), the findings of the case studies showed that Taylor’s model is not entirely adequate for describing the negotiation process in the search for records. The task of the human intermediaries was not primarily “to give people what they do not know they want” (Tibbo, 1995, p. 301, citing J.I. Wyer) in the first place, but to translate what they wanted to a potential search entry in the systems, identify potential object that corresponded to the request, and then locate and retrieve them.

This could also be attributed to some specific attributes of the search for records. It did not necessarily have to be a sub-set of an information-seeking process as claimed by Byström & Hansen (2005). As established above the search for records or information from records was not an independent process, but part of other processes. Search for records arose as a part of various actions or tasks. Some tasks basically consisted of creating and using information, often in the form of records. Hence, the search for records or information from records might be generated by the task itself, as either more elaborated sub-tasks or routine operations. Particularly when records were requested because of their evidential properties, most sources and channels were also ruled out since a specific item was needed. The search for records was thus much closer to the task in hand than to a general information need.

8.6 Concluding remarks

The time has come to tie the knots together and to finish up this thesis. The previous section shows that the study has brought about some significant findings and it has resulted in new knowledge about user behaviour and the search for
records. The results can make a contribution to both research and recordkeeping practices.

8.6.1 Contributions

The analysis of the information behaviour of users of records in the two case studies was guided by a general framework of activity theory, based on the elementary model of an activity as presented in figure 4.1. An activity is generated by a motive in order to reach an outcome and contains the components subjects, objects and tools. These elements could be identified on different levels of an activity, and the information behaviour of users of records considered as a part of a more overarching activity in that they aimed to accomplish something, to fulfil a task. Due to the specific circumstances of the cases, cf. section 8.2, some findings have been made that deviated from the findings of previous research in other environments, particularly in archival repositories. This implies that use and search for records are context dependent. However, by transforming the findings to more abstract and conceptual categories, they could be transferred to and applied in other settings.

The initial analysis resulted in a model of information behaviour of users of records in an activity framework informed by elements from Wilson’s model of information behaviour and Saracevic’s model of information search interaction, described in figures 8.1 and 8.2, pp. 197-198 above. This model can be applied as an analytic tool in other environments and thus contribute to further research, but it could also be used as a diagnostic tool to assess current practices and as basis for development and design of user services and representational systems. The choice of theoretical framework was successful and contributed to identification the specific conditions for and features of the use of and search for records. An important result of the study is confirmation that activity theory can be used to illuminate information behaviour. The strength of the activity theory framework is that it clearly describes the information behaviour or information seeking or search as embedded in a larger context, and as a means rather than as an end in itself. As Menne-Haritz stated, records are “transactions in themselves” (Menne-Haritz, 1998, p. 20), thus inextricably linked to the creating activity. In their further use, they add input to other activities or processes and are linked to other contexts (e.g. McKemmish, 2001). Records are created, maintained and used by organizations and individuals to serve purposes. Activity theory acknowledged this purposiveness.

A significant, if not surprising, finding is that the existing representational systems do not serve the users’ information needs particularly well, and do not function as satisfactory tools for search and retrieval of records, which is a serious challenge for the recordkeeping profession. With help of the activity theory
framework, these deficiencies can be attributed to various contradictions and tensions within the organizations and in relation to the environment. It is essential that recordkeeping practitioners become aware of these contradictions and develop strategies to solve them. An important aspect is the lack of correspondence between the way users approach the records, how they identify the objects they request, and the features of the representational systems. It is thus necessary to capture the user queries and incorporate them into the design of systems, and develop tools that can capture changes and individual idiosyncrasies. Although the users of records belong to various categories with different purposes, a few common traits have been observed in both of the case studies: users mostly have specific needs and they can identify the objects of interest in specific terms, even if they cannot define the exact items that would satisfy their needs. Internal users often connected records to the activities of the organizations, to the administrative processes and the work processes performed in the organizations. Original context, i.e. provenance, is thus an important access point, and is still valid as a basis for description of records.

On the other hand, context can also be obscuring. For external users involved in activities of their own, the original context is of less value as an identifier and as access point. As can be seen from the analysis of user categories, a significant portion of the users who approached the organizations did not have a direct relation to them. They were interested in records or information from records kept by the organizations, not in the organizations’ activities as such. As has been discussed above, temporal changes can also make the original context obsolete as a means of search and retrieval. A combination of contextual information and other identifiers, for instance subject terms, would contribute to enhanced access and make it possible for users to relate to their own contexts. From the perspective of internal users it is also necessary that the representational systems better support the work processes. How records are used in relation to work tasks, how search and retrieval function can be incorporated in business management systems, and how records created during the work processes in various business management systems or by other means should be captured in general representational systems, are highly relevant issues for recordkeeping practitioners.

The study has further pointed to the vital importance of human intermediaries in the search process. To some extent this can be explained by the deficiencies of the artefactual intermediaries, but what has been made evident is that the human intervention in the search process has a value in itself. This is an example of a division of labour that can contribute to the efficiency of the organizations’ performance. The use of the representational systems demands specific skills, which other employees can rarely achieve and that with few exceptions is almost impossible for an external user to obtain. However, as has been emphasized above,
the specific skills and knowledge of the human intermediaries have other dimensions. A better understanding of the competence of registrars and archivists and their role in the search process can contribute to the development of user services and strengthen their position in the organizations.

8.6.2 Limitations of the study

Like any work of research, this study has its limitations and a restricted scope. The study has a qualitative approach and the empirical findings are based on two case studies. The results can thus not be generalized or considered as representative for information behaviour or for search and use of records generally, and this has not been the purpose of the study. The purpose has been to gain a better understanding of a specific phenomenon, namely information behaviour of users of records in contemporary organizations, which could contribute to the knowledge of information behaviour in general and of use of and search for records in particular. Thus the results can fit in to a larger context and be assessed in relation to other studies. Even though it is not possible to make generalizations from the study, the result could be abstracted and conceptualized and transferable to other situations where it can be applied and tested. To ensure the quality of the research it has been guided by a theoretical framework and clearly defined research questions, the credibility of the findings has been corroborated by the informants and knowledgeable third parties and by rich descriptions of the cases.

Since the study has been of an explorative character, it was necessary to get a broad overview of the studied phenomena and the organizations in the case studies at the expense of details. Therefore, lengthier and more detailed observations of individuals’ behaviour were not undertaken. The selection of informants was done with the ambition to reach a broad spectrum of subjects, and its relevance and possible constraints have been discussed in section 3.5 above. As expected, access to external users did pose a problem, and apart from a few complementary interviews, their behaviour has been studied by indirect means: captured user queries and the internal informants’ accounts of their interaction with the external subjects. The case studies have also only covered public organizations. This was a conscious choice, but it cannot be assumed that the results would have been identical in organizations that work under different conditions.

8.6.3 Possibilities for future research

However, what has not been achieved can also make a contribution. This study has thrown light on a number of issues that will reward further and deeper research. The gaps in the study together with the factual results have generated
questions that will provide subjects for forthcoming research, and a few examples will follow here:

- how are records used in specific work tasks?
- how can tools for search and retrieval of records be designed to support the work tasks?
- how can business management systems be integrated with the representational systems and with records management systems over all?
- how can the identifiers that users provide be incorporated in representational systems to enhance searchability and access?
- what aspects of the mediation of search for records can be formalized and captured into artefactual systems, and what aspects require the intervention of human intermediaries?
- what activities are external users involved in that generates a need for records, and how is the users’ information behaviour impacted by those activities?
- can a relationship between the properties of records and the need and the use of records be established?
- how is the information behaviour of users of records manifested in other types of organizations?
- what factors, indogenous and exogenous, has impacted the implementation of various representational systems?
- can records continuum theory contribute to enhanced access and, if so, how?
- how can information behaviour aspects be integrated with frameworks for preservation of records like the OAIS-model?

8.6.4 Finally...

It can be concluded that the information behaviour of users of records has some specific features that differ from information behaviour in general, due to the inherent properties of records, their complexity and to the purposive character of the use of records. These specific features are manifested in the way records are approached, how the search for records is mediated and negotiated, and how the search relates to information seeking and use in general. The findings of this study have thus shown that information behaviour is a more complex and varied process than has been assumed in previous research, and that the perspective from archival theory can enrich information science research.
REFERENCES

Bihang till Svensk Författningssamling 1903 nr 58. Riksarkivariens cirkulär med närmare anvisningar i anseende på tillämpningen af nådiga kungörelsen den 22 maj 1903 angående allmänna grunder för ordnande och förtecknande af vissa offentliga arkiv.


Menne-Haritz, A. (1994). Appraisal or Selection - Can a Content Oriented Appraisal be Harmonized with the Principle of Provenance? In The Principle of


Regeringens proposition 1989/90:72. Arkiv m.m.


*SFS* 1903:56 Kungl. Maj:ts nådiga kungörelse angående allmänna grunder för ordnande och förtecknande av vissa offentliga arkiv.
*SFS* 1903:104. Kungl. Maj:ts nådiga kungörelse angående plan till förteckning öfver rådstufvurätters och magistraters arkiv (s.k. stadsarkiv).
*SFS* 1930:251. Lag om kommunalstyrelse på landet.
*SFS* 1930:252. Lag om kommunalstyrelse i stad.
*SFS* 1933:483. Råd och anvisningar rörande vården av kommunala arkiv.
*SFS* 1949:105. Tryckfrihetsförordning.
*SFS* 1947:152. Regeringsformen.
*SFS* 1980:100. Sekreteresslag.


Appendix 1

INTERVIEW GUIDELINES

Registrars

Personal information
What is your position?
How long have you been employed?
Previous work experiences?

Work context
Where is your place in the organization?
What is the business activities of this unit?
What kind of records are generated here?
Do you handle any classified information?

Work tasks
Can you describe your work tasks?
To what extent do you use to answer questions, provide records or information from records in your daily work?
Do you have to access records yourself when performing your work? For what purpose?

Users
How often does it happen that anyone approaches you to consult records or information from records?
What categories of people want to consult records?
What is the proportion between outsiders and employees?
Which is the most usual category?
What do you think is the most usual reason for consulting records?
How do they approach you – by telephone, mail, e-mail, personal visits?

Queries
What kind of questions do you get from outside, from the public?

1 The interview guidelines were originally rendered in Swedish, and the interviews were conducted in Swedish. The guidelines were used as a scaffold during the interviews, but not followed literally, pointing to areas that should be covered and complemented with follow-up questions when called for. The recordings and the transcriptions of the interviews are preserved by the author.
What kind of questions do you get from the employees?
What objects are requested? Is it the answer of a question, a certain fact, or a specific record or copies of records?
Are there any questions you could answer just with help of the journal, or do have to retrieve the files?
Those who want to consult records; can they provide journal reference number or suchlike?
What is the most usual terms provided to identify the requested objects?
Can you give any examples on how they put the questions?
Does it happen that you have to help to find out what they actually want?
Can you describe how you do then?
When the employees need to consult records, do they put the questions more clearly than the public?
Does it ever happen that you cannot find out what is requested?
Does it ever happen that you cannot find the requested object?
Do you ever get requests for records that are not registered in the journal?
Are there any questions that you find difficult to handle?

Search tools
Tell me how you go about to search the journal? What search fields do you use?
What search entries do you prefer?
Can you give me a demonstration of how you search the journal? Describe how you do when you make a usual search.
Do you appreciate that the public or the employees ever access the journal to identify the objects of request?
Are you satisfied with the journal system? Is there anything that you are not happy with?
Are there any other means of search you would prefer?
Do you use to take out reports or statistics from the journal?
Are there any other registers or search tools that you have access to?
Archivists

Personal information
What is your position?
How long have you been employed?
Where is your place in the organization?
Previous work experiences?

Work context
Where is your place in the organization?
What is the business activities of this unit?

Work tasks
Can you describe your work tasks?
To what extent do you use to answer questions, provide records or information from records in your daily work?
Do you have to access records yourself when performing your work? For what purpose?

Users
How often does it happen that anyone approaches you to consult records or information from records?
What categories of people want to consult records?
Which is the most usual category?
What is the proportion between outsiders and employees?
What do you think is the most usual reason for consulting records?
How do they approach you – by telephone, mail, e-mail, personal visits?

Queries
What kind of questions do you get from outside, from the public?
What kind of questions do you get from the employees?
What objects are requested? Is it the answer of a question, a certain fact, or a specific record or copies of records?
Are there any questions you could answer just with help of the journal or inventories, or do you have to retrieve the records?
Those who want to consult records; can they provide journal reference number, archival identity or suchlike?
Can you give any examples on how they put the questions?
What is the most usual terms provided to identify the requested objects?
Does it happen that you have to help to find out what they actually want?
Can you describe how you do then?
When the employees need to consult records, do they put the questions more clearly than the public?
Does it ever happen that you cannot find out what is requested?
Does it ever happen that you cannot find the requested object?
Are there any questions that you find difficult to handle?

**Search tools**
What search tools do you have access to?
What search tools are available to the users?
Tell me how you go about to search the journal? What search fields do you use?
What search entries do you prefer?
Can you give me a demonstration of how you search the journal? Describe how you do when you make a usual search.
How do you use the inventory?
Do you appreciate that the public or the employees ever access the journal or the inventories to identify the objects of request?
Do they ever ask for an inventory?
Does it happen that you use the inventory together with the user to identify the object of request?
Are you satisfied with current search tools? Is there anything that you are not happy with?
Are there any other means of search you would prefer?
Employees

Personal information
What is your position?
How long have you been employed?
Previous work experiences?

Work context
Where is your place in the organization?
What contacts do you have with other employees (including managers, politicians)?
What contacts do you have with outsiders?
What is the business activities of this unit?
What kind of records are generated here?

Work tasks
Can you describe your work tasks?
Do you ever have to consult records or information from records when performing your work? For what purpose? In what context?
How often does it happen?
Do your contacts with other employees/outsiders ever generate a need to consult records?
What kind of records do you consult?
What objects do you usually request? Is it the answer of a question, a certain fact, or a specific record or copies of records?

Search procedures
Describe how you go about to search for records.
Do you search by yourself or do you approach the registrars or archivists?
When you approach the registrars or archivists, can you provide journal reference number, archival identity or suchlike?
Can you give any examples on how you use to put the questions?
What is the most usual terms you use to identify the requested objects?
Has it ever happened that they could not find out what you want?
Has it ever happened that they could not find the requested object?
What search tools do you have access to?
Do you use them?
Can you give me a demonstration of how you use them? Describe how you do when you make a usual search.
Are you satisfied with current search tools? Is there anything that you are not happy with?
Are there any other means of search you would prefer?
External users

For what purpose have you been consulting the agency/archives to take part of records?
In what context?
Have you done it several times?
How many?
Have you consulted other agencies/archives to take part of records?
Do you consider yourself as an experienced user of records?
Why did you approach this particular agency/archives?
Had you checked out what records you could expect to find before you turned here?
Describe the last time you consulted the agency/archives to take part of records.
What objects did you request? Was it the answer of a question, a certain fact, or a specific record or copies of records?
What kind of records did you consult?
Did you use any search tools, the journal or an inventory, to identify the requested object? Did you find it useful?
When you approached the registrars or archivists, how did you put the question?
Did you provide journal reference number, archival identity or suchlike?
What terms did you use to identify the requested objects?
Did they understand what you wanted?
Did they find the requested object?
If you have previous experiences of searching for records, was this a representative example?
Can you tell me about other times you have been consulted other agencies/archives to take part of records? Differences/similarities?
Are there any other means of search that you would prefer?