THE INFORMATION SEEKING PROCESSES OF GENEALOGISTS

by

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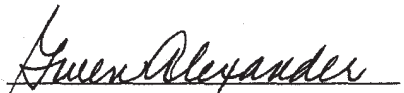

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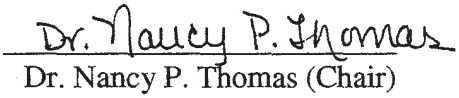

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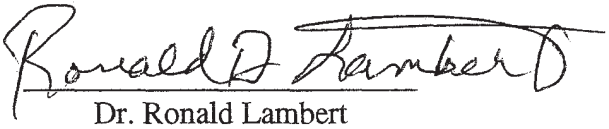

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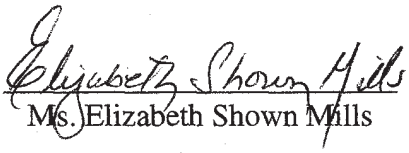

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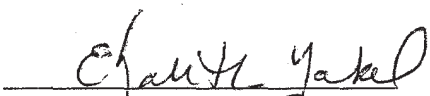

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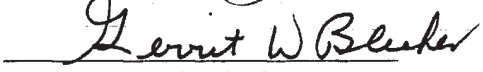

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AN ABSTRACT OF THE DISSERTATION OF

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This study investigated how genealogists search for and gather information in contexts rich in genealogical information. It assumed a constructionist paradigm, acknowledging that all knowledge is created through language, which is bounded by social, cultural, and historical contexts. It used a grounded-theory methodology consistent with both the research aim and theoretical framework presented. To provide the data that supported the research aim, interviews, observations, and talk-in-action were employed. These methods were chosen to capture and focus on the experiences and descriptions of information seeking by genealogists. Data was collected from three sites frequently visited by genealogists including a public library, a proprietary library, and a historical/genealogical society library. Taylor's (1991) information use environment (IUE) was used to define and compare the group of genealogists, the setting in which they were researching, their information problems, and ultimately how they approached and resolved their information needs. A result was the defined IUE of genealogists. With regard to the resolution of problems, participants were found to follow two distinct information seeking processes. The first process centered on locating and selecting sources in the library. The second process was the information selection process participants utilized to search for information in sources. The other framework used in this study employed archival intelligence to examine how genealogists approach information seeking using

primary resources (Yakel and Torres, 2003). This study contributes to the development of how genealogists seek information by supporting many of the archival intelligence principles. It also analyzed the potential segments of genealogical researchers based on their information seeking processes and strategies. Following the three categories proposed by Mills (2003), participants were segmented based on their research methodology and concerns for gathering evidence to validate their information. Participants' emphasis on the principles of proof was also included as an indicator. A six-stage model of information of seeking specific to genealogists is proposed. This model suggests that genealogists deliberately approach their research armed with information problems using the two processes uncovered in this study. However, the process does not end at the library; genealogy is an iterative process that continues to new research and problems.

Acknowledgements

I began this journey over seven years ago and have many additions and changes to my life during this time. Without the help and support of the following people none of this would have been possible. I am and will always be grateful to those who helped me along the way. I am only allowed one page of thanks, which is a thousand pages too short.

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Although I began my doctoral journey alone, I did not finish it that way. I was lucky enough to find a wonderful wife and two beautiful girls along the way. They have been my rock. Through SLIM weekends, trips to libraries, late nights, and lonely weekends,

you all have been there for me. I could not have asked for a more supportive family. My two cheerleaders have not known me as anything other than a doctoral student; now we get to enjoy weekends. My wife's love and support through this process lifted me up when I was down and never faltered. She has been understanding and always there for me. I truly am blessed. I would also like to thank my parents. I have blown off many weekends and activities over the past few years, but they have always been there for me.

Final thanks go out to the libraries, staff, and individuals who participated in this study.

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Chapter 1: The Information Seeking Processes of Genealogists

According to the International Federation of Library Associations and Institutions (IFLA), genealogy is an activity that can be found around the world (IFLA, 2005). Moreover, family history has been ranked as high as number two for most searched item on the World Wide Web, with 35% of all households with Internet having used the web to search for their family history (Fulton, 2005; myfamily.com, 2005). In the United States, genealogy is second to cooking as the leading hobby for Americans (Drake, 2001; Yakel, 2004). In fact, according to a 2005 survey by an independent marketing firm, 73% of Americans are interested in their family history (myfamily.com, 2005). Thousands of men and women set out every day to search old newspapers, county records, censuses, and many other sources for clues to their own pasts. Because of the type of research that is required to discover family history, genealogists are a user-group that frequently visits cultural institutions (libraries, archives, historical societies, court houses, museums, churches, etc.) in search of specific genealogical information.

Genealogists are constantly searching for sources that contain some clue or information that will provide a connection to their past or lead them to the next source, clue, or piece of information. Finding each new piece of information often leads to a new search and thus starts the process over again (Yakel, 2004). The search for specific information is the core of genealogical research. Although individual genealogists may be looking for different types of information and plan to use the information differently, their motives and experience levels determine why and how they seek genealogical and historical information.

The popularity of this activity coupled with the number of individuals who are pursuing this interest demonstrates its importance to institutions and organizations that strive to serve users of cultural artifacts. However, genealogists are one of the least frequently studied groups of users. Consequently, this study will seek to describe the information seeking of genealogists.

Information Seeking Processes.

The specific study of the information seeking of genealogists is a relatively new area of research. Even so, recent studies by Yakel (2004) have provided key insights into the processes employed by this user group. Specifically, Yakel found that genealogists' research was process driven and truly never has an end point. The search for one's ancestry is an iterative, complex, ongoing process. This type of research relies heavily on browsing and trial and error (Sinko & Peters, 1983; Kuglin, 2004). Furthermore, studies have also shown that face-to-face genealogical activities can be a very social experience (Lambert 1996b; Nash 2004). Genealogists join societies, share information, and rely on others for sources and help when researching (Dulong, 1986; Duff & Johnson, 2003; Sweeney, 2001).

Technology has provided genealogists the ability to connect with others who are also involved in researching their family histories. Email, posting boards, and the ability to publish family histories and trees on the World Wide Web allow genealogists to connect with other family members and genealogists across the globe. Yakel (2000) predicts that, as more primary search materials are made available online, users will come to rely more and more on other users and less and less on library professionals.

Genealogy and the development of message boards and open-posting websites have already created this type of atmosphere in the genealogical community (Fulton, 2005).

Technology also allows many genealogists to research their family history without having to go to a bricks and mortar library or local society. Technology allows individuals access to materials that were once only available through visits to institutions in specific, sometimes distant, localities. Genealogists can now store their information on computers, create their own personal websites, and publish charts and histories with the push of a button. Genealogists can also access catalogs, finding aids, collections, digital records, and other record types through the Internet.

Information Needs

Genealogists seek information differently based on their information needs (Duff & Johnson, 2003). Many genealogists gather as much information as possible, collecting names, dates, and locations for as many family members as they can find. This type of research focuses on finding basic vital records and other sources to build pedigree and family group sheets. Other genealogists seek and gather historical information that provides in-depth information on specific families or family members. This group uncovers more depth and historical information about families and individuals to better recreate a family's history. Yet other genealogists complete exhaustive historical research that describes the history of a family or individual but also focuses on a specific social, temporal, geographic, economic, religious, cultural, or other historical issues. This type of information enables genealogists to recreate the lived experience of their ancestor's past (Mills, 2003). These examples show that the information needs and research goals of genealogists may vary.

Kuglin (2004) and Lucas (2005) found that most genealogists are also frequent users of libraries. This seems to indicate that there is a large group of genealogists who utilize cultural institutions in meeting their informational and recreational needs outside of those connected to their genealogical past-time. However, when searching for genealogical information, individuals generally choose specific institutions based on what is available in the collections.

Traits of Information Seeking

Overall, there is no comprehensive model that describes how genealogists seek information. However, there have been attempts by both scholars and practitioners to understand and plan services for this group. The first discussions described the importance and benefits of the relationship between archivists and genealogists (Mitchell, 1975; Rubincam, 1949). This was followed by library journal issues dedicated to the relationship between librarians and genealogists (see 1983 issues of *Library Trends* and *RQ*). Other literature examined the relationships genealogists had with professionals (archivists, librarians, and historians) (Redmann, 1983; Bryan, 1986). These segments of LIS literature encouraged information professionals to help genealogists better understand facilities, collections, and usage of materials. However, these studies did not take into account the impact of studying the information seeking characteristics of genealogists. Furthermore, early research did not examine genealogists as a user group, nor address issues associated with the information literacy skills related specifically to genealogical research. Sociologist Ronald Lambert was one of the few researchers concerned with understanding genealogists. During the 1990s, Lambert studied the

demographics, motivations, and characteristics of two separate user groups: the members of the Ontario Genealogical Society and genealogists with convict ancestry in Australia.

Another area of emphasis on information seeking comes from the genealogical world. Genealogical research rests upon the accuracy of the original source and the understanding and use of this source by the family historian. Genealogical research includes, "Choice of sources, thoroughness of the investigation, the analysis of information, the correlation of details, and the conclusions drawn" (Mills, 1999, p. 166). These areas of research differentiate genealogists from individuals who collect or gather family names simply to create a family tree, with results of often dubious reliability. Mills provides principles for analyzing genealogical evidence, which separates genealogists from family tree climbers. "Sources provide information from which the [genealogist] researcher selects evidence. All undergo the evaluation process to produce proof' (p. 175). Sources are the artifacts, books, people and records in which the information is found. Information provides statements about people, places, events, time, and situations. Evidence is the finding the researcher makes after analyzing information reliability, credibility, and relevancy to the problem being researched. Proof is the sum of all evidence found in the evaluation process that supports a conclusion or assertion about an aspect of family history.

Information Seeking and Expertise in Archives

Another useful approach that does not specifically examine genealogy but rather encompasses the manner in which individuals search is research on users of archives. In an effort to better understand how individuals search archives for primary materials, Elizabeth Yakel and Deborah Torres (2003) developed and tested a theory of information

seeking within archives. The theory of archival intelligence posits that users rely on three areas of expertise when performing research in archives using primary source materials: domain knowledge, artifactual literacy, and archival intelligence. Specifically, archival intelligence provides insight into how an individual's level of expertise guides him or her through the search process. The study of archival intelligence provides a framework for understanding how individuals in pursuit of primary sources orient themselves during the research process, pursue the questions they have, and locate materials.

Information Seeking: LIS Perspectives

An area that may provide direction for describing the way genealogists seek information is the previous research and research areas that have been developed in library and information science that examine overall information seeking. During the early 1980s, the field of library and information sciences (LIS) began shifting focus from the collection to the user, thus increasing the importance and the amount of research specifically aimed at understanding users (Wilson, 1981; Dervin and Nilan, 1986).

Another area within LIS that provides support for the study of genealogists focuses on information seeking in everyday life. These studies propose that information seeking is not a generic activity. Rather, it occurs in specific contexts relying on the experiences, differences, activities, and goals of specific user groups. Hartel (2005) indicates research of everyday life considers the context of information seeking. Unfortunately, many researchers do not account for context when interviewing or asking questions regarding information seeking. Others account for the micro-context but simply imply the macro-contexts of culture, history, and society. Yet, the way in which a user

seeks information cannot be described without also taking into account contextual influences (Chatman, 1996, 1999, 2000).

Recently, there has been a move by some LIS scholars to study the impact of information seeking on everyday life activities. These studies have examined the homeless, minority communities, and other everyday life interactions (e.g., Savolainen,1999; Agada, 1999; Pettigrew, 2000; Hersberger, 2005). One of the newest areas of scholarship in everyday life information seeking is in the field of leisure activities. Hartel (2003), using the framework of serious leisure put forth by Stebbins (1994), suggests that LIS should expand outside of academic and professional contexts and consider the significance of studying serious leisure activities, many of which have extensive information aspects. Serious leisure is defined as the "systematic pursuit of an amateur, hobbyist, or volunteer activity sufficiently substantial and interesting in nature for the participant to find a career there in the acquisition and expression of a combination of its special skills, knowledge, and experience" (p. 173). Although it can be argued that genealogy activities can be applied to the amateur, hobbyist, or volunteer activities of serious leisure, the area of hobbies, specifically the sub-area of liberal arts hobbies, has been shown to encapsulate most genealogical researchers (Stebbins, 2001). Following Stebbins' example of genealogists as liberal arts hobbyists, Hartel (2003) proposes the study of genealogists as a worthwhile area of LIS research.

The recent emphasis in LIS to uncover information seeking in everyday activities encourages researchers to examine users and ways in which they search for and use information. This emphasis, along with the growing popularity of genealogy, has increased the amount of attention family historians are receiving in LIS research. In 2003,

the first study of how genealogists seek information was published (Duff & Johnson, 2003). Since then, a handful of other studies have appeared, adding to our understanding of genealogists, yet still leaving many questions and aspects of this major user group unanswered.

Specific studies, models, and theories focusing on information seeking and users have been well documented in LIS. The study of users of primary historical materials is one of these areas. These LIS studies focus on professional users of cultural institutions such as humanities researchers, historians, and other groups of archives users. Many of these studies provide both theoretical and empirical examples of information seeking of users of cultural institutions. This research provides examples of the processes that individuals utilize when seeking information in cultural institutions (Cox, 1992). While useful, this research focuses on professionals and does not account for the motivations, goals, and needs of leisure-based user groups.

Although all of the aforementioned theories and studies are useful for describing how genealogists seek information, most of these studies do not account for the variety of motivations, goals, and information needs previously described. Thus, the need arises to develop a theory or model to better describe the information seeking of genealogists. This study used a grounded theory approach to develop such a model to describe the information seeking processes. By following a grounded theory approach, both anticipated and unanticipated elements of information seeking, as described and exhibited by genealogists, were utilized.

Information Use Environments

The previous research on genealogists indicates that they are a special user group that seeks out specific information from a multitude of sources utilizing a variety of

institutions. One way to investigate genealogists is to study them as a group instead of as individuals. Sociological research examines groups by describing them as social worlds or social structures that allow for entrance and exit by individuals interested in similar activities. By defining a group as a social world, specific characteristics unique to the activity or group can be analyzed instead of analyzing the individual.

Using this observation, Taylor's (1991) information use environment (IUE) model can be applied to the study of the way genealogists search for information. An IUE includes the set of criteria that affect the way in which information, for a specific population, is collected, judged, diffused, and disseminated. It also includes assessing the way in which information is deemed useful. Taylor created a structure for studying an IUE. This structure first accounts for the population being studied by analyzing the demographic and nondemographic variables of the group. The second part of Taylor's structure examines the information problems the user group faces. The third section provides the setting for information seeking. This includes aspects of interest, access to information, and experience level. The fourth and final part of Taylor's model investigates the way in which the group resolves information problems. This section accounts for both information seeking and information use. This aspect has yet to be fully described for genealogists.

The benefit of applying Taylor's model is to account for the way a specific user group seeks and uses information within specific contexts. Context affects what decisions individuals make about useful information due to the elements within the specific context. If the aspects of IUE can be applied to genealogists, then new models and theories can be developed that provide direction for supporting information seeking in a

variety of cultural institutions and information systems. These aspects may also support genealogy as a new sub-discipline or academic field. Utilizing a grounded theory approach will support and amplify Taylor's IUE model by uncovering areas specific to the information seeking process that may provide detailed attention to this unique user group.

The bottom line is that we need to know more about this specific user group. Any institution that genealogists utilize, no matter what size, location, collection, or purpose, should at least acknowledge the value of genealogists. Carr (2003) argues that cultural institutions must strive to understand and support the impact they have on the construction of everyday life. He acknowledges the importance of getting to know patron groups. Overall, he states, "Every act of design or service undertaken by an institution is done in the name of its community of users and is a reflection of how the community of users is understood" (p. 66). Carr's focus on the user supports the idea of getting to know this important user-group and how they are utilizing cultural institutions.

Statement of the Problem-Value to LIS

Genealogists should be seen in LIS as a major user group. However, if the number of studies undertaken within our discipline and the extent of our understanding of the information seeking processes of individuals pursuing family history is any indication, this is not the case.

Due to the numbers of individuals who pursue family history, there is value to any study of genealogists. For one thing, this group is one of the few groups whose information seeking and use extends to many different types and sizes of institutions, types of collections used and information resources. Insights gained from an increased

understanding of genealogical searches, including search strategies and processes, will provide ways to rethink how LIS provides access points to collections and the interaction between service providers and genealogists in reference settings. Conway (1994) indicates that if institutions can recognize the needs of users, they could then guide the users to become better independent patrons.

Other benefits include insights into how collections and resources can be presented and how they can be arranged and stored to enhance information seeking and use. This would include assisting smaller libraries, archives, and other institutions with understanding the investment of staff time, volunteer time, development of collections and genealogical material.

Following the ideas set forth by early LIS researchers, another goal of understanding information seeking is to better develop retrieval systems. If there is an understanding of the steps taken and the issues that arise when beginning a research session, it may be possible to create better bibliographic tools for connecting surrogates to original records. This information could also be used to develop specific finding aids and surrogate records that are of particular value to aiding genealogists.

Currently, the academic field of history does not recognize the value and quality of work that is coming from many genealogical researchers. Because many genealogists are not formally trained as historians, they are seen as lesser researchers. The truth is that many avid genealogists hold historical research and research standards at a higher level than historians (Mills, 2005). Genealogical information provides social historical insight into everyday life of time past from the perspective of many races, both sexes, in a variety of locations, over multiple time periods. Where historians may paint their story

with a broad stroke, genealogists have the ability to provide the fine details of history. The first step to establishing genealogy as a legitimate academic field is to better understand the group as a whole. This study seeks to aid in this mission.

Finally this specific study has the ability to influence LIS simply because of the type of research design and theoretical frameworks that this study will follow. This study will aid LIS in the development and pursuit of understanding information seeking in everyday life activities. In addition to studying an everyday life activity, this study utilized a social constructionist framework. Social constructionism relies on studying exactly what genealogists say and do in the context of a naturally occurring event.

This study examined the information seeking of genealogists who were using facilities that house information specific to family history. Genealogists use museums, historical societies, county courthouses, cemeteries, and many other locations. The study of this group cannot be limited to how they research in traditional libraries and archives. Because genealogists seek information in multiple facilities, analysis of this user group can provide LIS with insights into the use and relationships between non-traditional library and archives settings.

Research Questions

The overarching question for this study is, how do genealogists seek information? In order to determine the answer to this question, the following five research questions were addressed.

1. What do genealogists do when navigating in information seeking environments?

This question analyzes how genealogists understand the environment they are using and the rules of use and access. It also examines how genealogists identify the limits of their own knowledge and their ability to tap into the knowledge of others.

2. How do genealogists seek answers to uncertain or ambiguous information problems?

This question focuses on the search tactics used. It also investigates the strategies used for preparing for research and question asking during research. Another focus of this question examines the interactions between genealogists and others used to solve information problems.

3. What skills do genealogists use when making connections while seeking information?

This question examines the ability to make and determine the connections and relationships of representations of documents, activities, process, and information within documents to the information problem.

4. How does the theory of archival intelligence relate to information seeking of genealogists?

This question combines all three previous research questions to determine the appropriateness of the archival intelligence theory for understanding information seeking of genealogists for research that takes place outside archives.

5. *Based on information seeking characteristics, in what ways can genealogists be segmented into members of a social group?*

Literature in sociology and leisure studies shows that there are segmented groups within social worlds. These groups can be defined by several characteristics. For example, this study will investigate the similarities and differences of information seeking in order to

segment the genealogical social world into groups based on information seeking characteristics.

Overall, the research questions provide insight into understanding how genealogists seek information. This section has provided an introduction to this dissertation. It included the background of the study, a statement of the problem, its value to LIS, and the research questions. The next section provides the theoretical framework that will guide this study. Sections three and four review the relevant literature. The final section details the research methodology, selection of sites and participants, the data collection methods, and the techniques that were used to analyze the data.

Chapter 2: Theoretical Framework

The goal of many genealogists is to uncover their family history. The information that is utilized is found in many different forms (government documents, family documents, oral histories, etc.). Genealogists also talk with other family members, genealogists, reference personnel and others as resources or to locate resources related to their past. Cognitive frameworks limit the investigation of information seeking to individual's cognitive structures. These studies do not allow for emphasis and contribution of social activities. Furthermore, reliance on cognitive approaches limits the social study of information seeking by excluding context, specifically the contexts of what information is being sought and the place within which information seeking occurs. Additionally, cognitive frameworks cannot account for the socially constituted meanings researchers bring with them and develop during the process of searching for information.

Social constructionism as a research design allows for multiple meanings and interpretations and specifically acknowledges that within the research framework and methodology focus should be on individual users, their experiences, the context of their information seeking, and the meaning that the activity has for them.

The Framework of Social Constructionism

Kenneth Gergen (1985), who largely introduced social constructionism to psychology, provides insight into the basic premises, which presents social constructionism as a different way of examining social processes in psychology (Burr, 1994). Gergen (1985) and Burr (1994) describe four areas in which most social constructionist frameworks are created.

1) The world is not observable; it is created through contexts.

Our knowledge of the world is not self evident; it is not a reflection of what we have observed. The nature and function of language provides the framework for understanding. To fully identify the framework, you must take into account the context of language usage. "The world does not present itself objectively to the observer, but is known through human experience, which is largely influenced by language" (Larkin, 2004, ¶ 17).

The study of how genealogists seek information relies on language as the vehicle individuals use to describe and carry out the research process in the context in which it occurs naturally.

2) The world that we know is historically and culturally created.

Language is a product of historical interactions. Ideas, objects, thoughts, and concepts have undergone changes over time. These were not sudden changes caused by nature but occur because of historical factors. In addition, culture accounts for some of the differences in how we approach certain psychological processes. "The categories in language used to classify things emerge from the social interaction within a group of people at a particular time and in a particular place" (Larkin, 2004, ¶ 17).

The cultural values and meanings individuals possess specific to searching for family history provide insight into how they approach information seeking. How genealogy is approached and how genealogical items are classified, given importance, and utilized within the framework of information seeking are important aspects of acknowledging the cultural values genealogists possess.

3) Knowledge is a product created and shared through social interaction.

Whether knowledge is accepted or not does not depend on empirical validity, but on social processes. Acceptance within social processes has been demonstrated in areas of psychology, communication, anthropology, sociology, history, and science. "How reality is understood at a given moment is determined by the conventions of communication in force at that time. The stability of social life determines how concrete our knowledge seems to be" (Larkin, 2004, ¶ 17).

Social constructionism allows for an investigation into the social processes that govern how genealogists search for information. These processes are made up of certain rules that govern social intercourse and social activities. The genealogical researchers and the individuals that interact with genealogists adhere to these rules. Again the vehicle of language and communication, including nonverbal cues, provides a basis for understanding the rules.

4) Knowledge and social action are intertwined.

Language use in itself is a form of social action and is connected to many other activities. These actions have the ability to construct, guide, sustain and support certain patterns and neglect others. Reality, itself, is a social construct defined by language. Within societies or culture, reality is not necessarily individual routines, but rather complex and organized patterns of constant actions occurring between members of the social groups (Gergen, 1985; Burr, 1995; Larkin, 2004).

The Reliance on Language

Within a social constructionist framework, it is through language that the world is organized and understood. Since language provides the means for understanding, language is at the center of interpretation. In this way, social constructionism

acknowledges that an individual's experience and activities are governed by his/her interpretation. This perspective admits the possibility of multiple realities and multiple interpretations of observations and accounts.

Social constructionism provides a framework for describing information seeking by focusing on language. It is seen neither as a tool or expression of our internal mind nor as a reflection of the outside world. Language is used in social interaction to construct and carry out functions. These functions are what create our understanding of the world. Throughout the search process, genealogists rely on language to connect to sources of information. Utilizing language from documents, conversations, and other sources, genealogists construct family history. It is the key to not only uncovering the past but also creating constructs to understanding the past. Furthermore, the social constructionist framework assumes that the functions are carried out within contexts (Gergen, 1995). These various contexts ultimately influence an individual's experience, acknowledging that knowledge is created through language, which cannot be separated from context. Understanding the experience of the individual while he or she interacts with others (i.e., family members, reference staff, other genealogists) or the language of others (i.e., genealogical and/or historical materials) will provide a key to understanding the information seeking process (Littlejohn, 1996).

One of the most influential works within constructionism is *The Social Construction of Reality* (Berger & Luckmann, 1966). It describes the sociology of knowledge or how knowledge is created. The premise of the authors is that knowledge is created through social interaction. Language is seen as the "most important sign system of human society" (p. 37). Thus, understanding a shared language is needed to understand

everyday life. Language becomes both the storehouse for meanings and experiences and provides the vehicle for sharing meanings and experiences with others.

Wittgenstein's *Philosophical Investigations* (1953/2001) provides the background for understanding the role of language in constructing our world. Wittgenstein views language as a set of rules that he labels *language games.* The rules or games provide us with common boundaries for understanding. These games are played out as social activities not as cognitive structures. We learn the rules of the games, share with others during the game, and thus learn truths through language. Wittgenstein considers rules as the mechanisms that govern, manipulate, and ultimately define our lives. He further acknowledges that the following rules is what allows for meaning to be created, recreated, and maintained (Harre & Gillett, 1994).

Sharing language. Communication is used by people to share events. Reality is created through this conversation. Our reality and understandings are created in our communication with others. Consequently, our actions and how we understand them depends in large part to the social reality that has been created (Littlejohn, 1996). Believing that the meanings, acts, and practices are all socially produced and transferred through language, language becomes both the carrier of historical and cultural processes and frameworks and also the medium that provides them. Knowledge created through interaction is then internalized and used to create an individual's own reality. Gergen (1985) states, "Descriptions and explanations of the world themselves constitute forms of social interaction…In the same way, descriptions and explanations form integral parts of various social patterns" (p. 268).

Gee (1999) also describes the reflexivity of language in use. Reflexivity is the ability of the words being shared to produce both situated meaning and cultural models of meaning. Situated meaning is the shared knowledge that takes place during a social interaction that is situationally driven and is negotiated between individuals involved in the interaction. This interaction is based on a shared language. Situated meaning can also be tied to prior experiences. Cultural models are the more broad based meanings that explain and define knowledge. They are normally socially and historically based and are normally taken for granted and/or stored unconsciously. Studies that seek to define how individuals gain knowledge must account for both. Theoretically, language becomes much more than the words being used. Gee argues that the analysis must account for the small parts and at the same time consider the large picture. Understanding language in use "involves asking questions about how language, at a given time and place, is used to construe the aspects of the situation network as realized at that time and place and how the aspects of the situation network simultaneously give meaning to that language" (p. 92). Thus, individuals' accounts can be used to provide insight into their information seeking characteristics. The narrative they create can be used to examine their own view of information seeking practices (Tuominen, Talja, & Savolainen, 2005).

Stuart Hall (1997) stated, "It is social actors who use the conceptual systems of their culture and the linguistic and other representational systems to construct meaning, to make the world meaningful and to communicate about that meaningful world to others" (p. 25). Social construction of information seeking also captures the construction of meaning through language. Individuals describe how meaning is made and at the same time produce meaning through the language and actions they use.

Narrative as language. Narrative is a specific type of language use presented by Gergen and Gergen (1997) within a social constructionism framework. Narrative is a self-constructed way of using language to establish coherent associations throughout one's life. Narratives are constantly undergoing construction, reconstruction, and deconstruction based upon social interactions. Again referring to the process of genealogy, individuals use information to construct a narrative about their family history. This narrative can be in numerous forms; however, the common theme is the construction of a person's past. According to Gergen and Gergen (1997), "[narrative] is used for … social purposes as justification, criticism, and social solidification" (pp. 163). Because of its social nature, narrative is not a private entity. It relies on a shared system of meaning for relating and connecting actions. Individuals rely on this system to create relationships. However, because there are different systems and meanings based on historical and cultural influences, narratives may be of value to some and not meaningful to others.

Narrative is also constrained by historical and cultural bounds. Because narrative relies on a shared system, differences arise in narratives owing to historical and/or cultural constraints. Narratives are constructed in and due to social interactions. In this sense, narratives are bound by historical, cultural systems of meaning, constantly constructing and defining actions and relationships. Gergen and Gergen (1993) view narrative as a way people tell about themselves. However, cultural patterns have the ability to influence narrative, which in turn defines roles and provides different structures of meaning.

Genealogists are constantly searching for clues to their ancestral past. Finding this information produces a reconstructed historical narrative. Analyzing the reconstruction of history, Hall (1991) adds:

> There is a past to be learned about, but the past is now seen, and has to be grasped as a history, as something that has to be told. It has to be narrated. It is grasped through memory, it is grasped through desire. It is grasped through reconstruction. It is not just a fact that has been waiting to ground our identities. What emerges from this is nothing like an uncomplicated, dehistoricised, undynamic, uncontradictory past. Nothing like that is the image which is caught in that moment of return. (p. 38)

Specifically for genealogy, acknowledging the cultural and historical basis for genealogical information contributes to a better understanding of individual interpretation and meanings. What constitutes useful genealogical data forms a core element of uncovering the values individuals utilize when selecting and searching for information. This includes the criteria individuals use in utilizing and relying on information.

Social Worlds

Social constructionists hold that knowledge is created, shared, and verified through social interaction and language. Consequently, the unit of study should not be the individual but rather a community, subject area, or knowledge field. Actors, events, practices, and formal organizations that can coalesce into a meaningful and interactionally important unit of social organization for participants have been defined as a social world (Unruh, 1980). Social world participants share, through communication, important structural and interactional characteristics (Shibutani, 1955). Strauss (1978)

adds that social worlds share a primary activity at particular sites and rely on a specific technology within these activities. Furthermore, organizations develop in response to the social world's activities. "The social world encapsulates the imagery, process, interaction, and relationships which unite the individual phenomena together" (Unruh, 1980, p. 272). Genealogy is an activity that is consistent with the definition of a social world.

Social worlds are constituted through a specific organizational focus, and social worlds must have both communication and geographic or physical centers. The social world focuses "orientation on interactional quality and meaning at a number of levels, including vicarious involvement in distant social worlds, participation in the production of social objects and products via social worlds, and especially some possible functions of the media in its various forms" (Unruh, 1980, p. 291). Unruh argues that social worlds are voluntary, and that entry and departure from a social world is free, accessible, possibly unnoticeable and intentional. Formal lines, memberships, or locations do not necessarily bound social worlds. There are social rules in social worlds. These rules are not strictly enforced and sometimes not explicit, allowing for a take it or leave it attitude to exist.

According to Unruh (1978), participation in social worlds can be defined in terms of social proximity indicated by how closely an individual's identity, experiences, relationships, and commitment are associated with the social world. Because social worlds allow for free entrance and exit and typically lack a hierarchical structure, analyzing and categorizing social groups becomes difficult to manage. Unruh suggests that one way to manage the study of social worlds is to segment the population into generalizable types based on shared characteristics. Strauss (1982) posits that a process of

segmenting occurs within social worlds creating sub-social worlds. Segmentation can occur through issues based on geography, technological advancements, ideological differences, competition with other social worlds, new membership types, and differences in use of social world objects (Strauss, 1984). Unruh (1978) also suggests that sub-types of memberships exist in specific social worlds. He provides four categories of trans-situational social types of participation in social worlds. Each social type possesses unique characteristics that differentiate it from other social types. *Strangers*, for example, are considered outsiders interacting with social world members but not actively participating in the social world. *Tourists* do get involved but are only slightly committed. They are only active within the social world as long as it remains to their liking. *Regulars* are active participants who provide structure to the social world. They are committed to the social world and are fully integrated into the on-going activities; however, they prefer to participate in activities created by others rather than create them. *Insiders* seek to create and sustain activities for other members of the social world. They are completely invested within the social world (Unruh, 1980).

Social Worlds in Leisure Studies

Research in the area of leisure studies has uncovered many such segments (Scott & Shafer, 2001). Stebbins (2005) argues that serious leisure creates social worlds "when enthusiasts in a particular field pursue substantial shared interests over many years" (p. 2). Bryan (1977) first introduced recreational specialization as a theory for segmentation of leisure social worlds. This theory proposes that there is a continuum of behavior within social worlds from the general to the specific. Over time, members become more specialized, creating sub-worlds with unique characteristics.

Scott and Shafer (2001) argue that recreational specialization not only includes changes in behavior but also includes specialization of knowledge and commitment levels. They indicate that many individuals may choose to remain at their current level of involvement and not pursue specialization beyond their own life interests. Not all members of the social world are expected to be involved in all aspects of the social world and may only be partially involved (Unruh, 1980). Kuentzel (2001) suggests that recreational specialization may not be a linear process and that some factors may impede and eventually discourage individuals within the social world. Scott and Godbey (1992) also indicate that membership in social worlds is differentiated based on the participation level of the individual in the social world.

Chapter 3: Literature Review

Contemporary LIS research has shifted focus from information systems and institutions to users and user behavior. The beginnings of LIS user research can be seen in the transition from a system-centered approach to a user-centered approach beginning about twenty years ago (Dervin and Nilan, 1986). Since that time, there have been thousands of articles dedicated to studying library users (Case, 2002). Most of these studies have examined the ways individuals utilize libraries and the effects of use and users upon the library profession.

As previously established, genealogists have not been a major focus of LIS user research. Thus, the review of relevant literature will include an examination of seminal LIS user studies, models, and theories. This literature provides a framework for understanding how genealogists seek information as general users of information. This section will describe general LIS user research and the potential relationships and problems created when general models and researching findings are applied to genealogists and their information seeking characteristics.

LIS Information Seeking Theories and Models

Working before the user-centered LIS paradigm shift, Taylor's (1968) objective was to, "examine and analyze certain relationships between library system and library user" (p. 178). Taylor explored this relationship by examining the types of questions that can be successfully answered in the library. He identified four levels of question formation. The visceral level is the unexpressed and inexpressible level. At this point, a person may experience some anxiety or uncertainty, but the need itself is experienced at an unconscious or preconscious level. The conscious level is where the information

seeker can articulate the need, but is unable to articulate it in terms of a question. In the formalized level, the user can articulate a formal statement of need. Finally, the comprised level is a question that can be presented and/or reformatted to fit into an information system. Taylor's contribution lies in the idea that users may or may not be able to express their needs. Taylor laid the ground work for identification of differences in LIS users based upon a specific information seeking characteristic by categorizing users into groups defined by question formation level.

Cognitive models in LIS

Belkin (1980), in an attempt to align information retrieval systems with users' needs, investigated the information seeking process. He found that individuals exhibited an anomalous state of knowledge (ASK) when confronted with an information problem. Individuals are not able to solve their problem because their state of knowledge is insufficient to understand all the ways to connect to the solution. The information and resources that are needed to solve the problem are unknown to the user; the role of the professional is to ask the user to describe the situation and what is known as a way to recognize or identify information and resources needed to resolve the problem. Belkin's (1980) model relies on the experience and expertise of users to be able to bridge a gap in order to solve their information problem.

In an attempt to identify variations of information seeking, David Ellis (1989) specifically examined different types of information seeking behavior. He identified six different types of behavior. *Starting* is the beginning type of behavior when information in new areas is being searched. *Chaining* is searching for information following connected material. *Browsing* is looking for materials in a potential area of use.

Differentiating is examining the nature, purpose, and audience of materials. *Monitoring* is the continual checking of recent literature. *Extracting* is the searching within specific sources for specific information. Recently, Meho and Tibbo (2003) have added four behaviors to Ellis' model incorporating technology-based searching techniques. *Accessing* is the process of getting to the sources or activities that may be required. *Networking* is the connection of others within the search process. *Verifying* is finding proof of an information discovery. *Information managing*, although not active information seeking, is a necessary task to aid in the retrieval process.

Also in 1989, Bates presented the berry-picking model for information seeking. She acknowledged that individuals search for information a little at a time and this search is constantly evolving based upon retrieving, reviewing, or discarding new information. She provided a wide array of tactics individuals use when thinking about their information query. Bates' study suggests that information seeking follows a non-linear pattern.

Kuhlthau (1991, 1993a) created her own model of information seeking based on her observations of various groups of library users. Kuhlthau's six-stage model, labeled, Information Search Process (ISP), presents the physical, affective, and cognitive actions that are associated with each stage while individuals search for information, which requires construction of knowledge to take place to be successful. Stage one is *initiation*. Individuals in this stage feel uncertain. They recognize some background information but aware they lack the knowledge to identify the solution. In the second stage, *selection*, individuals begin to develop a level of optimism and begin the task by identifying the general topic. In *Exploration,* stage three, individuals expand the search; however, this

creates feelings of uncertainty and diminishes confidence, as information is found that does not match the problem. *Formulation* is the next stage and is the turning point within ISP. As the search becomes more focused, feelings of clarity and confidence begin to rise. *Collection*, stage five, adds a sense of direction and builds interest. The information search process becomes more focused and specific relevant information is sought and collected. The final stage, *presentation*, provides a sense of satisfaction as thoughts become focused when information is utilized.

Kuhlthau (1993a) also describes two moods that shape information seeking. The *invitational* mood means that individuals are open to information seeking and consider many options. The *indicative* mood brings about an end in the search process. In addition, Kuhlthau (1993b) describes how uncertainty initiates the information seeking. Along with describing the ISP, Kuhlthau also presented ways information professionals could assist and intervene in the search process.

LIS Models and Context

Wilson (1999) updated his model by incorporating context with the information need. The model also included the effect of motivations on information seeking and recognized that individuals have different types of searching behaviors. Wilson's model provides a framework for studying users and their interactions with others and accounts for their environment by including context.

Brenda Dervin (1983, 1999) provides insight into information seeking by combining the cognitive view with the influence of context. Dervin has been one of the key figures in developing information seeking studies, models, and theories. Her theory of sense-making has transformed over the past twenty years, beginning in the cognitive

realm, and it is now viewed as a social theory of information seeking focusing on the impact and importance of context.

In 1983, Dervin presented sense-making as a way of studying information needs, seeking, and use communicatively. Sense-making posits that when individuals seek information they progress through space and time contexts. Information problems do not occur in a vacuum, as each problem is tied to a situation, which is context based. When uncertainty, dilemmas, and problems are approached, a gap is created. The sense that individuals make in bridging the gap is the core element of the sense-making theory. Thus when the gap is bridged, context plays a role, because the situation cannot be separated from the information problem. Dervin and Dewdney (1986) encouraged librarians to ask users to describe the situation in order to provide solutions to the patron's question. When studying information seeking, Dervin (1999) describes information within sense-making as a structural term.

> The intent is to reach for the most general understanding that incorporates the idea of information as structural representation and at the same time as something that the human species, because of the discontinuity mandate in the human condition, makes and then challenges and unmakes and remakes as events move forward. (p. 738)

Sense-making can be used to examine different uses of information or how individuals have created new orders and patterns using information. The study of information seeking should study the uniqueness of information use and not the commonalities.

Another model that includes context in information seeking is Foster's (2004) non-linear model of information seeking. This model posits that the information seeking

experience is not always defined by a specific category or role but is the interaction of a core process (opening, orientation, or consolidation) and the context (cognitive, internal, or external). The interaction is defined by the information seeking activity. Distinguishing itself from models such as Wilson's (1981) and Kuhlthau's (1991), the non-linear model of information seeking allows individuals to start, finish, and continue information seeking in multiple contexts from different perspectives (Foster, 2004). An issue not specifically addressed by Foster's model, however, is the inclusion of social factors within information seeking.

Sociological LIS model

Alternatives to the cognitive based models of information seeking are Elfreda Chatman's theories and models based on sociological aspects and everyday information seeking. Chatman (1996, 1999, 2000) developed three frameworks for understanding social aspects within information seeking. Her first theory, information poverty, arose from her ethnographic work with people in everyday life information seeking. Chatman's (1999, 2000) second theory, life in the round, expands the concepts of self-protective behavior and combines these with the concepts of small-world, social norms and worldview to create the theory. Chatman's third theory is that of normative behavior. This theory focuses on how in everyday lives, people who share cultures can be characterized by ordinary or routine events. This theory relies on social norms and worldview but adds social types and includes aspects of information behavior.

Another field of LIS that has gained some ground in the social realm of information seeking research is the social constructionist movement. Frohmann (1992) argued that the cognitive viewpoint does not provide enough attention to the social

aspects of information seeking. He (1994) presents discourse analysis as a way to incorporate social context into LIS. In response to Frohmann, Tuominen and Savolainen (1997) describe a social constructionist approach to studying information use through studying discursive actions. They state, "It is possible to study people's thoughts, ideas, and emotions by looking at how they are played out in action" (p. 85). They argue that discourse analysis, a social constructionist method, provides the tools for studying these thoughts, ideas and emotions by examining the nature of language. Language is seen as a social event that has a specific contextual-based, functional action and provides a realistic description of an account.

Talja (1997) presented discourse analysis as a way to carry out studies that focus on information users within a social constructionist framework. Talja lays out discourse analysis and how it could be used in studies that focus on information seeking. She urges that discourse analysis can be used to focus on both the information and the user. Language is a shared system of meanings that frames our experiences. We have a variety of roles in society and can have a variety of interpretations and actions within each role. Because language provides the meaning of our experiences from the user's perspective, by studying it, we can begin to understand the reality from the user's perspective. Because language is a shared system, we can examine reality through the concepts and meanings provided. This allows for multiple viewpoints. Talja (1997) states, "It [information science] should study the meanings and interpretations they [concepts] receive in different social contexts and fields of knowledge" (p.78). Consequently, the unit of study for discourse analysis should not be the individual but rather a community, subject area, or knowledge field.

Hjorland and Albrechtsen (1995) presented domain analysis as a way to study information seeking. This methodology shifts focus from individual users to communities of users termed domains. They argue, "The best way to understand information in Information Science is to study knowledge-domains as thought or discourse communities" (p. 400). Knowledge is formed through dialectical relationships between the domain and its individual members. Recently, Hjorland (2005) adds that knowledge may also be influenced due to current trends in the domain. Furthermore, "It [The domain] emphasizes the internalization of culturally produced, signs, and symbols and the way cognitive processes are mediated by culturally, historically, and socially constructed meanings" (p. 340).

Pettigrew (1999) adds to the social framework of information seeking by developing the theory of information ground. Information ground is "environments temporarily created when people come together for a singular purpose but from whose behavior emerges a social atmosphere that fosters the spontaneous and serendipitous sharing of information" (cited in Fisher, 2005, p. 185). Fisher, Durrance, and Hinton (2004) describe seven key elements of information ground: they can occur anywhere, the gathering point has another purpose than information sharing, different social types attend, social interaction is a primary activity with information flow as the by-product, there is both formal and informal sharing of information, information obtained from information grounds is used in a variety of ways, and people's perspectives and physical factors create sub-contexts within information grounds.

LIS and Leisure Studies

The final category of everyday information seeking focuses on the role of leisure. Sociologist Robert Stebbins (1994) has divided leisure activities into two areas: casual leisure, activities that are short lived and come naturally, such as watching TV, and serious leisure, that he considers "the systematic pursuit of an amateur, hobbyist, or volunteer activity sufficiently substantial and interesting in nature for the participant to find a career there in the acquisition and expression of a combination of its special skills, knowledge, and experience" (p. 173). Information activities can be undertaken in all three areas of serious leisure: amateurs, volunteering, and hobbies. Hobbies is the least studied area, yet is the most popular. Stebbins (2001) divides hobbies into five areas: collectors, activity participants, players, makers and tinkers, and liberal arts. Of these, liberal arts provides the most insight for LIS because according to Stebbins, liberal arts hobbyists seek knowledge for its own sake. This type of liberal arts hobbyist practices active learning by purposely seeking desired information. Stebbins contends that liberal arts hobbyists externalize what they have learned and make new relationships and meanings with what they know.

Hartel (2003) utilized Stebbins (1994) to discuss the hobby of cooking as it relates to LIS research. She emphasizes that LIS research has narrowly examined issues within everyday human experiences. Hartel champions serious leisure as a way to study information based upon information seeking and its central role in pursing hobbies. Stebbins (2001) and Hartel (2003) provide genealogy, specifically the work of Ronald Lambert, as an example of liberal arts serious leisure research, "which could be chronicled and serve as useful insights for library reference" (Hartel, 2003, p. 235).

Hartel ends by emphasizing liberal arts hobbies research as a way to add new knowledge to and build upon public identity of the LIS field.

Although all of these ideas and models for both cognitive and social aspects focus on information seeking, many of these studies do not fit with this research or the overall study of genealogists. For example, many of the processes studied or used as examples have beginning and ending points, producing a linear pattern of information seeking. Many of the cognitive studies lack explanation of socio-cultural factors. Some studies explain behavior and do not mention the impact of context, while others are focused on professionals and how they search. However, all of these models provide insight into the study of the information seeking of genealogists.

Although all of these ideas and models for both cognitive and social aspects focus on information seeking, many of these studies do not fit with this research or the overall study of genealogists. For example, many of the processes studied or used as examples have beginning and ending points, producing a linear pattern of information seeking. These would include the work of Bates (1989) and Kuhlthau (2004). Yakel's (2005) study of genealogists posits genealogy is iterative in nature, thus making a genealogy a constant or even cyclical process.

Many of the cognitive studies lack explanation of socio-cultural factors. Genealogy has been shown to be a very social activity (Dulong, 1986). If the theory accounts for socio-cultural factors, they do not mention the impact of context. The context for genealogical researchers is extremely vital due to the numerous types of institutions and resources available. Many of these institutions, such as county

courthouses, have strict rules and procedures that must be followed when utilizing their collections.

Other LIS studies focus on students or professionals investigating these specific user groups. The study of leisure activities, such as genealogy, is missing from the literature. Moreover, how these user groups search for information is negligible. However, all of the LIS models provide insight into the study of the information seeking of genealogists because they outline possible information seeking characteristics and allow for comparison.

Genealogical Literature Review

The use of information within social worlds is dependent, not only on the subject matter, but on other elements of the context of the social worlds, which affects how social members live and work. Referring to Taylor (1991), information use environments (IUE) provide a structure for examining the contexts and defining what the environments may be. IUE defines "those elements that (a) affect the flow and use of information messages into, within, and out of any definable entity and (b) determine the criteria by which the value of information messages will be judged" (p. 218). IUE provides a framework for understanding the users and analyzing the contexts within which they make choices about what information is useful and not useful. Because genealogists work in a variety of settings and institutions, understanding the elements of their context provides the framework for defining the specific user group and their information characteristics.

Taylor (1991) states, "each group has different kinds of problems over varying time frames, different ways of resolving those problems, and consequently differing information seeking behaviors" (p. 220). The context itself provides the means to

examine a set of people involved in a particular context, the problems of this set of people, the setting in which information is being sought, and how problems are resolved within the context.

Information Use Environments

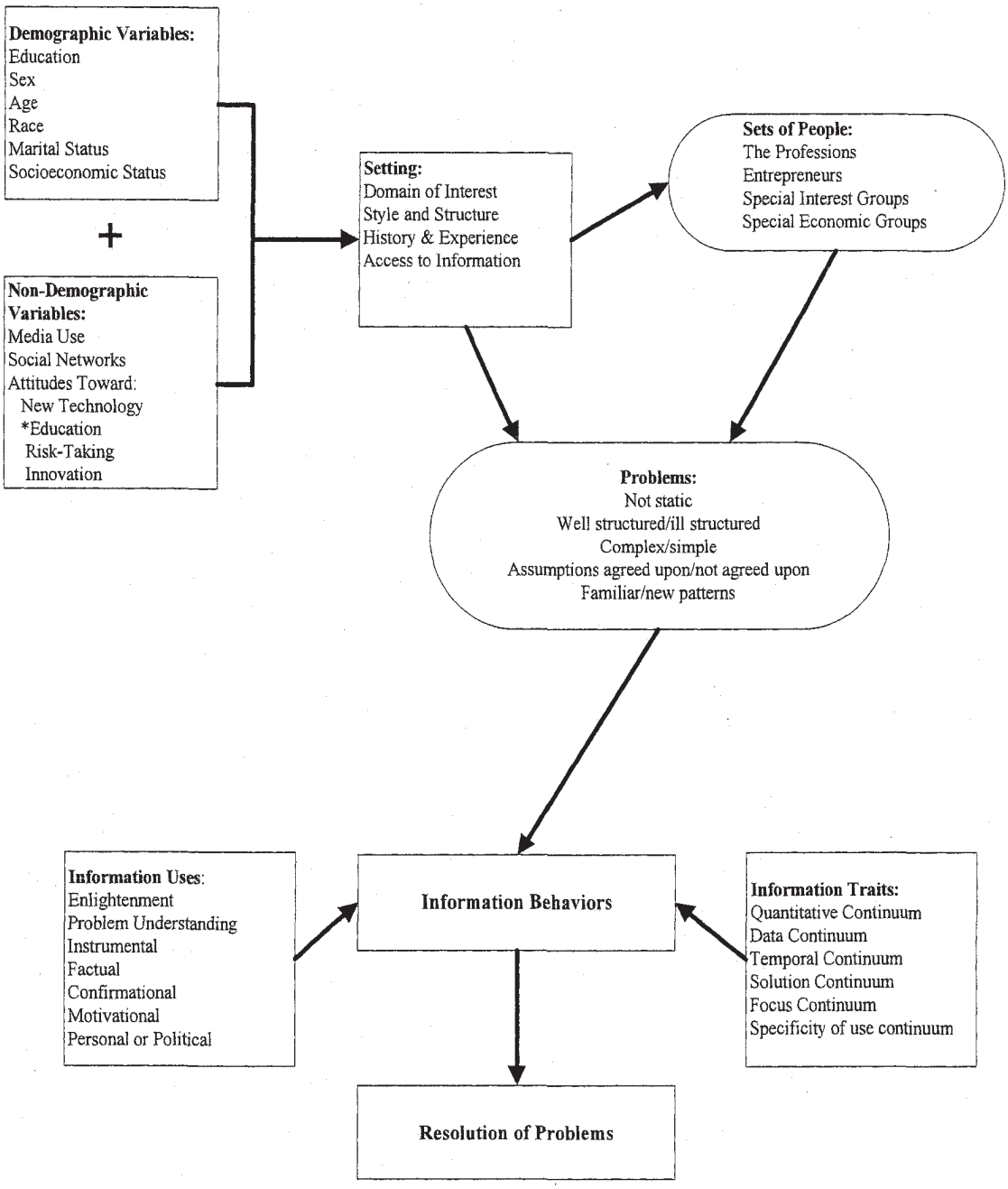
Taylor (1991) defines an Information Use Environment as "a set of people established on the basis of some set of variables and then labeled A, B, or C? Or is a set of people established a priori in a historical or social sense, i.e., doctors, engineers, farmers, etc., and then these groups are examined to determine their information behavior?" (p. 222). Taylor emphasizes that these groups are defined by socio-cultural factors. More importantly, each group's information practices are pre-determined based on these factors. Defining the group of people identified as genealogists must outline and identify the variables that in turn define the IUE. Taylor includes nondemographic characteristics of a set of people such as social networks, attitudes toward new technology, and education.

From a user perspective, Taylor (1991) acknowledges that problems are areas in which a user has doubts and searches for clarity through information. However, problems change with time and can spawn new problems based on several variables including relationship to the user and their previous experience, the setting being utilized, and the anticipated and actual end result. Furthermore, relevancy, based on the user's end result, can influence the type of problems. Most genealogists are interested in all time periods and retrieve information on specific individuals. However, to answer their information needs, the information can be found in many different sources from many different settings.

For Taylor (1991), the setting is "concerned with physical context and with ways of describing the context in which a specific class of people usually works and lives, and which affects the way they seek and make use of information" (p. 226). Genealogists traditionally begin their research in local organizations using libraries, archives, or historical societies. Taylor acknowledges that the mission and structure of different institutions and organizations will have a variety of effects on the information-seeking of their users. This includes how information is disseminated and organized, as well as the accessibility of the information.

The final aspect, which defines an IUE, is the resolution of problems. Taylor (1991) suggests that the focus should be to uncover "the way a given set of people view their problems and what they anticipate as resolution" (p. 229). Problems are not usually resolved by a single question and answer. "They pose different requirements on the type of information perceived as necessary, and hence different uses to which information is put in the process of resolution" (p. 229). Taylor proposes eight classes of information use, which are created by the needs of users in specific situations. The second section of the literature review will examine the IUE characteristics and contexts specific to genealogists. A visual representation of Taylor's IUE structure is provided in Figure 1: Lillard's representation of Taylor's IUE.

Figure 1: Lillard's (2002) Graphical Representation of Taylor's (1991) information use environment data structure*



*Used by permission of the author

IUE-People

Knowing the traits and characteristics of the genealogical user group provides the foundation for understanding how people in this group seek information. This would include describing the motivations and goals of genealogical patrons. Understanding genealogists' motivations defines why they entered the social world. Once individuals are part of a social world, then their demographic information can also be studied. IUE-People characteristics also include examining the influence of research experience, investment of time, and how research techniques are learned.

Motivations. There are a variety of motivations that drive individuals to participate in genealogy. Although they may differ from individual to individual, the goal or the anticipated end result will assist in determining the approach and process used for seeking information. Lambert (1995b) focused a large part of his study of the Ontario Genealogical Society on the motivations of genealogists. Overall, he found that people pursue genealogy primarily for three reasons. The first is to pursue family history in order to find out about ancestral past. Their goal is to uncover details about who, where, and how ancestors lived in order to learn more about them. The second reason is for self understanding or personal identity and reasons that come from one's ability to connect self with family and place.

The final reason for pursuing genealogy is to preserve knowledge of one's own past for future generations. The ultimate goal for this motivation is to leave family history information for posterity (Lambert, 1995b). The three primary motives were supported in recent studies of genealogists conducted in both New Zealand and in the United States (Kuglin, 2004; Lucas, 2005).

Of course, people also approach the doing of genealogical work as a vocation or a professional activity. This motivation is closely related to motivations of historians or biographers. These researchers share goals and utilize the same genealogical research techniques but their goals distinguish them from mainstream genealogists who pursue family history as a leisure activity or for religious reasons. Other genealogists prefer to provide assistance to other genealogists. This is demonstrated in volunteerism or providing reference or research materials for other genealogists (Lambert, 1995b).

Demographic. Overall, demographic surveys of genealogical populations have identified a unique population of users. Studies of family historians have shown that the majority of the genealogical population is female. The population is also usually over 40 years old and in many situations over 50. Studies have also found that genealogists have achieved a higher education level than the average population for both men and women. Furthermore, genealogists are typically locals, with the majority of individuals traveling less than 50 miles to their research site (Sinko & Peters 1983; Lucas, 2005). However, Gordon (1991), in a survey of national historical organizations, found that members of the National Genealogical Society traveled more often and farther than other members of national historical organizations. The studies focused on demographics identified a group of users who are local, women over the age of 40; however, this does not account for all genealogists.

Sinko and Peters (1983) surveyed users of Chicago's Newberry Library in order to capture demographics and assess how genealogical users view services. They found that there were a significant number of individuals who had started their research within a six-year period (1975-1981) and another significant population who were experienced

genealogists, noting that ten percent of Newberry's genealogical users were extremely active.

Jacobson, Kunz, and Conlin (1989) examined the social characteristics of members of Wisconsin genealogical societies. They found an older, predominantly female population and provided possible reasons for the overwhelming number of women who are pursuing genealogy. The researchers propose that social change, specifically social dislocation, returning to roots, creates a motivation for genealogy. Testing this theory, Jacobson (1986) found that social dislocation was not a major factor in motivations to do genealogical research.

Lambert (1995a) confirmed that certain demographics, such as an older (over 40) female population, held true for the Ontario Genealogical Society (OGS). Lambert also found that most respondents were white, educated, and Christian with their ancestry being primarily Anglo (British, Scotch, Irish, Welsh) and having lived in Canada or the United States for an average of four generations.

Recently Drake (2001), a psychologist, studied genealogists to examine genealogical behavior. She surveyed online genealogical website users examining their demographics, interest levels, generativity, and mobility, including sense of place. She found a largely female population mainly between 40 and 70 years of age. Overall, she confirmed that genealogists are generative in nature, connecting with other family members and sharing information in order to establish and guide the next generation. Drake was also able to link number of years of research to both genealogical interest level and behavior. This indicates that experienced genealogists, in terms of years of research, will be more active researchers.

Identifying users and training. Aspects closely related to the motivation of genealogists are their levels of experience and the time they invest in researching. These factors coupled with the motivation and goal of researchers provide insight into genealogists' information seeking processes.

Genealogists first learned to do genealogical research with trial and error search techniques, learned from other genealogists, read how-to books, or attended genealogy classes and workshops typically put on by genealogical institutions to teach various research techniques (Sinko & Peters, 1983; Lambert, 1995a; Drake, 2001; Kuglin, 2004; Lucas, 2005). In rare situations, genealogists learned how to do genealogy research work from a librarian or archivist. In fact, family historians studied by Kuglin did not utilize reference staff for assistance in finding resources.

Sinko and Peters (1983) indicated that 58% of genealogical users of the Newberry Library in Chicago had five or less years of genealogical research experience. However, more recent studies found most genealogists have ten or more years of research experience (Lambert, 1995a; Drake, 2004; Lucas, 2005). Sinko and Peters (1983) also indicated that 53% of users of the Newberry Library belonged to at least one genealogical society. More recent studies, (Drake, 2004; Lucas, 2005), indicate that the percentage of genealogists belonging to genealogical societies was similar to those of users of the Newberry Library.

Kuglin (2004) and Lucas (2005) found that the majority of researchers frequently pursue genealogy activities, spending time each week working on genealogy. However, these studies also identified a group of less frequent users who only spend a few days a month or less researching family history.

A key finding that emerges from the study of genealogical users is a difference in the number of individuals who considered their research abilities "expert" were equal to those who considered themselves "beginners" (Lucas, 2005). Thus, genealogists categorize their research abilities differently. This research demonstrates that there are segments of the genealogical community based on differences of their research or information seeking abilities.

Lambert's studies of genealogists. Lambert (1995b) posed 25 reasons for doing genealogy in a survey to the Ontario Genealogical Society. The top four reasons were to learn about roots, to learn about who I am (80%), to come to know my ancestors as people (79%), for posterity (73%), and to restore forgotten ancestors to the family's memory (55%). Lambert also included the question, what value does genealogy have for you? The most common response reflected a sense of discovering roots and identities. Lambert noted differences in age, with younger respondents more interested in self-identity. He also noted a difference in men and women. Women were more apt to note a social value of genealogy; men reflected a higher likelihood to produce a book or article, noting that genealogy is something to do in their spare time.

Lambert's (1995c) research also explores how individuals tied the past to the present in their lives. Lambert offers two explanations. Many individuals indicate that a special experience external to themselves, such as a death in the family or finding an old photograph, encouraged them to start. Others explain internal reasons such as fulfilling a curiosity about a family or ancestor or because of a love of history.

Lambert (1996a) also investigated active participation in genealogy, examining investment, practices, accomplishments, and what identity genealogists view as their

own. Using prior research, five role categories—researcher, archivist, registrar, chronicler, and identity—were created and posed to survey participants. Lambert's findings confirmed these categories of identity. Furthermore, specific traits were added to each category. The article also discussed traits of usage by OGS members. He also found that members used numerous resources and facilities and that 20% of respondents had invested time and resources for creation of information resources to assist genealogical groups.

Lambert (1996b) provided a summary of his findings to the academic world in *Time and Society*. He used his article to emphasize the different temporal perspectives and reasons for doing genealogy, based on his research of motivations. By identifying the past (one's ancestors), present (self), and future (posterity) as the most prevalent motivations, Lambert demonstrated different levels of identity building. He observed that "co-mingling" of the three temporal contexts aid in developing various roles within genealogists.

Lambert (2002) continued his investigation of genealogists in Australia. His research focused on the impact of convict ancestry on Australian genealogists. He found that most genealogists who had convict ancestry started their research prior to finding a convict ancestor instead of starting genealogy to find one. This fact addressed how descendants spoke about their convict ancestry. Participants assumed an identity based upon their ancestry, allowing them to develop interesting stories about their past. However, because their ancestors were convicts, genealogists also diminished the crimes in a variety of ways. Lambert argues the way convict descendants perform genealogical research and create individual and family identity is through narrative. In this way,

genealogists became agents in the creation of a collective identity. This in turn has influenced the way convict ancestry is presented and discussed in genealogical workshops, literature, and ultimately Australian history.

Sociological aspects of genealogy. Nash (2002) and Meehan (2004) both investigated genealogists to gain better insight into "connection to place." Nash explored the development of immigrant identity, finding that tourist genealogical researchers, traveling to and researching in a native country, could be disappointed based on imagined expectations created from self-narratives of family and place. Even though genealogy can create a complex social history, many times sense of identity may challenge a sense of belonging. Meehan (2004) describes how traveling to one's past ancestral location can itself connect self to place.

Kuglin (2004) surveyed users of several libraries that primarily or frequently serve genealogists. Her study confirmed many of the demographics identified in previous research. She reports that less than one quarter of her respondents learned to do genealogy through a course or a librarian, confirming that most genealogists are self-taught or learn from other genealogists. She also verified previous studies that demonstrate genealogists use multiple institutions and sources.

Reporting the history of genealogy, Hareven (1978) states that the surge of new genealogists is due to the search for personal, individual ancestral histories, as opposed to legitimizing pedigrees and famous ancestors. Jelks and Sikes (1983) describe the genealogical reference interview and indicate that one of the first things librarians must do is understand the motivations for doing family history.

In an attempt to encourage the academic study of genealogists, Erben (1991) identified psychological motives as a desire for gratification, closure, and religious beliefs are presented as motivations. He includes connections to important individuals, membership in organizations, and migration as sociological motivations. Erben's emphasis was to study genealogists as a possible lead to better understanding of patterns of family activity.

Genealogical communities. Genealogists have several avenues of social networking, one of the largest being a network of local, regional, and national societies. Dulong (1986) analyzed the membership and activities of societies and investigated their impact. Dulong observed that membership in societies was once a part of attainment of a lineage status, such as membership in the Daughters of the American Revolution or the Mayflower Society. However, membership in societies had changed; it had become a social activity. Individuals were joining societies to provide a sense of heritage identity and belonging. His study focused on the relationship and use of genealogical societies as social activities. Dulong's dissertation showed that membership in genealogical societies allowed individuals social and personal change. Genealogical research conducted by ordinary people, regardless of lineage status, had become the prevalent reason for joining genealogical societies. Litzer (1997) provided empirical evidence of genealogical society membership impact and involvement with libraries. His article lists several areas of mutually beneficial cooperation between genealogical societies and libraries. Litzer notes that libraries can provide genealogical societies an example of use of technological resources and systems.

In a study of historical document users, Gordon (1992) surveyed members of the National Genealogical Society (NGS). She found that 74% of NGS respondents indicated that they were avocational researchers. Most NGS researchers were not formally trained yet have a social system in place to continuously learn new skills while improving old skills. Gordon (1992) notes, "The genealogists are also active researchers who described fresh experience more often than any other group" (p. 19). She found that NGS members relied more on assistance from other researchers and learned from workshops and institutes more than any other organization.

The most recent area of interest in information seeking and genealogists is the online environment. Technology has also provided genealogists with another form of social networks. Free and proprietary genealogical websites, databases, and listservs have been created to cater to genealogists. Barth (1997) surveyed genealogists and archivists focusing on archival access technologies and their impact on genealogical information. Barth noted that most genealogists have current technical equipment, including genealogy software. In archives, Tucker (2004) examined the user-friendliness of archives' websites for genealogists. Results showed that archives are devoting online resources to aid genealogists in research. Veale (2004a) analyzed communication patterns of genealogists in online genealogical newsgroups. She found that communities were being developed in the newsgroups. Individuals who utilized the newsgroups frequented the site, while there was infrequent activity from those from outside the community. Veale (2004b) seeks to investigate the online community of genealogy even further. Her dissertation explores how the online environment meets the need of genealogists and the interactions and collaborations fostered by the online environment. Fulton (2005)

investigated networking of genealogists. She examined genealogical online networks and found that individuals rely on the networks as ways to communicate and connect with others. In another study, Fulton (2006) found that genealogists devoted a considerable amount of their leisure time to pursuing their family history. As they became more invested, they became more devoted to finding all the information they could about their ancestors.

IUE-Problems

"More than other groups the genealogists look for information about private life and citizens rather than public officials, and they are the least interested in institutions" (Gordon, 1992, p. 47). Family historians are constantly searching for a source or sources that contain some clue or information that will provide a connection to their past or lead them to the next source, clue, or piece of information. Once genealogists locate the specific information about a family member, they are able to make these connections. However, unlike many other library and archives users or historical researchers, their search is not complete. Uncovering each new piece of information leads to a new search and thus starts the process over again.

Mills (2003) provides a summary of types of genealogical problems. She indicates that some genealogists collect as many names and dates as they can find. Yet another group goes a step farther than finding names and dates. They research in-depth historical information on specific families or family members. Her final groups of genealogists perform exhaustive historical research following strict genealogical research standards to describe the history of a family or individual. These researchers gather specific social,

temporal, geographic, economic, religious, cultural, or other historical issues. Similar groups were identified by Duff and Johnson's (2003) participants.

Lambert (2003) provides more evidence of why individuals pursue genealogy as an activity. Ultimately, he argues that genealogy provides a way for individuals to create a symbolic past through personal ancestors. Furthermore, Lambert (2006) provides three modes of how reconstructing family history presents different ways of knowing; these modes represent ways of connecting to one's ancestral past. The descriptive mode is the collection of factual evidence about ancestors. The narrative mode explores and develops stories that reconstruct the ancestors. The experiential mode provides the instruments that act as evidence when reconstructing ancestors. Overall, investing in the different modes creates various levels of cognitive, affective, and intellectual development, thus creating symbolic bonds between ancestors and the genealogists who research them. Overall, genealogical problems can be identified through an awareness of users' motivations combined with an understanding of how genealogists plan to use the information they uncovered.

IUE-Setting

For genealogists there are several elements in the setting that can influence information processes. One element is the type of institution being utilized. Genealogists, many times, begin their research in local organizations using libraries, archives, or historical societies. Frequently, type of collection held or access to available collections in the institution determine usage (Lucas, 2005). Sinko and Peters (1983) found genealogists extensively use other types of facilities for research and most frequently use

the public library for both genealogical and non-genealogical purposes; however, most infrequently visit Newberry.

Gordon (1992) found members of the National Genealogical Society (NGS) prefer to use governmental archives and historical societies and do not frequently visit college and university libraries or museums. Gordon notes that it may be useful to educate genealogists on the benefits of underused institutions and to connect genealogists to the creation and use of governmental documents. Genealogists are the most frequent users of microfilm and prefer local, family history resources. NGS members also travel farther and stay longer, when searching for information, than the other historical organization members in Gordon's study.

In an examination of users of the National Archives, Conway (1994) indicates that 54% of all researchers were pursuing avocational or personal research and no more than half of all users in his study were genealogists. However, Conway found that 83% of microfilm room users were genealogists. This room accounted for the most usage throughout the year of any research area in the National Archives. Specific to genealogists' information seeking practices, Conway (1994) indicates "a personal network of friends and family, reinforced by special classes and information published by the Mormon Church, seems to be the most powerful source of information about the holdings" (p. 107).

Another aspect of setting that influences genealogical users is their relationships with the staff. Filby (1967) asserted that genealogists deserve attention from librarians. In a 1975 *American Archivist* issue, Kyvig (1975) states that archivists must familiarize themselves with genealogy and genealogists, even though dealing with this group of

patrons "demands a good deal more of archivists" (p. 510). Bidlack (1978) introduced librarians to services they could implement to aid genealogists. He (1983a) adds that getting involved with genealogists and genealogical organizations can aid in reference work and overall support of the library. He (1983b) supports his argument by pointing out the number of publications that are produced by genealogists, the number of workshops that are offered by genealogical societies, and the dedication of volunteers. Overall, he challenged libraries to assist genealogists.

Jacobsen (1981), writing from the perspective of state archives, contended that archivists must first re-educate themselves before educating genealogists. She states that genealogists are the largest user group and the most active supporter of her state archives. She points to the importance of genealogists in archives, stating, "we have a duty—a responsibility if you will—to make our records available to them" (p. 342). Jacobsen identifies physical arrangement of research rooms, reference services, charging for inquiries, and most importantly the training of genealogists to use archival guides as examples of things archivists can do to better assist genealogists. Meyers (1980) provided librarians with clues to sources that libraries may already house that aid in genealogical research.

Librarians and archivists have not been the only ones to describe and report on interactions with genealogists; historians have described similar sentiments. Cox (1984) describes genealogy as the most public type of history. Bryan (1986) argues that historical societies should join forces with genealogical societies. He provides examples of what his historical society and others have done to encourage and support genealogical

users. "Those agencies that are able to build a bridge or two [between facilities and genealogists] will probably benefit significantly" (Bryan, 1986, p. 33).

Amason (1988) created a framework for librarians. He focused not only on collection development but also on ways to improve reference service such as establishing relationships with local history or genealogical societies. Redmann (1993) described how genealogists have been underserved. She indicates that professional scholars have been the focus of archivists' reference services. She discussed how genealogical research methods are now more widely accepted as a type of scholarly research, providing supporting examples. This acceptance has led to better support for genealogists.

Boyns (1999) surveyed local authority repositories to investigate the impact of genealogists on British archives. Family historians were found to be the largest user group. Respondents acknowledged that genealogists were valued for their frequent use and mentioned that all users should be treated equally. Many of the repositories indicated that they purchased and kept non-archival reference sources that are relevant to genealogy materials. Most importantly, 48% of these repositories indicated that they conduct courses to help train family historians.

The final characteristic of setting that influences genealogists is that of technology. More and more genealogists create, disseminate, utilize, store, and find genealogical information using technology. Martin (2001) found that email is becoming the dominant form of remote communication. Lucas (2005) discovered, of genealogists in his study who have computers, most had at least 50% of their own genealogical information stored on them. More significantly, genealogy users of a public library and

private library listed the Internet as an important resource, with users of a genealogical society noting the Internet as their number one resource. Fulton (2006) found that genealogists devote a great deal of time and identified the Internet has an important source. Finally, genealogists use the Internet as a medium for exchanging information.

IUE-Resolution of Problems

This area of the genealogy IUE has received the least amount of research attention. However, work in other related areas can be utilized to gain a sense of how genealogists resolve problems. Research focused on humanities and historian users (groups who utilize institutions frequently visited by genealogists) has found that most researchers prefer to work alone (Stone, 1982; Wimberly et al, 1989). Bates and others (1996) researched the online information seeking processes of humanities researchers. They found that names, places, temporal eras, and other proper nouns were frequently used as search terms. Overall, they found that their participants tended to use online searching to supplement their research yet still relied heavily on primary resources. Collins (1998) found that subject terms were the most frequently used query terms. Martin (2001) verified Collins' findings of subject based query terms and added that genealogist based inquiries were also tied to specific collections and items in the collections housed in the archives. By studying historical research methods, Cole (2000) investigated the information seeking of Ph.D history students. The students used name-collecting as a research method. This method is used to narrow their searches to specific resources, looking initially for the name, to locate other valuable information. Name-collecting is also used to connect to information useful for their historical research. Conway's (1994) study of National Archives users confirmed these results, finding that

researchers tended to use date, name, place, and medium as elements of information requested.

Studies of information seeking of genealogists. In the first study that specifically investigated the information seeking practices of genealogists, Duff and Johnson (2003) interviewed ten experienced professional genealogists. The researchers distinguish between three stages of genealogical research that are based on experience and end-result. The first stage involves collecting names and dates of ancestors. The second stage reveals genealogists seeking detailed family information. The third stage, detailed by a participant, implicates a higher level of research. Researchers in this stage investigate locations and detail social structures and relationships and are able to connect this information to historical contexts. Duff and Johnson indicate that novice genealogists are in the first two stages. Expert researchers are in the third stage, if they "increase their historical or contextual knowledge in order to increase their access to personal information" (p. 84). This reinforces the impact of domain knowledge on information seeking.

Duff and Johnson (2003) indicate that there are four areas used by genealogists to uncover information: names, locations, dates, and genres. They indicate that based on this type of information seeking, most archival systems are usually not organized in a way to facilitate these types of inquiries. The expert user is shown to be able to connect record types and sources with information needs. "Thinking like a genealogist means figuring out how to access archival material" (p. 87). The experienced participants in this study had developed the ability to link data with records. However, because the genealogists

studied were professionals, they had developed into specific domain experts and could rely on similar research strategies drawn from previous experience.

Duff and Johnson (2003) also identified the social aspect of genealogical research. Examples were provided for interactions with archivists. Although their participants indicated that it was necessary to ask archivists for access for some collections, most of these interactions occurred at the beginning of research sessions. Expert genealogists preferred to begin their searches based on their own expertise with the system. When necessary, these professionals preferred to collaborate and network with colleagues rather than with archivists. This could be due to the genealogists' struggle with interpreting and understanding archival systems. To overcome this issue, genealogists have created parallel reference tools as opposed to using archives produced finding aids.

Yakel (2004) interviewed genealogists from southeast Michigan. Her participants were experienced, yet varied by age and gender. Yakel confirmed Lambert's (1995b) list of reasons for doing genealogy, finding that individuals' past experiences had eventually driven them to do family history. She also confirmed early research on sources for genealogy training. Yakel's (2004) greatest contribution is identifying the difference between traditional information seeking, which is end-goal oriented, and genealogical information seeking, which is process oriented. The more often genealogical researchers investigate, the more questions they develop. These questions require further research of increasing depth in terms of the variety of resources and the complexity of search strategies. These activities constitute genealogical work as an iterative information seeking process. Yakel also noted information sharing and social connectedness among

genealogists. This was noted in genealogical organization membership and related activities, including Internet activities.

Yakel and Torres (2007) continued the investigation of the community of genealogists. They found that genealogists experience self-identification and self-discovery through a variety of family historian roles. These roles are created through deliberate and thorough actions. Through this process, genealogists seek meaning by adding contextual information to family stories, records, and ultimately narratives.

Kuglin (2004) also examined information practices of genealogists. She found that many genealogists identified the location and title of a specific source prior to visiting a library. While in the facility, first time users interacted with reference staff and browsed the collections. However, on repeat visits individuals chose to use the catalog as well as browse but tended not to ask for assistance. In fact, 96% indicated that they ask for reference help one or less times in a visit, and 88% reported that they will look for a resource two or more times before asking for help.

Segmentation of genealogists. Although an IUE (Taylor, 1991) is made up of people with similar goals, interests, and problems utilizing the same institutions and organizations, research on social worlds has shown that a variety of levels exists within each group, such as in the recreational specialization models. Specific characteristics of members of the social world can be used to segment the group into sub-worlds. Specific to genealogists, Lucas (2005) found that there were equal numbers of individuals who considered their research ability experienced as those who identified themselves as novices. Conway (1994) found that the National Archives microfilm room had both inexperienced and very experienced researchers.

Archival intelligence. Yakel and Torres (2003) provide archival intelligence as the framework for investigating "the knowledge about the environment in which the search for primary sources is being conducted" (p. 52). They propose that the way in which archival information is sought, collected, and utilized is based upon the individual's level of expertise in each area. The researcher's knowledge of the specific family, individual, geographic area, or temporal era determines domain knowledge. Utilization and interpretation of specific information collected determines artifactual literacy. Domain knowledge and artifactual literacy make it possible for the user to judge whether the information collected is relevant and useful. They also determine potential ways in which the information can be utilized.

Archival intelligence refers to the specific practices that are carried out while seeking information and provides the framework for understanding the areas where information seeking takes place: knowledge of archival theory, practices, and procedures, strategies for reducing uncertainty and ambiguity, and intellective skills. Knowledge of archival theory consists of recognizing the language of archives, internalization of rules, and the ability to assess and compare one's own knowledge-base and that of the reference archivist (Yakel, 2005). The language of archives includes language and terminology specific to archival facilities, collections, bibliographic tools, and staff. Sweeney (2002) found that researchers struggled to locate specific information due to a lack of archival knowledge. Knowledge of language and rules enables users to interact within the facility. Understanding the rules allows for better development of routines and practices of research.

Expert users are able to focus more on research problems and strategies and less on internalization of rules. "The ability to articulate a lack of knowledge and then act on this information need appears to be a sign of researchers being able to manage the archival system and get it to respond to their information needs" (Yakel & Torres, 2003, p. 67). Experience develops confidence in the reference professional and his or her ability to assist the researcher. In archives, experienced users frequently refer to the LIS professional for expertise on collections and bibliographic tools (Sweeney, 2002). However, the researcher can overestimate the ability of the reference professional resulting in a hindrance of the search process.

As demonstrated by an array of information studies, patrons utilize facilities in search of answers. Many times users do not know what they are looking for or how to look for the answers they require. In archives, this presents a formidable obstacle because of individual access systems and collections within each facility, which may differ from institution to institution. Sweeney found that ultimately, different types of finding aids and archives require different types of orientation and usage. Reduction of uncertainty in archives can be identified in two categories: ability to develop search tactics and the ability to ask questions that relate to their specific information need. Expert users, through prior experience, are able to better connect the facilities' rules, collections, and finding aids to their specific research query. Novice users, on the other hand, struggle with identifying problems and the ability to conceptualize and identify key sources to solve problems. Drawing from similar experiences, reviewing previous research, and investigating online sources, expert users seem to also better prepare for their visit to the archives. Expert researchers are also able to better formulate questions. They not only can

form questions better aimed at their information gap but also provide contextual information that aids the reference professional in helping them understand the researcher's situation (Yakel & Torres, 2003).

Yakel and Torres (2003) define intellective skills as "the user's capacity to understand the representations of documents, activities, and process" (p. 73). One aspect of intellective skills is the ability to prepare a research strategy. Preparation not only includes the ability to plan ahead but in identification of a beginning point. Experts are able to make connections between facilities, research problem, and strategy needed to find the answer. The second part of intellective skills while researching within archives is the ability to understand the relationship between aids, catalogs, and other surrogate records and the primary sources they represent. Experts are able to make a smoother transition between representations and actual sources. Yakel and Torres emphasized the need to make these transitions based on the number of online surrogates that are becoming available, as well as the different types of representations that may be used.

Archival intelligence represents a way to segment archival users into experts and novices by examining their information seeking strategies. Archival intelligence provides a unique approach for studying information seeking in cultural institutions because of the focus on specific information practices. All three areas of expertise identified by Yakel and Torres (2003) are needed to precisely search for and utilize primary sources. However, archival intelligence provides a framework for separating and investigating the information seeking aspects of primary source research. This framework can be used to analyze the information seeking processes of genealogists. This perspective allows for an

examination of various traits of information seeking and may be of use to possibly segment genealogists into groups based on their approach to information seeking.

Conclusion

Overall, the reviews and studies that have focused on genealogists and/or users of institutions that house potential genealogical information outline a specific user group. The demographics, motivations, and relationships with others specific to genealogists have been studied for over 25 years. With this information, the LIS community must begin to understand how this unique group goes about using the institutions and most importantly the information from these institutions. Only a handful of researchers have started this research, and of this group none have studied genealogists in the context of searching for information. Of the studies in LIS that have specifically investigated the information seeking of genealogists, none have questioned and observed family historians in context. Duff and Johnson (2003) and Yakel (2004) interviewed genealogists as a methodology for investigating genealogists. Genealogists completed questionnaires while in New Zealand libraries (Kuglin 2005). To add to our knowledge of genealogists, we must understand how they approach and carry out information seeking in context.

With regards to investigating information seeking of genealogists in context, the archival intelligence theory framework allows for a better understanding of specific information seeking tactics and strategies. Additionally, Mills' (1999, 2003) work provides the framework for possibly segmenting users into distinct groups based on their information seeking characteristics.

Chapter 4: Methodology

This study employed a grounded theory approach as understood in the work of Strauss and Corbin. Essentially, it involved the study of individual episodes of information seeking by individual researchers in three kinds of institutions that serve the needs of family historians. The unit of analysis was an information seeking episode. An episode is defined as a single information seeking session undertaken by an informant. Allowing for multiple searches, the episode began with an informant's entrance into a facility and ended when he or she exited the facility. Data were collected through a variety of interview and observational techniques and conducted by a single researcher. The methods were selected to capture and describe the experience of information seeking from the user's perspective.

A qualitative research method was employed to investigate these experiences. Wilson (1981) states that qualitative research lends itself to studies focusing on information seeking in everyday life, allowing for a better understanding of the information need and the individuals' meaning generated by and through information seeking processes. Another reason to use a qualitative methodology is that it allows the researcher to conduct the study and gather the data in context. As Littlejohn (1999) suggests, "Our meanings for events derive from interaction in particular time and places...depending on the context in which we are working" (p. 176). Thus, qualitative methodology utilizes the meanings, interactions, and experiences obtained directly from the point of view of the genealogist and allows for multiple interpretations. Qualitative research fits well with the theoretical framework of social constructionism as it is designed to capture the constructed reality of individuals in everyday life.

According to Grover and Glazier (1985), another reason to use qualitative methods is to investigate an area that has not been extensively researched. A qualitative study should provide insights that will identify topics for which further research is needed. Although there have been a number of interesting studies of genealogists, most of these studies have been conducted outside of LIS. "Where we know little about the field being examined, it is wise to explore it in an open-ended manner to ensure that all relevant processes and structures are identified and considered" (Stebbins, 2001, p.163).

Grounded theory. Specifically, grounded theory allows for the creation of a model or theory that explains a situation "in which individuals interact, take actions, or engage in a process in response to a phenomenon" (Creswell, 1999, p. 56). Glaser and Strauss (1967) suggested that grounded theory studies should allow the categories of interest to rise directly from the data. This development should lead to a theory based on observations of the process being investigated. Grounded theory was chosen to complement the framework and theoretical lens supporting the investigation of information seeking in everyday life. Furthermore, Artinian (1986) argues that grounded theory provides researchers with the ability to identify processes that describe the characteristics of a specific social group. Charmaz (1990) addresses the issue of using grounded theory within a social constructionist framework. She acknowledges the basis of grounded theory as creating categories and patterns that provide a holistic picture of what is being studied. However, Strauss and Corbin (1998) propose that individual responses in the data should be compared to information from the literature. For this reason, Taylor's (1991) information use environment (IUE) and Yakel and Torres' (2003) archival intelligence theory were used to help guide the structure of the research, which

focused on genealogical researchers as a group, the settings they utilize, their information problems, and how they seek information

Rather than interpret, create, and apply categories defined by previous literature, the information seeking processes of genealogists, defined and exhibited in their natural context, were used to create the categories of analysis. These categories were used to support, refute, or add to our knowledge of the genealogists IUE and archival intelligence theory as applied to genealogists.

Limitations

This study describes information seeking as it is understood, experienced, and described by individuals working on family history research. While there are millions of individuals who participate in genealogy, the findings presented are based on data collected from a limited number of individuals in a small number of locations. The participants in this study do not provide a representative sample. Because the three libraries were intentionally selected and all the informants were volunteers, this study represents a purposive sample. With the size and type of sample, no claims to generalizability of results to other populations can be made. Even so, this study does provide a first-hand account of the information seeking of a select number of genealogists seeking information in three different institutional research contexts.

The amount of data gathered is another limitation of the study. Data was only gathered from three institutions. Furthermore, each informant was only observed and interviewed during one information search session. Defined as an information seeking episode, informants determined both the length of each episode as well as the nature of the activities undertaken in each research session. The fact that the sites selected were

purposive and not random is another limitation of this study. There possibly may be patterns observed in some types of libraries or geographic locations that are idiosyncratic and thus not representative of the same kinds of institutions located for example in other parts of the country. The results of this study provide insight into the information seeking behavior of a group of select genealogists, within a single information seeking episode, in a specific location. The results of this study recreate the information seeking processes of a specific group of individuals who participate in genealogy activities, while in this social setting.

Another limitation lies within the purpose of genealogy. Studies have shown that genealogy can produce very personal and potentially private information. Individuals experience self-identity, self-discovery, religious enlightenment, and create or refresh memories through genealogical discoveries. At times, these findings are unexpected. Participants were informed that if at any time they did not feel comfortable, they could elect to back out of the study and all materials would be erased or destroyed.

Finally, social constructionism admits the possibility of multiple interpretations of any data set. To support my interpretations and conclusions, I utilized several methods of data collection to capture words and actions of informants in social interactions, resource interactions, and interviews. The methods selected included interviewing, talk-in-action, and observations. These methods examine the information seeking process discussed by and performed by genealogists.

Issues of Access, Distance, and Ethics

Two issues faced by qualitative researchers are access and distance. These issues deal with the acceptance of the researcher into the community being researched (access)

and the investment the researcher applies to his/her research group (distance). In order to focus on both issues, I have relied on my own involvement in the research community. In terms of access, I have studied my own family history for about twelve years. The topic for the study grew out of my own personal involvement with genealogy. Consequently, my own genealogical research provided me with knowledge of and access to social settings and networks, and an understanding of the vocabulary of the informants. Moreover, the actions and words of the members of the group studied are much easier to interpret if the researcher is a participant in these activities (Van Maanen, 1988). Although I am not an active participant in this study, I am an active participant in this community. To preserve distance during the data collection, I separated myself from the information search being conducted. Most importantly, I did not serve as a bridge between my informants and the information problems they were researching. In addition, the data collection process I used in this study resulted in a set of field notes and transcriptions of electronically recorded interactions. These strategies also offer a measure of distance that is useful to a researcher in analyzing data collected in naturalistic settings.

Ethics. Privacy and anonymity were also ethical concerns. This study considered multiple perspectives with regard to ethical guidelines. In order to begin this research, initial permission to use human subject was submitted to the Institutional Review Board for Treatment of Human Subjects at Emporia State University (Appendix B). This application was accompanied by all informed consent forms. These forms were developed using the board's guidelines. After receiving the signed human subject application, permission was obtained from each institution before any research was

conducted (see Appendix C). The institutions were provided with a list of research tools, including interview questions and observation techniques that were used. The institution also had the option to discontinue the research at any time and request that all research materials be destroyed. After completion of the dissertation process, all participating institutions will receive a final version of this study.

Permission to interview and record was also obtained in writing from each participant. During this process, participants were informed that all information gathered during their interviews and/or observations would be made available to them upon request. As with institutions chosen as study sites, each informant was asked to fill out a permission form (see Appendix D). This form described their participation and explained to them that they had the option to discontinue the research at any time and request that all research materials be destroyed. The final area of permission, unique to this study, relates to individuals with whom the genealogist interacts during the information seeking session. For staff at study site institutions, permission was asked prior to the research session by way of a permission form (see Appendix E). The permission form was also provided to these individuals following any interactions with the informants that took place. As with the informants, if any staff or patrons had refused permission at any time, any and all recorded interactions between the informant and the individual that refused participation would have been destroyed. Privacy and anonymity of all individuals involved with the project was ensured. For the purpose of maintaining confidentiality, I assigned abbreviations and numbers to the participants. Each participant was identified by the abbreviation of the library he or she was using along with a number (i.e., Genealogical Society Participant 1 is GenSococ1; Public Library Participant 1 is Public1;

Proprietary Library Participant 1 is Prop1). These assigned aliases were utilized throughout this dissertation. Demographics for each individual participant is provided in Appendix I.

Research Design. This research observed genealogists who were searching for information in natural settings. This study also included investigating information seeking of genealogists at multiple locations. Obtaining access to both public institutions and individuals who visit them posed a major challenge. Lofland and Lofland (1995) believe that researchers are more likely to gain successful access to different situations if they make use of previously established contacts. Because I have conducted a previous study and have presented at library and genealogical meetings, I was able to gain access to three genealogical institutions.

Institutions

Grounded theory studies are based on data occurring in context. This study investigated how genealogists seek information in a variety of physical settings. The institutions selected catered to genealogists and had missions to serve genealogists. Due to their mission, the institutions provided immediate access to genealogical materials for patrons. Data were collected from genealogical users researching in a specific site. These sites were purposefully selected because they have slightly different missions, offer different collections, and have substantial access to genealogical information. The three that were selected and agreed to participate included a proprietary library, a public library, and a historical and genealogical society. These types of institutions have been frequently rated as some of the most visited by genealogical users (Kuglin, 2004; Lucas, 2005). Furthermore, multiple sites were selected due to the potential for providing insight

into the broad range of information seeking processes utilized by genealogists in order to reduce research costs. I selected specific research sites because of their geographic proximity to my home.

Three libraries (proprietary library, public library, and a historical/genealogical society) were originally asked to participate. Two of these three (proprietary library and genealogical society) accepted and completed the permission form. The other library (public library) declined based on the policies of the library. Permission was then sought and received from another public library. All three sites are located in two large, urban communities in the Midwest.

Proprietary library. The first institution selected was a proprietary library. The smallest of three institutions, this library consisted of a reference desk, six computer stations, and four microfilm/fiche readers. There is one table available for patron use. This special library houses some reference materials, various research tools, and two microfilm/fiche cabinets. All computers have internet access and genealogical software; however, the library does not subscribe to any proprietary databases. The library does offer access to millions of microfilm/fiche records available from their parent library via interlibrary loan for a small fee. Reference service is provided by volunteers. Library hours are limited, being open four days a week for a total 21 hours. Hours consist of three four-hour sessions during the day and three three-hour sessions during the evening. No weekend hours are available. Reference staff size varies from one, in the evening, to two or three during the day time. In 1997, 1,182 people signed in on the daily attendance sheet.

Genealogical society. The second site I selected for examining information seeking was a historical/genealogical society. Referred to in this study as a genealogical society, this library's mission also includes collecting and preserving local history. The society does charge for membership, which includes free usage of the library. Non-members must pay for the privilege of using of the facility. In 1997, there were 348 members. The current location of the library is in a house containing three floors of genealogical and historical materials. The main floor (2nd floor) contains research tools, reference materials, state book collections, microfilm, and new materials. The main floor is also the location of the reference desk, one computer, and one microfilm reader. The upstairs (3rd floor) mainly consists of collections of newsletters, journals, and other periodicals published by state, regional, or county historical/genealogical societies. The basement (1st floor) houses the local history collections. City, county, and state records including directories, cemetery listings, obituaries, and court records are found in the basement. Published family histories are also included in this collection. Each floor has multiple tables and chairs for patron use.

The library has access to other materials from other state libraries via interlibrary loan. Like the proprietary library, the genealogical society has an internet connection, as well as wireless internet capability, but it does not subscribe to any proprietary genealogical databases. As in the proprietary library, assistance is provided by volunteers, with one working reference and at least two others working on accessioning and cataloging materials. The library is open two days out of the week: Tuesdays and Saturdays from 9 to 5. Beginning in mid-April and ending in October, the library is also

open one evening a week for four hours. During the time I visited the library, January to May 1997, 507 people signed the daily attendance sheets.

Public library. The third site included in this study was the public library, and it represents the largest site and the most heavily utilized. The public library is a branch library for a metropolitan library system; however, the library's specific mission is dedicated to genealogical research. Located all on one floor, the library has several large collections areas including state and county books, directories, microfilm, periodicals, and new materials. In addition, the library has a separate microfilm reading room, ten computers, and numerous tables and chairs.

The library has access to Internet but patrons must log-on using their library cards and are limited to one hour of use at a time. If no one is waiting, patrons may have their times extended if they ask a librarian. However, because it is a public library, any patron with a library card may utilize the computers to surf the web, regardless of whether or not they are doing genealogical research. The library subscribes to multiple proprietary databases, all of which can be accessed through the library's Internet connection. They also have access to numerous local, state, federal, and international records on microfilm/fiche via interlibrary loan. Some genealogical collections are available for check-out. However, they are not located in the library; rather, they are located in the branch public library next-door to the public library.

The public library is the only library that utilized paid librarians, employing three MLS-degreed professionals along with other full-time and part-time paraprofessional employees. The library has integrated staff workstations as reference desks, and they are located at two locations in the library. The library is open 65 hours a week, including four

evenings and all day Saturday. In 2007, 73,742 patrons visited the library. For June and September 2007, the two months in which I carried out research, the attendance was 6,256 and 6,122 respectively.

Selecting Informants

Informants were selected based upon two criteria. First, the individual had to be seeking family history. Library visitors seeking local history or doing other kinds of historical research not directly related to researching one's family were not included. Second, the individual had to be visiting the library in order to perform at least one information-seeking session as defined below, not simply making an enquiry.

Information seeking episode. Following the example set by Sweeney (2002), a single, chronologically continuous information-seeking episode was used as the unit for data collection and analysis. For genealogists this does not mean that they have to be researching a single individual, family, resource, etc. It means an observation and talk-in-action recording session began when a genealogist entered the institution to search for information, and it ended when the individual left the building. The availability and the patience of the genealogist determined the length of the information seeking session. If the genealogist left the facility and returned the same day, this was counted as two information seeking episodes and only the initial session was included as data in this study. This occurred with four of the participants at the public library. Furthermore, if the participant returned to the library on a different day while I was collecting data, only the initial information seeking episode that they agreed to participate in was utilized. This occurred once at each library.

Recruiting participants. Individuals were selected through active recruiting. This form of sampling is referred to as designated theoretical sampling (Creswell, 1998). The two methods used to recruit participants were sign-up sheets or I simply asked patrons as they entered the library. Sign-up sheets were posted at the entrance of each institution next to the sign-in sheet. Patrons who wanted to participate provided their contact information on the sheet. Library staff passed the information along to me and I contacted the individual to set up a research time. Volunteers for the study were also recruited through local genealogical societies. I discussed my dissertation at three local genealogical society meetings. Other individuals were asked as they entered the institution if they would be willing to participate. The number of participants and the mode of recruiting were based on the specific location. Twelve of the participants volunteered prior to their library visits, the other thirteen were asked to participate as they entered the institution. One individual at the genealogical society and six individuals at the public library refused to participate in the study when asked as they entered the library.

Individuals willing to participate and who met the criteria were asked to participate and subsequently to fill out a permission form. After obtaining permission, I asked respondents to participate in a pre-interview. Creswell (1998) states that a total of 20 to 30 informants should be the overall sample size for a grounded theory study. At the outset of the study, I proposed to start with a minimum of eight informants at each facility (24 total). The number of informants was also proposed to be balanced across the three institutions. Due to a small number of patrons at the proprietary library, only four individuals participated. In order to saturate the data, five additional patrons were

recruited as participants in the study from the public library. Table 1 provides a breakdown of the number of participants for each library and the type of recruiting that occurred.

Table 1

Mode of Recruiting used at each Facility (n=25)

Facility	Number of Participants	Asked as they entered library	Volunteered prior to their visit to the library
Genealogical Society	8	7	1
Proprietary Library	4	4	0
Public Library	13	2	11

Data Collection Methods

Multiple data collection methods were selected and utilized. Following the grounded theory framework and the purpose of this study, the specific phenomenon of information seeking was the goal for data collection. This means the context in which information seeking is occurring was also accounted for in the data collection techniques utilized. The theoretical framework of this study acknowledges the importance of both the language used to describe the activity and the language and actions used during this activity. With these issues in mind, interviewing, observations, and talk-in-action were the data collection methods used to collect the experiences of genealogists. All interviews and talk-in-action occurrences were recorded using a digital recording device.

Interviews. Interviews in a sociological study are designed to identify the informants' experiences and values that help them to create their own meanings. Rather

than remaining neutral, researchers are encouraged to be active and allow individuals to provide the fullest account of what they are studying. Holstein and Gubrium (1995) feel that, "treating interviewing as a social encounter leads us rather quickly to the possibility that the interview is not merely a neutral conduit or source of distortion but rather the productive site of reportable knowledge itself" (p. 3). An active interview means probing informants to provide limits, rules, and comparisons. The reasoning behind being an active interviewer is that this stance enables the researcher immediately to interpret data by listening and following up on the information and understandings revealed as the interview proceeds. Interviews adhering to a social constructionist framework should be viewed as interactions that allow participants to uncover their own social reality (Wood & Kroger, 2000).

This study included two types of interviews. The first interview was a pre-interview (Appendix F). Semi-structured pre-interviews investigated individual's perceptions of the information seeking process. For example, one of the questions asked participants to describe how they planned on searching for material. This interview also aided in determining the research areas and demographics of informants.

Following selection and consent, prior to their information seeking session, each individual was interviewed. These interviews examined how individuals say they seek information. The questions were framed by the three aspects of archival intelligence but were also guided by the institution, collection, and information need of the participant. Each interview was recorded and transcribed verbatim by the researcher. The second type of interview was a follow-up interview (Appendix G), which took place immediately after the information seeking episode. The follow-up interviews were used to discuss

observations, to clarify statements, or to expand on ideas presented during the information seeking session. The interviews also asked participants to describe their next research steps. The follow-up interviews were recorded and transcribed verbatim by the researcher.

Observations. For this study, I acted as an overt, non-participant observer. This allowed participants to actively seek information following their normal routines, knowing, however, that they were being observed. As an overt observer, I did not interact with the participant during his or her information seeking episode. However, due to space constraints, observation occurred in close proximity to the participant. Non-participant, structured observation was used to collect non-verbal data that occurred while the informant was seeking information. Pre-defined categories of behavior and actions were used to collect observation data (see Appendix H). These categories were based on areas identified through previous research, the archival intelligence theory, and potential types of interactions.

Talk-in-action. Recording and observing participants who are interacting with others during the information seeking process provided another type of data collection. This included observing interactions with other researchers, institution employees (librarians, pages, archivists, curators, etc.) or any family members involved during the information seeking process. Talk-in-action was captured through recording individuals as they interacted with others during the information seeking session. This methodology has been used in museum settings to provide insight into meaning making activities (Silverman, 1990; Feinberg & Leinhardt, 2002). All talk-in-action episodes were transcribed verbatim by the researcher.

Although talk-in-action recordings were gathered at all locations, the frequent movement of participants and logistics of a recording device inhibited gathering all conversations and impacted the quality of all the audio recordings. During transcription, many of the conversations were found to contain words that were inaudible. For this reason, the data gathered in talk-in-action was used for contextual purposes only. This data was used to identify the types of issues and questions participants were discussing. Talk-in-action was originally selected to capture the creation of social reality through recording conversations and talk aloud responses. Again due to the quality, recordings were ineffective in providing quality data.

Handling data. There were also problems that go along with trying to capture naturally occurring communication. One cannot be expected to completely transcribe the data while in the collection process; thus, electronic recording of the data can be very helpful, although it also presents several problems. The first problem is related to difficulties in making a sound recording in a public space. The physical surroundings, volume, pitch, and timing of the interactions have to be considered. Furthermore, the very act of being recorded may inhibit informants in the free expression of their opinions. In addition, there are always ethical issues involved when one makes a permanent record of an interaction in this way. Permission was obtained from all parties involved. However, asking for permission to record may have also hindered natural discourse. The final problem is accounting for non-verbal actions related to language. Non-verbal data can be as useful as verbal data. Transmission of the message relies on non-verbal signs and cues. If language is action, then non-verbal actions provide the stage for meaning to be made. During observations, attempts were made to note non-verbal actions.

During and immediately following each data collection opportunity, field notes describing any activities were logged into a notebook. These consisted of field notes made during the interviews and the information seeking episode by the researcher. Each interview and talk-in-action recording was transcribed verbatim as soon as possible after the data had been collected. All transcriptions were done by the researching using a computer. Data analysis began following a review of each transcription. The first step was to print off each transcription. Identified aspects of data that were coded and provided clues or answers to the research questions were noted and highlighted, including specific quotes. This coding was done manually using a variety of highlighting colors to identify specific quotes related to the initial categories.

Timeline. The timeline for this study was based on the number of users and the hours of the institutions. Some of the institutions were only open a few days a week and then only for a few hours a day. Although I designated that the minimum number of participants from each of the three libraries would be eight, the goal was to have potential data categories saturated. Categories are saturated when no new relevant information on information seeking is gained from further data collection. A grounded theory approach permitted coding and creating of categories to take place between data collection episodes, allowing me to have a better idea of when categories became saturated. Once it was determined that the categories had been saturated, the writing of the results and discussion sections of this dissertation began.

Overall, data collection began in January 2007 and lasted until September 2007. Data collection began at the genealogical society. The genealogical society was visited 20 times over a five month period: twelve Saturdays, four evenings, and four Tuesdays.

Eight individuals participated from the genealogical society. Due to infrequent patronage, 13 of the 20 visits did not result in participation.

Data collection at the public library took place in June 2007 over a three day period with eight genealogists participating. Immediately following the visits to the public library, data collection began at the proprietary library. From June to August 2007, twelve visits (five during the day and seven in the evening) to the library took place and resulted in four participant sessions. During those twelve visits, only six patrons visited the library. Because of the small number of library patrons at the proprietary library, another visit to the public library was scheduled. One reason for the low visitation rates could have been the time of year. In September 2007, I visited the public library for another three days. Five individuals were recruited and participated during these visits.

Data verification. The data collection methods employed in this study were created to gain insight into how informants described their information seeking processes and experiences. The goal of multiple data collection techniques is not triangulation to build and support a thesis using different methods. Rather, by utilizing thick description, defined as using individual's words and meanings within context, this study gained a better view of genealogist's own experience while seeking information as it occurred in a natural setting.

Data Analysis

In following with a grounded theory approach, coding was done at different levels of the data collection and analysis process. Open coding was the initial examination of the data to form categories in order to segment the data (see Appendix J for open coding categories). Strauss and Corbin (1998) define a category as a unit of information

composed of events, happenings, and instances. Open coding occurred throughout the data collection process. During open coding, the constant comparison method of data analysis was used to examine and re-examine the data and categories that had been created.

During data collection at the genealogical society, words and actions were identified that came up repeatedly during the observations and interviews. These items were used to create themes, which were used to develop an open coding system. This coding system was continually reviewed, added to, and refined as data collection continued at the remaining two libraries (see Appendix H for categories suggested during observation). The open coding system evolved into overall system that was used to identify repeating patterns, themes, and explanations. Following observations and transcriptions of the interviews, coded data was displayed in an excel table in which I inputted supporting information for each theme.

Following open coding, the analysis and axial coding of this study was done using transcriptions of interviews, talk-in-actions, and observations utilizing NVivo-7™, a qualitative analysis software tool. The software is a database system that imports transcribed interviews and other information sources. This system allowed for querying of data as separate and aggregate coding based on informant responses and observations. The process of coding was not automated by the software and still required the selection and assignment of specific data sets into appropriate coded areas. The data sets queried through the software were compared and contrasted to the initial coding categories that were created throughout the data gathering process.

Using the software, axial coding followed open coding and allowed for new ways to examine the open coded data. This allowed for identification of a central theme and also for explanation of specific conditions, strategies, and consequences that occurred. Specific actions and quotes were identified to support specific themes. The last coding was selective coding. This final process provided a discussion of axial coding presenting a larger picture of the phenomenon (Creswell, 1998). This coding process looked at connecting themes and led to the development of models describing the information seeking processes.

This study not only sought to describe the information seeking process of genealogists but also to determine if there were differences in information seeking strategies and approaches among the genealogists I observed. Open coding was used to identify similarities and differences in the way individuals seek information. Next, axial coding was used to identify relationships and strategies of differences and similarities in information seeking. Selective coding examined the similarities and differences in categories. The characteristics of individuals were analyzed to compare similarities and differences. This allowed for an examination of potential segments of the participants based on their information seeking processes.

Chapter 5: Research Results

The purpose of this chapter is to describe, summarize, and analyze the data as it relates to the frameworks presented in the previous chapters and consider the "fit" between the data gathered and these frameworks: Taylor's Information Use Environment (IUE) (1991), Yakel and Torres' Archival Intelligence (2003), and social roles segmentation in the work of Unruh (1980). The final section of this chapter explains how the data answers the five research questions posed at the outset of this study.

Taylor's Information Use Environment

Taylor's (1991) IUE structure was chosen as a framework for this study because it provides a foundation for understanding how groups of people search for information and a way of categorizing and describing separate characteristics that define these groups. The first explores the demographic (age, sex marital status) and nondemographic characteristics (social networks, attitude towards technology) of a group of people to see if differences in the group account for specific information behavior. The second category consists of the information problems that drive the search and characteristics of these problems. Specifically, problems are conceptualized as the "kinds of information sought and in the uses made of the information" (p. 225). The third category describes the setting or environment in which the information seeking occurs. The fourth and final category takes into account how individuals in the group resolve problems. Taylor suggests that the context in which individuals seek and use information allows them to "make choices about what information is useful to them at particular times. These choices are based not only on subject matter, but also on other elements of the context in which a user lives and works" (p. 218). Thus, to truly examine an IUE, one must explore what is

happening within the users' contexts. Although genealogists have been researched, there is yet to be a study that examines how the IUE and its categories are defined within the context in which information seeking occurs.

Archival Intelligence

One of the contexts that genealogists utilize is archival institutions. Yakel and Torres (2003) suggest information seeking and usage in archives are reliant upon three areas of expertise: domain knowledge, artifactual literacy, and archival intelligence. The fact that genealogists work with and research primary documents beg the question: Do the principles of archival intelligence relate to genealogists who are researching in non-archival settings?

Segmentation of social worlds

The final framework for this study, provided by Unruh, relates to the social roles enacted by genealogists during information seeking. Unruh (1980) conceptualizes a social world as that which unites individuals who are following, or are active in, a central phenomenon. Furthermore, he indicates that roles develop in the social world based on the amount of activity, beliefs, and relationships created in the pursuit of the phenomenon. In this case, the phenomenon is family history-related activities. Recreation and hobbyist research scholars have found that social worlds and membership levels exist in other hobby/pastime activities (Stebbins, 2005; Scott & Shafer, 2001). If genealogists are a social world, are there various segments groups defined by certain characteristics that can be identified through the information-seeking process?

Relationship of the three frameworks

Taylor's (1991) IUE was selected to provide a framework to better understand genealogists as they seek information. The elements identified by Taylor allow for an investigation into the people, context, and information characteristics of the participants. Archival intelligence (Yakel & Torres, 2003) supports the IUE framework by providing a lens in which to examine how individuals in this study approach information seeking while potentially utilizing primary documents. In addition, segmentation takes elements identified through the IUE and archival intelligence frameworks and examines these elements in order to place members of the group into potential categories.

Review of Methodology

For this study, three facilities were selected whose missions and purposes are to support the information seeking pursuit of family history. In these facilities, 25 individuals were interviewed, observed, and audio-recorded to identify their demographic profiles, their information problems, and their information-seeking processes. Participants were interviewed before and after their information seeking sessions to determine their purposes for selecting the institution, the nature of information problems, and their initial approaches for solving the problems, and they were asked specific questions regarding demographic characteristics and their genealogical research backgrounds. Following the initial stages of the interviews, participants were observed and any conversations they engaged in while seeking information were recorded. When the participants had finished their information seeking episode searching, post-search interviews were undertaken to clarify observations and to ask about next steps in their research the individuals anticipated beginning. The interview questions and observation

techniques were based on previous research specific to genealogists or users of facilities that house primary materials (Yakel, 2004; Sweeney, 2002; Silverman, 1990).

Taylor's IUE People: Description of the group

The characteristics of a set of people and an examination of similarities and differences within an IUE define the group. Taylor (1991) indicates that these characteristics can be divided into demographic and nondemographic variables.

Demographic Variables

Taylor (1991) indicated that some demographic variables such as age, sex, race, and marital status do not help define different information-seeking and usage processes. Conversely, Taylor felt that characteristics such as education and profession may have an effect on information seeking. Table 2 provides the demographic characteristics of age, sex, and marital status by facility.

Although age was not considered significant for information seeking by Taylor (1991), the age, sex, and marital status of respondents seemed to be important demographics in this study as identifiers of group membership. Only one participant reported being under 30, while over 60% of participants reported being over 61 years of age. Since all but one participant was over 50 years of age, the overall population can generally be described as older adults. Gender also was also an important variable, as 20 of the participants were female. As for marital status, the overwhelming majority (n=23) of participants were or had been at one time married, with eighteen currently married.

Education and employment. Another set of demographic characteristics of IUE people within Taylor's (1991) framework is the education and employment status of participants.

Table 2

Participant Demographics: Age, Sex, and Marital Status

Number of Participants	Genealogical Society	Public Library	Proprietary Library	Total	Percent
Total Number	8	13	4	25	
		Age			
Under 30	–	1	–	1	4%
31–40	–	–	–	0	0%
41–50	–	–	–	0	0%
51–60	1	5	2	8	33%
61–70	3	4	1	8	33%
71–80	4	1	–	5	21%
Over 80	–	2	–	2	8%
		Sex			
Male	2	3	–	5	20%
Female	6	10	4	20	80%
		Marital Status			
Single	–	1	1	2	8%
Married	6	9	3	18	72%
Divorced	1	2	–	3	12%
Widowed	1	1	–	2	8%

During the interviews, participants were asked to provide their highest level of education and their current employment status. All participants provided a response to these questions, which are broken down by facility in Table 3.

The education level of the participants is spread across all levels from high school through graduate school. However, 22 were high school graduates and 19 reported having at least some college, while almost one half (n=12) had college degrees. When examined by facility, genealogical society participants represented a large portion of the High School Graduate and Some College categories. Although the participants at the public library included the spectrum of categories of education, these participants also

Table 3

Participant Demographics: Education and Employment Status

	Genealogical Society	Public Library	Proprietary Library	Total	Percent of Total
		Education			
Some High School	1	1	1	3	12%
High School Graduate	2	1	–	3	12%
Some College	3	3	1	7	28%
Bachelor's Degree	1	5	1	7	28%
Some Graduate Work	–	1	–	1	4%
Master's Degree or Higher	1	2	1	4	16%
		Employment			
Working (full-time)	2	3	2	7	28%
Working (part-time)	2	2	–	4	16%
Unemployed	–	2	–	2	8%
Retired/Disabled	4	6	2	12	48%

represented the most educated group with 75 percent having at least a bachelor's degree. In comparison, the educational levels at the genealogical society and public library suggest that use of specialty libraries versus public libraries is not necessarily related to educational level.

With regards to employment, 11 participants were retired. Given the average age of participants this is not unexpected. However, the same number of participants was working, with seven of these 11 employed full-time. Participants who were employed full-time or were retired were represented at all facilities.

Genealogical experience. Another important characteristic, not mentioned by Taylor, is the participant's investment in the activity. This characteristic examines how long each participant has been pursuing genealogy and how active they are in terms of

researching each month. In the interviews, participants were asked how long they had been doing family history. They were also asked how frequently they do genealogical research. These questions did not focus on usage of the facilities that were being utilized but referred to overall genealogical research. Responses to these questions ranged from specific time provided in hours per day, days per week, a specific day during the week, or days per month. Some responses provided a response such as a few times a week or a few times a month. The responses to these questions are provided in Figure 2 and Figure 3.

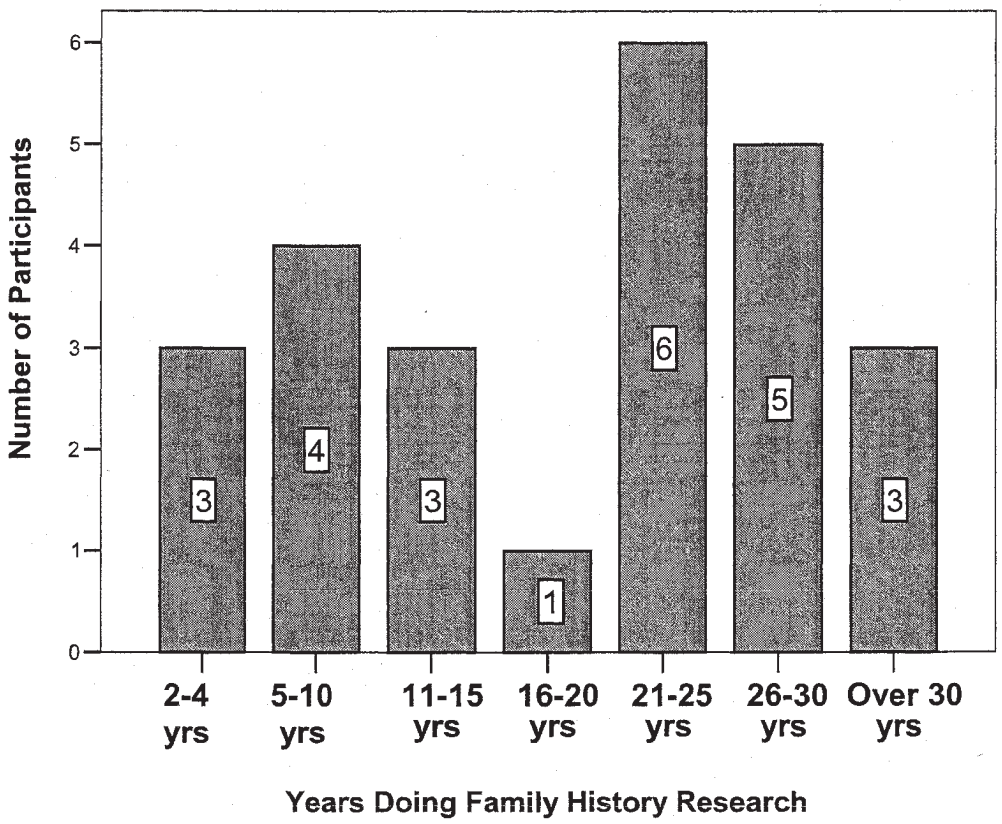


Figure 2. **Number of years participants have been doing family history research.**

Over half of all participants (n=14) have been pursuing family history for over 20 years, with almost one-third (n=8) over 25 years. In comparison, less than one-third of

participants (n=7) started researching their family during the past decade. One thing not captured in the table is the continual researching of family history activities. Although many participants indicated they started a long time ago, they frequently indicated that they had stopped and started numerous times. GenSoc1 stated she started about 20 years ago, "but I got burnt [sic] out on it and didn't do it for 15 years." Similarly, Public6 gave the response of doing family history "off and on for over twenty years."

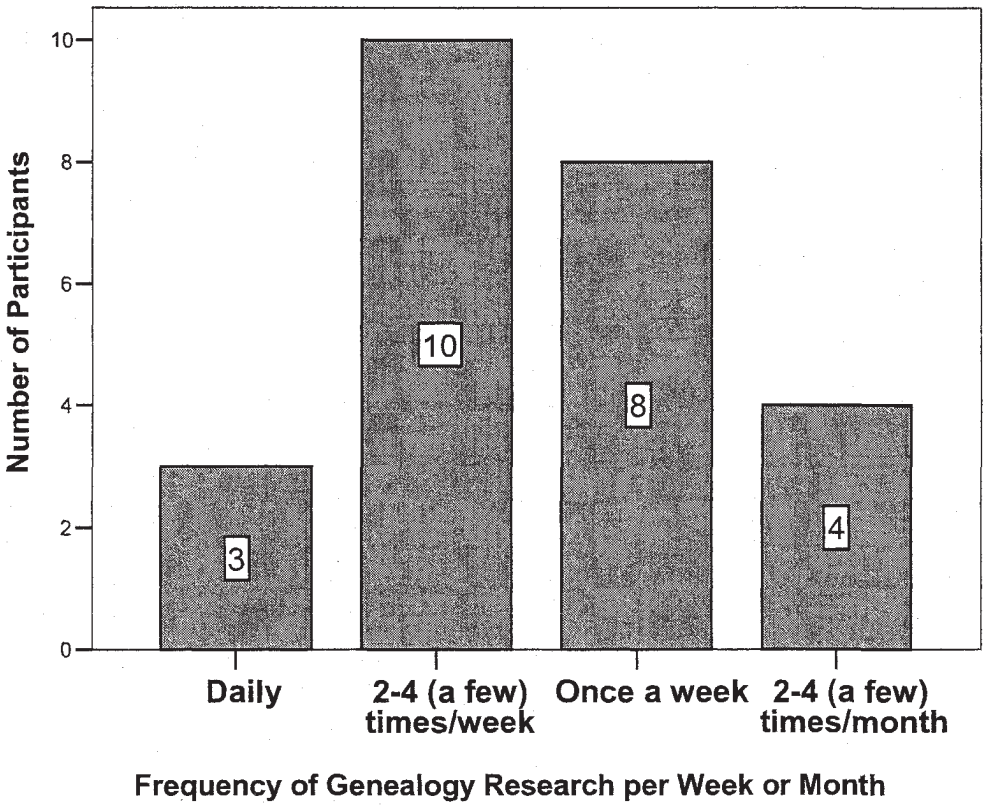


Figure 3. **Frequency of genealogical research per week or month for each participant.**

In regard to the frequency of research, all participants indicated they research family history at least once a month, with over two-thirds (n=21) working on genealogical research at least once a week.

Why participants do genealogy. Understanding what drives genealogists to want to do genealogical research was also an important aspect of this research. In the interview, participants were asked to describe why they do family history. Once these responses were identified, four categories of response type were noted. Figure 3 provides a breakdown of the participants' responses by the five response categories identified. In the first response category, participants talked about an interest in solving problems. Responses to solving problems include a response like, "It is a mystery; it is an unsolved question that needs an answer; it's the search, after more knowledge, to find the answer" (Public1). Another response category focused on an interest in the historical past. A good example was given by GenSoc1, who said,

> Umm, it's a connection to the past, connect myself and the older generation that I know of to different events in history, and it explains history a little better. It's the amazement and awe of the people in 1800s went through [sic] and survived, and as I drive across the country in my air-conditioned car and the mountains and things, that I picture them and their wagons—horse-drawn wagons.

The third response category centered on the participants' desires to find out about their specific ancestors. GenSoc2 indicated, "I just want to find my ancestors as far back as I can." The final response category focused on responses that indicated a religious purpose. Prop1 stated that she pursued her family "as part of my religious beliefs."

One should occasionally note that responses fit into multiple categories. For example, Public11 said, "I find it interesting, as far as learning about slavery, and I felt that it was real important, especially when you have grandkids coming to you about your

family tree and about your family." She was interested in the historical context of her family's background but also wanted to know specifically about her family.

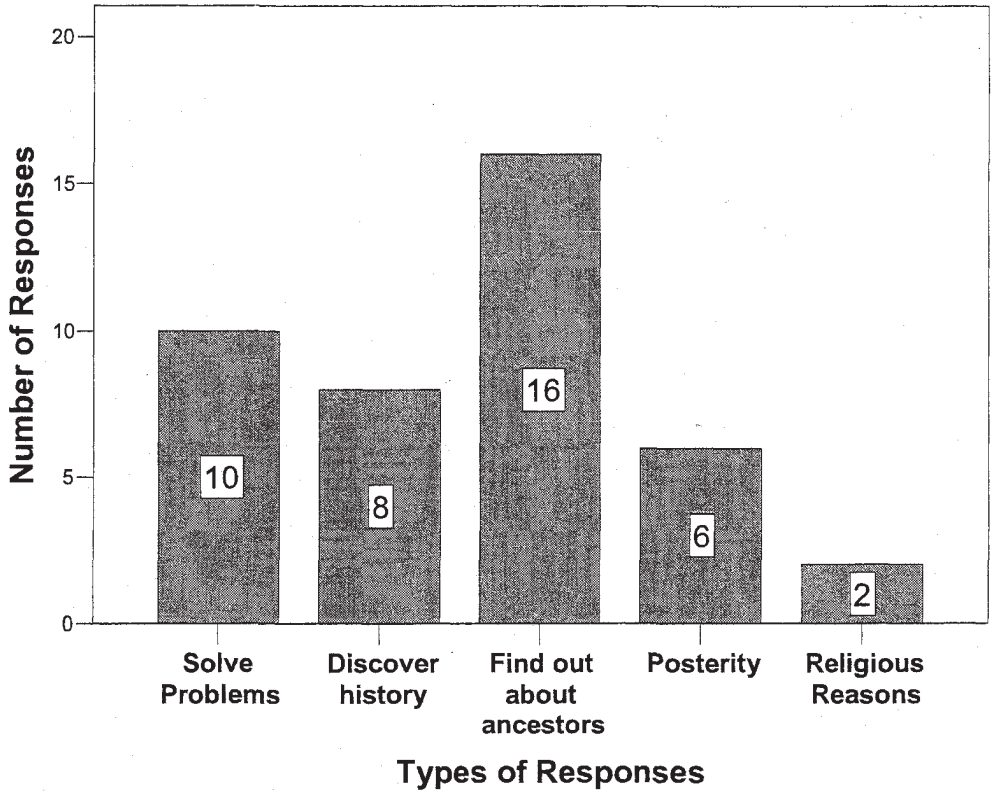


***Figure 4.* Categories of responses by participants, when asked why they do family history.**

Social factors

Taylor (1991) also indicated that social factors are an important element for determining the set of people in an IUE and provide additional insights into the motivational characteristics of genealogists in this study. Thus, although participants identified solving problems, discovering history, and finding out about ancestors as reasons why they do genealogy, six participants also responded to the question by talking

about its importance for posterity, specifically identifying their children or grandchildren as recipients of their research.

Taylor (1991) also indicated the importance of social networks, as they might relate to group membership. In order to ascertain the relative importance of formal memberships in specific social networks to information seeking of genealogists in this study, participants were asked to discuss their memberships across contexts. Figure 5 includes the responses to the question from the pre-interviews, "how many genealogical societies do you belong?"

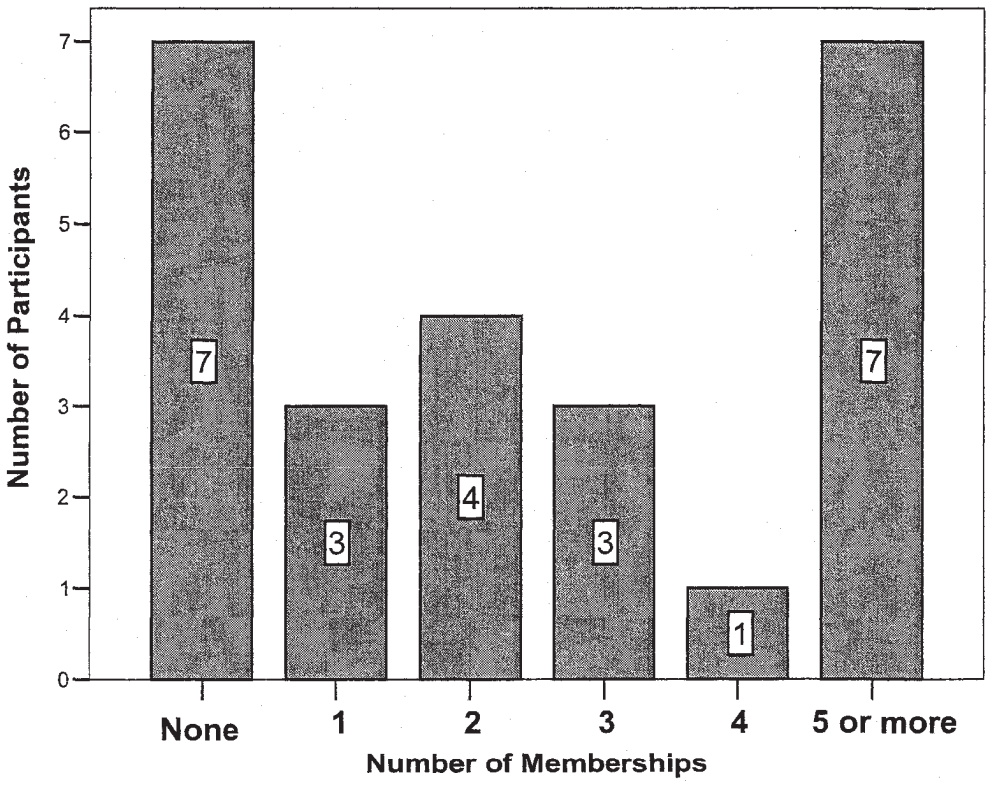


Figure 5. **Participant membership in genealogical societies.**

Over a quarter of all participants (28 percent) do not belong to any genealogical society. Conversely, the same number of participants also belongs to five or more

societies. These numbers may be somewhat skewed as all participants at the Genealogical Society were members. Of the participants who belonged to multiple societies, many of them indicated multiple memberships in lineage groups such as Sons of the Confederacy, Daughters of the American Revolution, and the Mayflower Society. Other than lineage organizations, participants noted memberships in two types of genealogical societies: those in the area of their residence and those in areas where their ancestors had lived.

Involvement with others at the facility. Each facility that served as an observational site for this study offers reference services to patrons. However, the types and backgrounds of the staff at each site vary. Both the genealogical society and the proprietary library use volunteers to augment reference help during business hours; however, the training and experience of these volunteers varies by location. For example, at the genealogical society, anyone who wants to volunteer can. A lack of training was demonstrated when, in one interaction that was observed, the volunteer did not know the collection and could not assist the participant. At the proprietary library, on the other hand, volunteers were observed helping numerous patrons and also providing technical and research assistance with participants. The public library has a large staff. The staff consists of reference assistants and librarians with a professional Master's degrees (MLS). Even though most of the staff are not MLS librarians, they are library employees. Both types of staff were observed assisting participants.

Other than technical or research assistance from library staff, participants at all facilities also talked with staff just to casually chat. This same interaction also occurred at all facilities between participants and other patrons. In one situation, a participant at the

public library saw that another patron was researching a specific part of the country. The participant said "hi" and indicated that she was originally from that area.

In the genealogical society and public library, five participants arrived at the facility in the company of a family member. In two of these cases, teenage children were brought along to assist in the research. The children were mainly observed assisting with physical elements such as re-shelving books, gathering blank forms, and spooling and reeling microfilm. In two other situations, family members were brought along because they were providing transportation for the participant. Although they did not assist in seeking information, they did provide a person for the participant to converse with during the research session. The other case was a husband and wife. Both were seeking genealogical information. However, they were not researching together. They were each researching their own ancestral families utilizing different resources. Although they sat at the same table, the couple did not interact while researching until they were ready to leave. Each one focused on his and her own research tasks during the information seeking episode.

Other examples of social interaction included sharing of information with other patrons and staff. This was observed at all facilities. At the proprietary library, one participant talked to everyone at the facility and even spoke out loud when researching. At the public library, a participant discussed with another patron the possibility that their families were related because they both had relatives from the same geographic area. Although these interactions did not lead to specific information or change information seeking processes, they were similar to other patron-participant interactions in which information was provided by a patron to the participant.

Research-related social interaction occurred in the genealogical society. On two occasions, participants were aided in their research efforts by other patrons of the library. These patrons overheard the participants discussing their genealogical research and information-seeking topics with library staff. In both situations, the patrons utilized wireless Internet connections to access genealogical cemetery Web sites and found the information for the participant. These Web sites contained the information the participants were seeking to solve their information problems. In these situations, the patrons solved the participants' information problems by accessing resources not available in the facility. Figure 6 provides a summary of all social interactions that occurred during the information seeking episodes by participants.

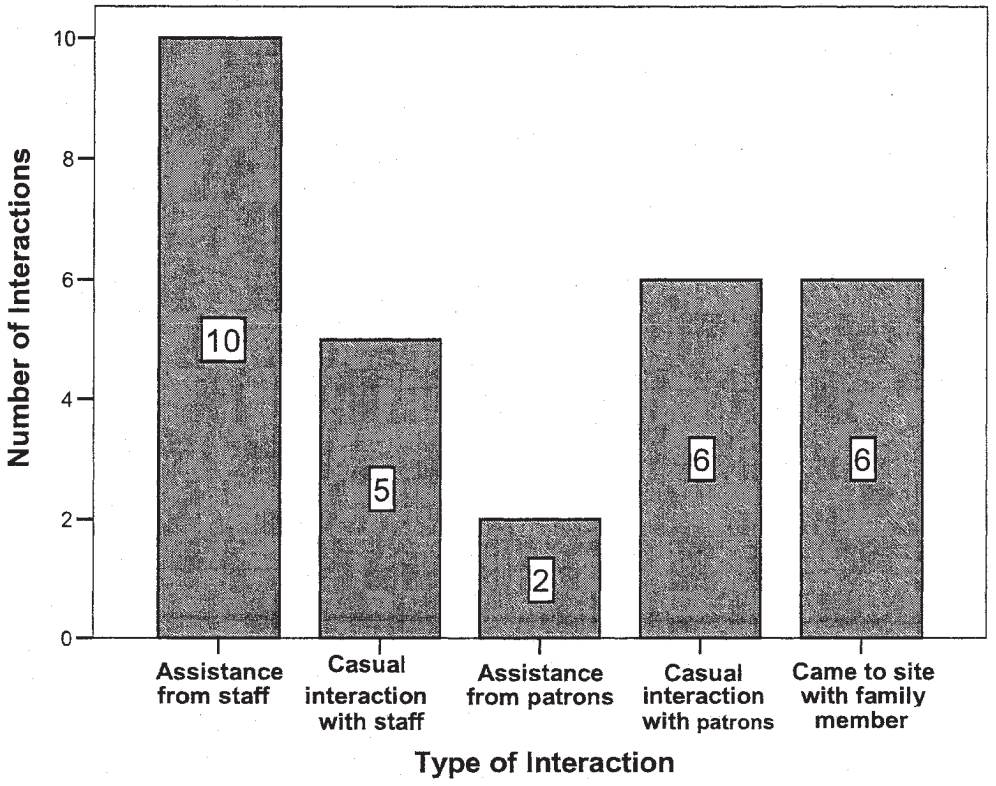


Figure 6. **Number of social interactions by type of interaction.**

Involvement with technology

Today's genealogists have the ability to tap into resources, records, and information via a multitude of technologies. The level of technology use and types of technologies used by genealogists provide a clearer picture of the specific IUE being investigated. Taylor (1991) indicates that attitude towards technology is another factor in determining the people characteristic of the IUE. During the interview, participants were asked if they use the Internet to do genealogical research, and if so, what Web sites they frequented. They were also asked if they utilized genealogical software in their research. Figure 7 summarizes the data on the use of technology of each participant.

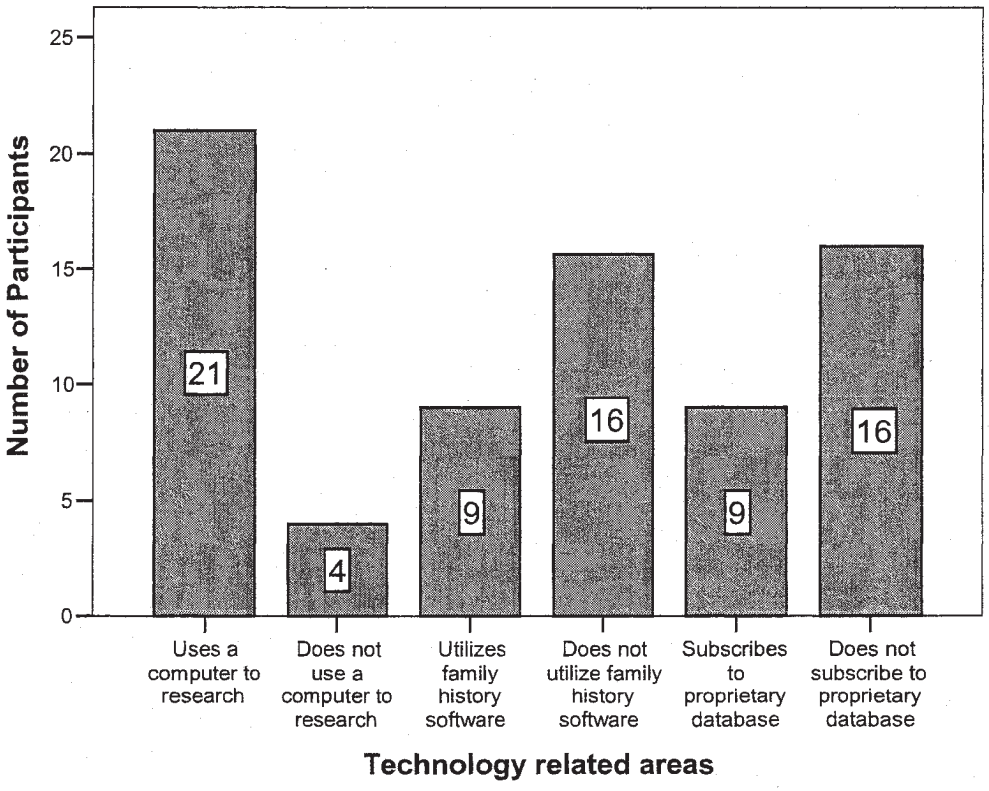


Figure 7. **Technology attributes identified by each participant.**

Eighty-four percent (n=21) of the participants used computers and the Internet to search for genealogical information. However, in this group, a spectrum of usage was described. Some participants, such as Public8, indicated that they use the computer rarely. Other participants, such as GenSoc1, use their computers and related technologies to do almost all of their research. In fact, this participant indicated that almost all of her genealogical information and sources are now housed on her computer. She brings a scanner and digital camera whenever she does genealogical research.

When discussing their computer usage, many participants provided Web sites they typically reference when doing research. Table 4 provides a list of the websites mentioned by participants within the interviews. A variety of Web sites were mentioned including subscription-based sites (Ancestry.com, Genealogy.com, NewsBank, HeritageQuest), free genealogical sites (RootsWeb, USGenWeb, FamilySearch), and cemetery sites (Internment.com and Find A Grave). Google was the only search engine site mentioned by participants. The United States Geological Survey (USGS.gov) was the only non-genealogical/non-search engine Web site mentioned by all participants. Overall, nine of the participants have subscriptions to proprietary Web sites: Ancestry.com (8) and Genealogy.com (1). Interestingly, only two of the participants at the public library indicated they have subscriptions. This could be due to the library owning subscriptions for many of these for-pay sites.

Purpose of Research

The final aspect that defines the people structure of the genealogical IUE is an investigation of the purposes participants reported for their own genealogical research.

Table 4

Websites mentioned by participants

Website	Number of References	% of Total
Ancestry.com	16	24%
RootsWeb	14	21%
USGenWeb	10	15%
HeritageQuest	8	12%
FamilySearch	8	12%
Google	5	7%
Find A Grave	2	3%
Genealogy.com	1	1%
USGS.com	1	1%
NewsBank	1	1%
Kindred Konnections	1	1%
Internment.com	1	1%

Although closely related to motivation, the purpose for doing genealogy pinpoints the product participants hope to create with their research. This element, which was asked about during the interview, allowed the researchers to describe how they intended to use their research. In these discussions, participants described the goals of their research. These results are provided in Figure 8. During the interview, participants were asked, What do want to accomplish with your genealogical research? As seen in the figure, 21 participants indicated they wanted to create or compile a genealogy. However, this group was subdivided into two separate categories. The first category was derived from participant responses that mentioned strictly researching their direct ancestry. For example, GenSoc2 indicated he was only interested in finding information on his direct ancestral line.

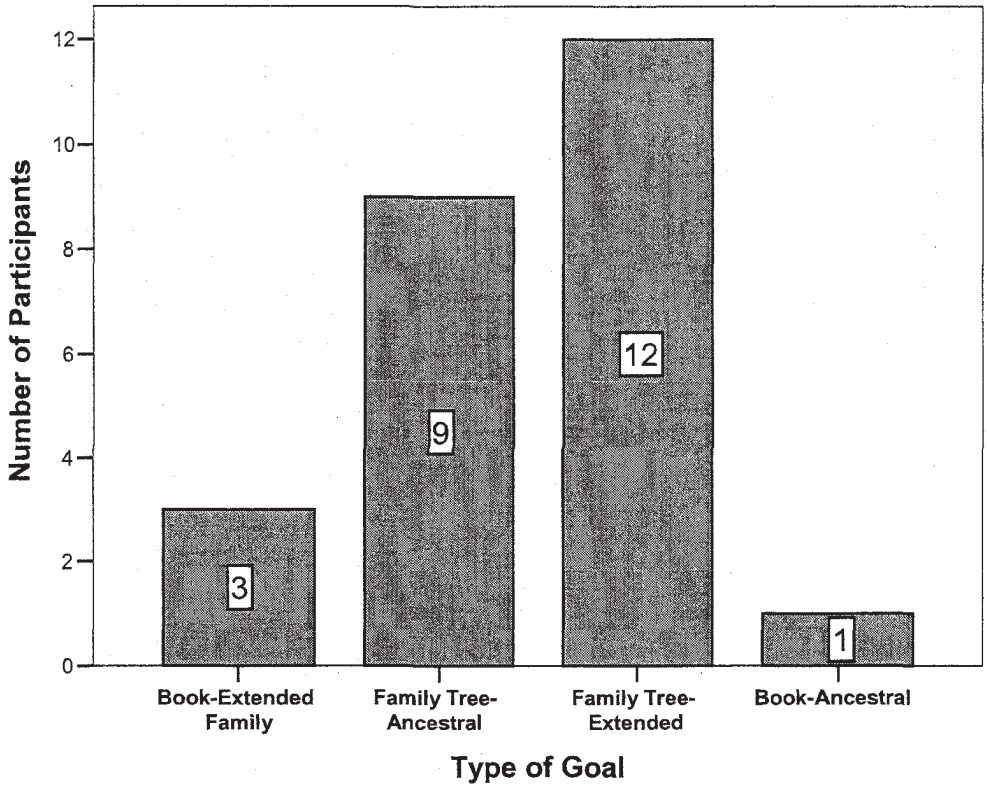


Figure 8. **Participants' overall goal of their genealogical research.**

"I want to find my line. Just kind of figure out where they originated and how they came down." Another example came from Public13, "Although I am interested in my aunts, uncles, and brothers and sisters of my grandparents and great grandparents, the goal of my current research is to complete my ancestral chart." Three of these participants indicated that they were collecting information on their direct ancestry for religious purposes. Another participant was gathering information as part of an application to a lineage society.

The second category of responses included their extended family in their research as well as their direct lines. These individuals were gathering information to create a

genealogy of a specific ancestral family. GenSoc6 wanted to find as much as she could about her extended family (i.e., aunts, uncles, and cousins), in order to include them in her information. "I am looking for all of the [family surname] family. I want to be able to document where and who the family members are and where they lived, what they did, what their life [sic] was like."

Similarly, the four participants who indicated they wanted to publish a book on their families also made the same distinct differences. Three of the participants were looking for individuals in their extended family. The other participant was looking for information to write a book about one specific ancestor.

To summarize the IUE-people structure of the genealogists in this study, all but one participant was over the age of 50 and over half were over 60. Eighty percent of the participants were women and most were married. Although a mix of responses was provided for how long the participant had been doing genealogical research, all of the participants indicated they research family history at least once a month. Most participants are socially involved either through memberships in societies or through interactions at research sites. Furthermore, almost all of the participants used computers in their genealogical research. Finally, the goal of 21 out of 25 of the participants was to create a genealogy. However, two distinct types of genealogies were described one that solely examines direct ancestry and another that expands upon ancestry and includes extended family members.

Taylor's IUE Setting: Description of the context

The setting, or more appropriately the context, within which information seeking occurs is another aspect of Taylor's (1991) IUE. He states, "We are concerned with

physical context and with ways of describing the context in which a specific class of people usually works and lives, and which affects the way they seek and make use of information" (p. 226). However, Taylor asserts that the setting extends beyond the physical entity of a particular place and also includes elements such as time, social factors, and the organization, domain of interest, and the level of information access for the specific IUE being studied.

Structure of Settings

Within Taylor's (1991) framework, the context influences information-seeking processes by providing physical and organizational parameters for the IUE. Each facility included as an observation site in this study offered unique physical attributes that contributed to or limited information seeking. The two most important areas pertaining to the physical context of each facility were collection areas and reading and study areas for research. Each collection has physical restrictions, such as space between aisles and shelves, height of shelves, and the location of each collection type within the institution. In addition to these physical restrictions of collection areas, the organization of the collection also plays a role in the context of information seeking.

Genealogical society. Because the facility is located on multiple floors, each floor presents several setting-related obstacles. Upon entering the facility, patrons find themselves on the second floor. The second floor collection houses the reference items, plus state and county books and transcriptions. No local, in-state, or local county resources were included on the second floor. These materials were located on the first floor of the library. The society arranges this particular collection by state in alphabetical order and then provides a source number based on when the book was accessioned into

the collection. Patrons unfamiliar with this system often struggled to locate specific materials. In addition, the collections on this floor are split into two areas of bookshelves. It was observed that this collection arrangement interrupted participants as they were seeking information, because they had to move from one area to another. Participants Genealogical Society 4, 5, and 7 were all observed moving back and forth between the areas of bookshelves.

On the other hand, the first floor of the genealogical society contains multiple types of collections that are organized in three different ways: by state, in alphabetical order, and in chronological order. Interestingly, none of the participants observed for this study indicated or were observed experiencing difficulty in navigating multiple classifications found on the first floor.

Proprietary library. The proprietary library was the smallest of the three institutions. The majority of the facility is dedicated to computer and microfilm stations. The collection consists of films and fiche requested by patrons. Because there are a variety of requests (i.e., censuses, newspapers, county records, and church records), the collection contains a wide variety of items. The classification system of this library follows the proprietary library's own classification system and is also organized by type of microfilm being accessed. Because the system is based on the library's own system, patrons must note their film numbers in order to access them within the collection.

Public library. The public library was the largest of the three facilities observed in this study. The public library has several collection areas, such as a large periodical and books collection, a microfilm reading room, and a microfilm storage area, as well as computer stations located at various areas in the facility. To use the computers, initially,

individuals must obtain a library card in order to log on. Patrons are limited to one hour of computer use at a time. However, as noted above, if no one else is waiting to use a particular computer, a patron may ask the librarian for extra time.

The classification of the resources in this library also varies based on the collection type. However, neither the classification system(s) nor the physical setting was observed to hinder information seeking by participating genealogists. This is likely due to the posting of the classification systems information on bookshelf ends and the attentiveness of library staff. For books, these signs consisted of the Dewey decimal number of states and counties. Microfilm collections had labels by year, state, and film number on each drawer. Only one participant was observed being confused with the physical setting. This person indicated that the confusion was caused by the fact that the finding aid for the collection was located in a location different from the collection itself.

The public library was the only institution in which participants were observed using multiple physical and collection areas almost concurrently. Individuals used the microfilm room, then moved to the computer areas before heading back to the microfilm room. Similarly, individuals moved from reading books at a desk to the computer and then back to the desk. However, it was noted that, as this was a public library, other individuals could use the computers. Several times all of the computer stations were in use, which may have limited the observed back-and-forth pattern of information seeking.

Focus of Collections

Another important aspect of the setting at each facility observed in this study is the focus of the collection. This aspect falls within Taylor's (1991) definition of IUE setting because it relates directly to the access to information. The institution's mission

ultimately guides the focus of the collections. These collections provide access to both general information and also specific information unique to each facility. Twenty-two participants were utilizing collections that were available at their respective library. The other three used resources acquired by the library through interlibrary loan. As stated in their missions, the genealogical society and the public library had collections that were specific to the areas they serve. This provides unique access to information for participants because they were able to seek information in their respective facilities, which may not be available at libraries outside of their geographic locations. In some collections, there was some overlap between information sources. The public library and the proprietary library are able to borrow microfilm from the same interlibrary loan source. However, the public library has more restrictions on the types of materials available. The genealogical society and public library also have many of the same books, census records, and journal collections.

Each library also offers patrons access to additional resources obtainable through interlibrary loan. For example, all three facilities can obtain local, state, regional, and national documents and records (through microfilm) for patrons. Although all three facilities included as sites for this study can provide this service, they access different collections available from a variety of different sources. Participants from both the public and proprietary libraries were observed accessing genealogical information from these sources. Table 5 provides a synopsis of the media and resource types available at each site.

The final element of facilities' collections that shapes access to information is the extent of primary resources available versus other sources of information. Each facility,

Table 5

Type of Collections Located at Each Study Site

Paper-Based	Genealogical Society	Public Library	Proprietary Library
	Paper-Based		
State Books	X	X	–
County Books	X	X	–
Society Periodicals	X	X	–
Local History Section	X	X	–
Local Documents/Records	X	X	–
Newspapers-local	X	X	–
Reference	X	X	X
	Microfilm		
In Collection–Census	–	X	–
In collection–Newspaper	–	X	–
In Collection–Other sources (county, state, church, books)	X	X	X
Available ILL	X	X	X
	Computers		
Number at each library	(1)	(10)	(5)
Internet Capable	X	X	X
CD-ROMs	X	–	X
Wireless Internet	X	–	–
Own Database Licenses	–	X	–

either through print resources, microfilm, or online scans, offers patrons access to unique primary resources. Primary resources are materials that contain firsthand accounts of events that were created at the time of those to those events or later recalled by an eyewitness (Pearce-Moses, 2005). These resources can be original records or scans of the records on microfilm or digital copies. Although patrons have access to these materials, as seen in Figure 9, thirteen participants preferred to use only secondary sources. In these situations, the secondary sources that were used were books with abstracted information

or Web sites. Books included abstracted cemetery records, county records, state records, and church records. Web sites were free usage sites that allow searching and/or posting of information such as Rootsweb and Familysearch. The primary resources used by participants included newspapers (microfilm), obituaries from newspapers (Internet), county records (microfilm), city directories (print versions), Indian rolls (microfilm), and the most widely used primary resource, census records (on microfilm or the Internet). Eight participants used only these sources during their information seeking session. The other four participants utilized both secondary sources and primary sources while searching for information.

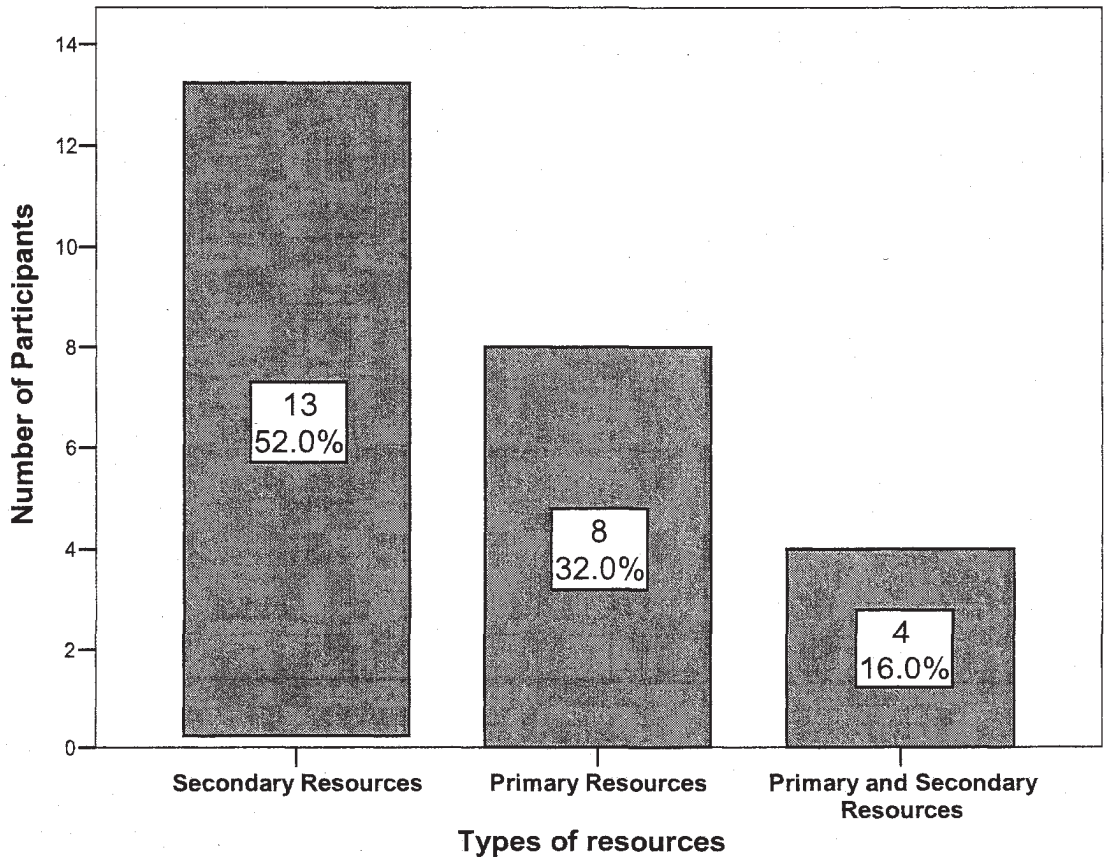


Figure 9. **Types of resources used by participants.**

Selecting a location. In the interview the participants were asked, why did they choose this particular location? Twenty-two participants indicated the focus of the collection and items available were the main reason they selected each location. This includes coming to the specific libraries to access online and microfilm materials that were not available at other institutions. For example, a participant at the public library said he/she came to the library, "Because I plan on working on Ancestry[.com], and I don't have a subscription to it" (Public2). The other three participants indicated a perception of helpfulness or a less restricted environment as a reason they selected the facility as opposed to going to a different location. The helpfulness and attitude of the library staff and volunteers were indicated as a reason individuals selected facilities. "The people are very friendly here," was the response from Prop4. The genealogical society also attracted genealogists because they are allowed to check out books, an option not possible at another genealogical facility in their service area. GenSoc8 answered the question with, "because I can park at the door, and I don't have to walk!"

Although 22 participants indicated the collection, eighteen of these participants also indicated they were regular users of the institution in which they were researching. One individual said she comes every Saturday to the facility just because it is her normal routine.

Access to information. Taylor (1991) indicates that access to information is a key element in the physical context of the IUE. In genealogical libraries, this is another aspect of the collections of each institution. This includes the ability to get microfilm from other locations and accessing Internet resources. The focus of the collection of each library also limits patrons' access to information. For example, the public library relies on local

funding, so a large part of its collection focuses on local resources. Similarly, genealogical society membership is primarily made up of people who live in the local area. The mission of the institution and local material collections aids in the makeup of membership. In contrast, the proprietary library's mission is to provide access to resources throughout the world. Although the collections of each of the libraries are the keys to accessing information, other elements hinder the ability of participants to access the information they require. These include external factors such as budgetary restraints of each facility, number of computers and Internet databases available, and hours of operation. There are also internal factors such as a lack of a clear and consistent online catalog at the genealogical society. These factors combine to limit or promote access to information.

The type of resource or information being sought by the participant is a major factor in accessing information. As indicated above, all facilities had access to both primary and secondary sources of information. However, each facility provided access to these information sources in a variety of ways. Two types of print-based secondary sources were observed being used by participants. The first were sources whose information spanned a state, geographic area, type of people, or time period. This would include sources such as Virginia marriages or Missouri pioneers. The other secondary sources were abstracted information relating to a specific source document or document location, such as Cabell County Marriages or the Scites Family Cemetery.

Access to primary sources was not limited by geographic or temporal elements but rather the type of media being accessed. Three types of media were available to participants: print, microfilm, and Web-based resources. In most cases, the print media

were tied to the geographic location of the facility. These would include resources such as city directories, obituaries, newspapers, and other materials from local sources. As indicated, all facilities had access to microfilm collections. Thus patron access to microfilmed information was limited to the collections available to each facility. Although some Web-based resources were available to anyone who accesses the Internet, access to specific databases that provide primary sources of genealogical information was afforded to patrons of the Public Library. However, two situations were observed in which participants used their own subscriptions to proprietary databases in their information seeking.

The reason for selecting the facility and the goal of each participant also are factors in accessing sources of information. If participants selected the facility for convenience, routine, or helpfulness of staff and/or facility rules, they may have limited their access to collections because the information they are seeking is not contained in or available to the facility.

Facilitation of space. Another element that influenced the setting for participants was the structure of the physical space. This structure creates or inhibits social interaction between library patrons and/or library staff. The size of the institution created an environment where social interaction occurred more often. In both the propriety library and the genealogical society, more participants interacted with other patrons than library staff due to the close proximity. In contrast, only one interaction was noted between study participants and other patrons at the public library. Table 6 provides a breakdown of type of interaction at each library.

Table 6

Type of social interaction at each library

Facility	Interaction with Staff	Interaction with Patrons	Interaction with Family
Genealogical Society	3	5	1
Proprietary Library	3	3	0
Public Library	6	1	4

In addition to environmental support for social interaction, space was provided at the genealogical society and public library for patrons to sit at tables and spread out their material. Subsequently, many participants selected a large number of books and brought them back to the tables to look through. The proprietary library did not offer this type of space. At that location, all table space was situated in front of either a computer or a microfilm reader. However, this library also has only a small reference book collection.

Summary

The setting of the genealogical IUE was driven by the mission of the library and the access to information. Participants were able to access various types of information at each site; however, many of the materials used were directly related to collections of the library, access to microfilm via interlibrary loan, and access to computers and databases. Although each site offers access to unique primary resources, the majority of participants selected secondary sources, mainly in the form of state and county books. The size of the institution also allowed for more interaction between participants and library patrons.

Taylor's IUE Problems: Description of the information problems

The general consensus in LIS research, when focused on information seeking, asserts that the information problem is the core of any information seeking activity (Wilson, 2005). Taylor (1991) addresses this issue by describing three concerns when breaking down IUE problems. The first concern is that problems are not static. They are constantly changing in response to new information. Associated with the non-static nature of problems, Taylor says members of the group, particularly in the beginning, can only vaguely articulate their problems. The second concern is that each IUE has a discrete set of problems. These relate to the context and are guided by the groups' occupation or common pursuit. Finally for the third concern, each problem has its own set of characteristics that provides the criteria for judging relevance. The characteristics of the problems have dimensions that affect the information deemed relevant and useful. Furthermore, Taylor classifies eight types of information use. These types of information use can be used to examine the perceived needs of users in particular situations that are not mutually exclusive.

1. Enlightenment: desire for context information or ideas to make sense of a situation.
2. Problem Understanding: more specific than enlightenment, better comprehension of a problem.
3. Instrumental: finding out what to do and how to do something.
4. Factual: need for precise data.
5. Confirmational: need to verify a piece of information.
6. Projective: future oriented, concerned with estimates and probabilities.

7. Motivational: connected with personal involvement, of going on or not going on.

8. Personal or Political: involved with relationships, status, reputation, personal fulfillment.

Genealogists are constantly searching for sources that contain some clue or information that connecting to their past or leading to the next source, clue, or piece of information. In essence, genealogists are searching for information that provides a clue to the specific facet of family history they are seeking. Twenty-four of the 25 participants were able to state their initial problems prior to beginning their research. These problems focused on a variety of elements; not surprisingly, the common theme was the search for family.

Description of Participants' Stated Problems

Participants were asked, at the start of the information seeking episode, what kinds of information they were looking for. This question allowed participants freely to discuss what they were researching. By stating what they were researching, participants described in their own words the information problems they were attempting to solve. Within this description, four categories of problems were identified: people, places, resources, and time period. These categories and the number of responses for each category are shown in Figure 10.

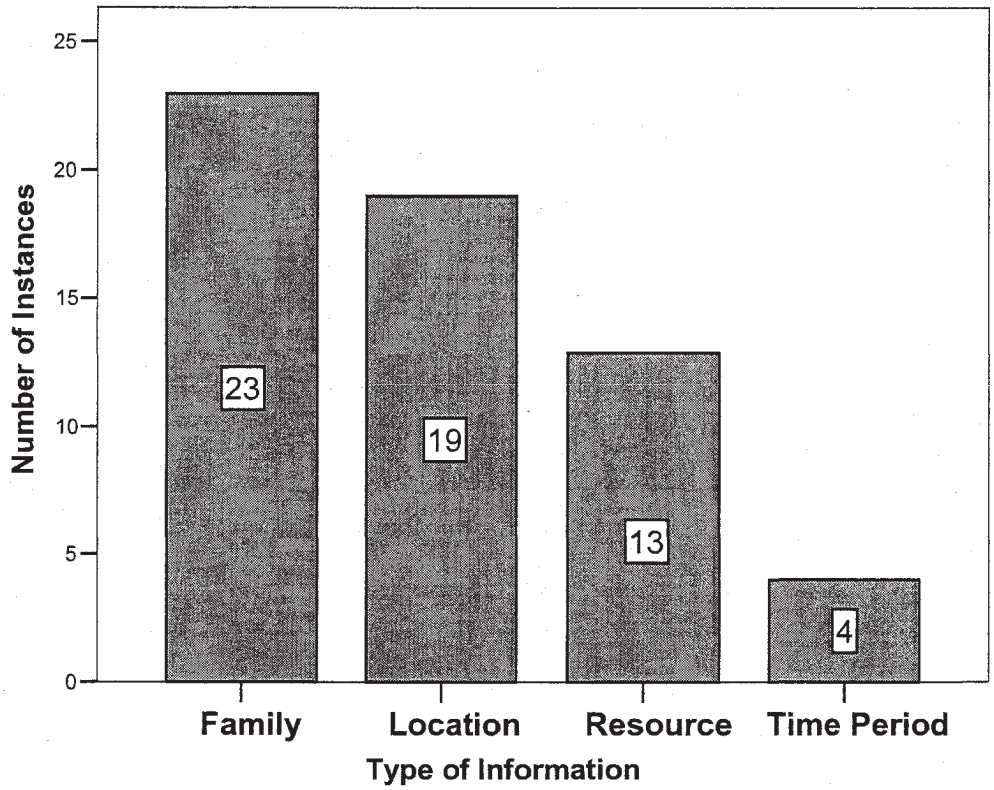


Figure 10. **Type of information provided in initial information problem.**

Respondents mentioned a family name or family member in all but one of the information problems presented (n=23). Among those participants who indicated a family name within their information problem, they either presented a specific family surname or indicated their relationship to the family member for whom they were looking. This included responses such as 'my great grandfather' or 'my mother's family.' Some participants even mentioned multiple families in the same information problem.

Nineteen responses also mentioned a reference to a location or geographic area. This number included participants identifying a specific county in which to look for

information. Other participants only indicated a specific state, such as GenSoc3, who was only looking at books related to Kentucky.

The third type of specific information in participant problems is discussion of a resource. For example, GenSoc1 was looking for specific cemetery records. Other references to specific resources in problems included references to marriage records, censuses, and city directories. Four other researchers included a generic reference to sources in their problem statement. GenSoc3, for example, wanted to look for his information in "new" books.

The fourth type of reference, period of time, was exhibited by participants who were searching in census records or county records. These participants provided the time period or specific census date within their information problem statement.

Although individuals identified four conceptual areas in their information problems, in all twenty-four cases, participants combined these areas within their information problems. For example, GenSoc1 provided the specific name, specific cemetery, and the county in her information problem. One aspect that arose when looking at the combination of problem areas was the move from specific to general. If a person provided a specific geographic location, he or she often combined that with a specific individual or a specific record set. Participants looked for cemetery records from a specific county or census records for a specific individual. Individuals who identified multiple families were searching in a specific resource. Table 7 provides the number of elements identified by participant's description of their information problem.

Table 7

Number of elements per information problem

Number of elements	Number of Problems	% of Participants
Two	15	63%
Three	7	29%
Four	2	8%

Problems by Institution

Although all of the information problems contained four elements, subtle differences reflect the institution in which the participant was researching. The mission, collection, and access to information affect the information problem. These factors may not determine the problems, but they provide parameters within which certain problems may or may not be resolved. For example, of the four participants at the proprietary library, two were using microfilm to seek specific family information using specific county sources and two were using the Internet to search for family history information. Because the proprietary library has only a small reference collection and the rest of the materials are available on microfilm and online, the choice of these particular media and resources is logical and inevitable. The ability to get the specific microfilm and to access the Internet allowed three of the participants, who had information problems, opportunities to research these problems.

Another issue related to the problems structure of the IUE is the selection of site with regard to the information problem. None of these participants was a first-time user

of the facility. Participants made the decision to come to the library to solve the problems they had identified. Most participants had previously utilized the institutions, or even the resources they were using, for previous genealogical problems. One person indicated that she was continuing a search from a previous day using the same resource (GenSoc8). This was also echoed by the two microfilm users at the Proprietary Library. All three participants indicated that their information problem had not changed from the previous search.

Addressing Taylor's three concerns

In Taylor's (1991) experience, many group members could not articulate their information needs. Among genealogists in this study, this is not the case. All but one participant clearly understood their information needs and could express their problems in ways that indicated an understanding of the research projects and tasks at hand. Prop4, who struggled with this, also recognized that proprietary library volunteers could help her identify and work through her information problem. When asked if she knew what information she might look for, she responded, "No, not exactly, that is why I am here, so I can get good help from all of these good people here that are volunteering."

Furthermore, Taylor (1991) asserts that problems are not static but rather change based on other IUE, including the setting and the type of resolution. Problems are created through a discrete set of parameters. Although the information problems identified by participants focused on very specific information, the problems overall followed a very structured format applicable to the key terms they were searching for. This is supported by the fact that 23 of the 24 participants' information problems included a family name or reference to a family member. Because very specific information is identified in the

information problems of participants, the questions do remain somewhat static. This may not be due to the type of problems but rather the type of information in the problem. Very specific information requires specific sources to solve the problems.

The third concern, problem dimensions, similarly allowed genealogists to add the specifics, such as names, locations, and resources, to their information problems. These specifics provided multiple dimensions to their information problems.

Taylor's IUE Resolution of Problems:

Description of how information problems were resolved

The previous three sections have defined the characteristics of the people in the IUE, the settings in which they exist, and the information problems they face. This section illuminates the questions posed by Taylor (1991) regarding the resolution of information problems.

> What constitutes … resolution of a typical problem? What kinds of information do people in a particular set anticipate? What filtering mechanisms exist? What are the attitudes toward the benefits and costs of information use? What are the criteria for information choice? What does information do for people in specific settings? (p. 228)

Preparation

Because the genealogists in this study were able to clearly identify the information problems they faced, many of them were able to prepare for their information seeking sessions ahead of time. For this reason, the steps taken within the preparation stage actually were or could be considered the first steps toward problem resolution. Participants described three activities they used in preparing for their information seeking

sessions. These included creating lists of information (names, dates, and locations) related to their problems, reviewing and gathering materials related to the specific problems, and reviewing the library web site. Figure 11 provides the type of preparation described by each participant.

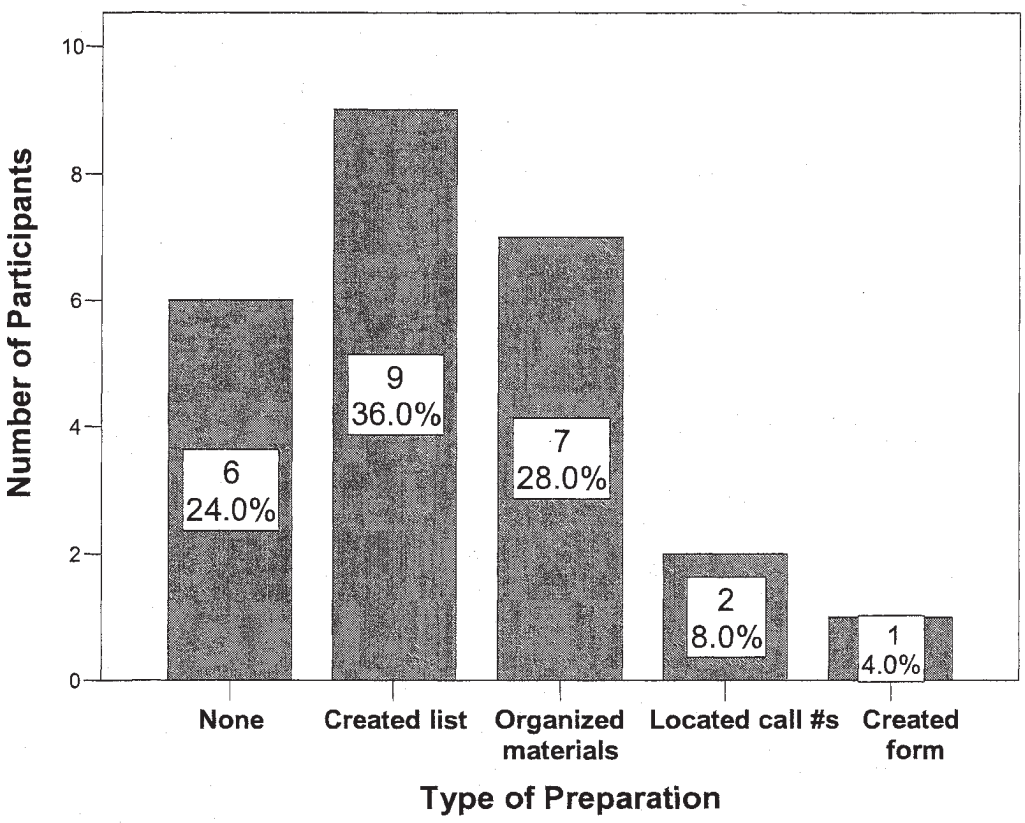


Figure 11. **Type of preparation described by each participant.**

The most observed and reported form of preparation was the creation of lists related to the information problem. These lists usually contained family names, dates, and locations and were either drafted on paper or created from computer templates (n=9). Organizing materials (n=7) was the second most often reported method by study participants. This involved the gathering of paperwork and other materials prior to their visits and reviewing information obtained from their most recent research session to identify what

information problems still existed. Another type of preparation described by two participants was accessing the institution's website prior to their visit to write down the call numbers of the resources they felt might be of use.

Interestingly, six participants did not engage in any type of preparation prior to their visits. These participants indicated they had memorized the information they needed to begin their information searches and preferred to rely strictly on their recollections. "I ordered the film for one specific family…it may be on there…once you've worked with your families long enough; you begin to know all the names, dates, locations. You memorize a lot of the information" (Prop3).

Searching for Resources

The second step in the problem resolution stage is the process of searching for information sources. During their initial opening strategy, participants employed two distinct search strategies to locate information that might solve the problem or provide clues leading to the next source-searching strategy: selecting and browsing. Selecting refers to knowing the specific media or resource at the outset of the information search and selecting it as the first strategy. Browsing is the strategy used by participants who searched bookshelves in search of relevant sources. Instead of selecting a specific resource, participants would scan areas of books looking for titles of interest. Figure 12 provides a breakdown of the initial search strategies employed by participants.

Fifteen participants knew the exact resource or group of resources they wanted to begin their searches with and immediately selected those resources. Participants who selected their resources utilized all types of media (microfilm, computers, and books) and

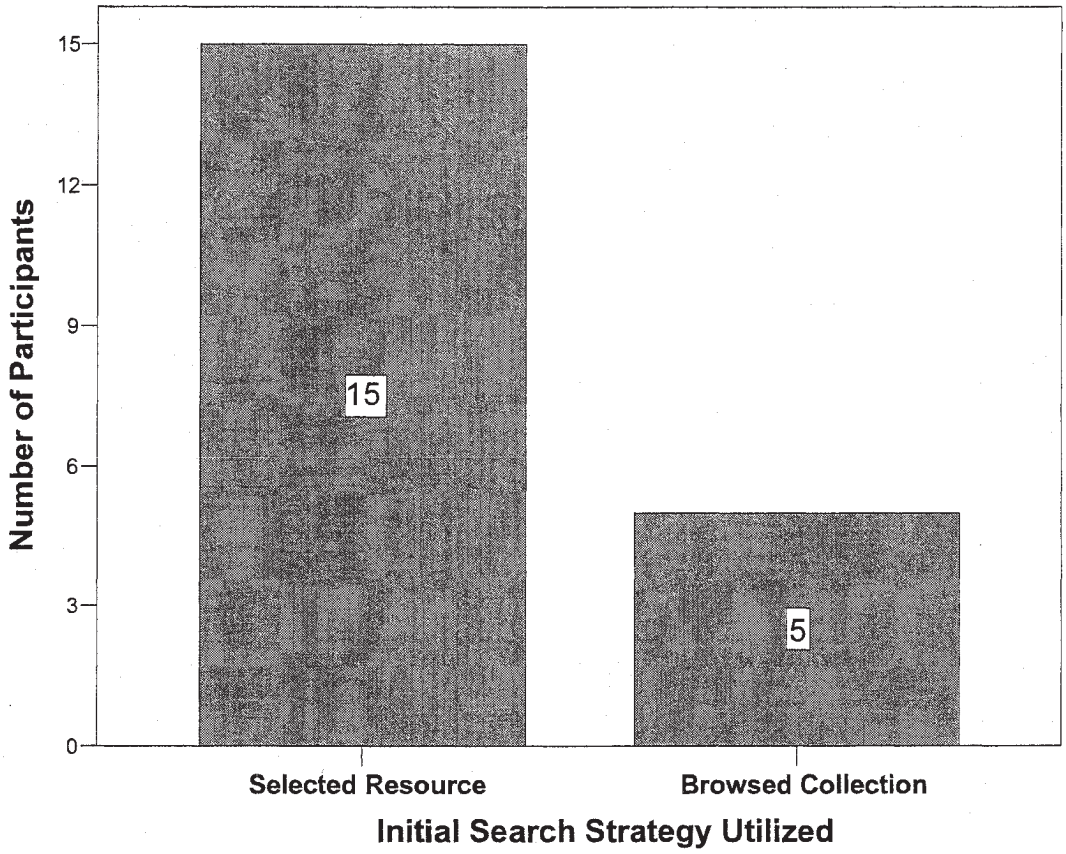


Figure 12. **Initial strategy employed by participants at the onset of their information seeking.**

both primary and secondary sources. Individuals who knew what type of media they wanted to utilize, but did not know the specific locations, relied on browsing for locating their initial sources. Because these participants had general ideas of the location of their materials, they were able to go to the parts of the collections that might have relevant sources. However, instead of pulling a specific source, individuals scanned and reviewed the titles and selected those they felt might have pertinent information. Frequently, individuals pulled books and quickly scanned their contents. They then either selected the books or placed them back on the shelf. Other participants less familiar with collections

spent more time browsing. The five participants not accounted for in Figure 12 asked for or received acceptance from others as their initial information seeking actions.

These same two search strategies were observed by participants in subsequent searches. However, during subsequent searches for resources, seven participants employed alternative search strategies. For example, initially Public13 began her search utilizing specific books. Following this search and reviewing of information, she began her next search for resources by browsing a book collection. Likewise, three of the five participants who initially received or asked for assistance from others switched to browsing to locate resources.

Not all of the participants selected a strategy that began by going directly to the library's collections. Five participants asked for or received help from others in the library to begin their information searches. These individuals utilized social interactions to begin their research sessions. In two of these situations, participants were discussing their information need and the patron interjected information to provide a solution. In the remaining situations, participants approached library staff instead of going to the collections or talking to patrons.

Factors Influencing the Searching Strategy

Seven factors were observed and/or discussed by participants when asked why they selected or failed to select specific resources. Four factors were derived from the relationship between the identified problem and knowing what initial sources to use to begin the search process. Two additional factors were determined by the social interaction that occurred prior to or during the search process. The final factor was the previous experience participants utilized during the search.

Search strategies and information problems. Two of the four factors tied to the information problem were identified based on the specific information participants provided within their information problem. If the participant provided specific information related to a resource in his or her problem, then he or she utilized a specific strategy for locating information. For example, Prop1 provided an information problem that included a specific resource. When asked, why the resource was selected, she responded, "The family and information I was looking for could only be found in the county records that I ordered." Similarly within her stated problem, Public8 indicated she wanted to find a relative in a specific city directory. Thirteen participants provided a resource when discussing their problems. This included all of the microfilm users, computer users, and the two participants who used city directories. Conversely, the participants who responded in their information problem without providing a resource tended to browse the collections.

The other two search factors tied to the information problem are derived from the recency of the information problem. That is, if the information problem was described as being a continuing search, participants knew exactly what sources to locate. GenSoc8 was not only continuing a search she had been working on for some time, but she also indicated that her previous visit to the library had the same information problem and utilized the same sources (group of books) she planned to use during this information seeking episode. Other participants indicated they were looking for resources they had previously used.

Search strategies and previous experience. In addition to the factors identified through participants' descriptions of their information problems, prior experience counted

heavily in determining participants' choices of specific sources. As described by GenSoc3, "I knew from previous research that the individuals I was researching were from certain counties in Kentucky. The books I selected were from those specific counties." Public11 phrased her previous experience in terms of using the same resources, "I had already searched the 1910 and 1920 Oklahoma [censuses] and when I seen a pattern in the same families in those years then I went to 1930s [census]."

In addition to using prior research knowledge, all of the participants had utilized their respective libraries before and did not have to orient themselves to the collections. They knew the facility and were able to search for their source information with relative ease. This allowed participants to freely access collections and sources.

Receiving assistance within the search process. For the 20 participants who initiated their own search processes, the first step was to locate information related to their problems or by utilizing previous experience. The five individuals who did not know their initial location for sources conferred with others to locate their initial sources. Two of these individuals were assisted by patrons, and the other three relied on librarians/volunteers to help them locate sources on the Web. When patrons assisted participants in the searches observed, the patrons used their own computers to look up information and provided the Web sites to the participants. In essence, the information provided by the patron answered the information problem for the participant. In the case of the two individuals working with volunteers, the volunteers sat at the computer and the participant provided information while the volunteer did the actual searching task. Public10, who began his search by communicating with a librarian, was directed by the

librarian to the library's online catalog and then to the subsequent collection area of sources identified in the catalog search.

Separate search processes

Two separate search processes were observed: the initial search and searches occurring after the initial search. Although two separate search processes occurred, no differences were observed in the techniques and strategies used. However, informants who participated in subsequent searches sometimes used different types of media. According to participants, they switched because they wanted to find or verify new information that had been uncovered by the initial sources. "I was looking in this census and ran across [family name]. I recognized the name from one of my other families. I then decided to start pursuing this new family line" (Public2). To find corroborative information in different resources, it was necessary to change the type of media they were using. Another reason participants switched was the initial search did not produce any information related to their information problems. Rather than continue in their current sources, participants moved to resources available in another media. In both situations, individuals were observed moving from a search using microfilm to the computer, paper-based resources to microfilm, and computer sources to microfilm. Although these variations in search strategies were observed, all participants used the same criteria to investigate similar types of sources and/or media to find certain locations and surnames. Figure 13 provides a breakdown of subsequent searches by types of sources or media used.

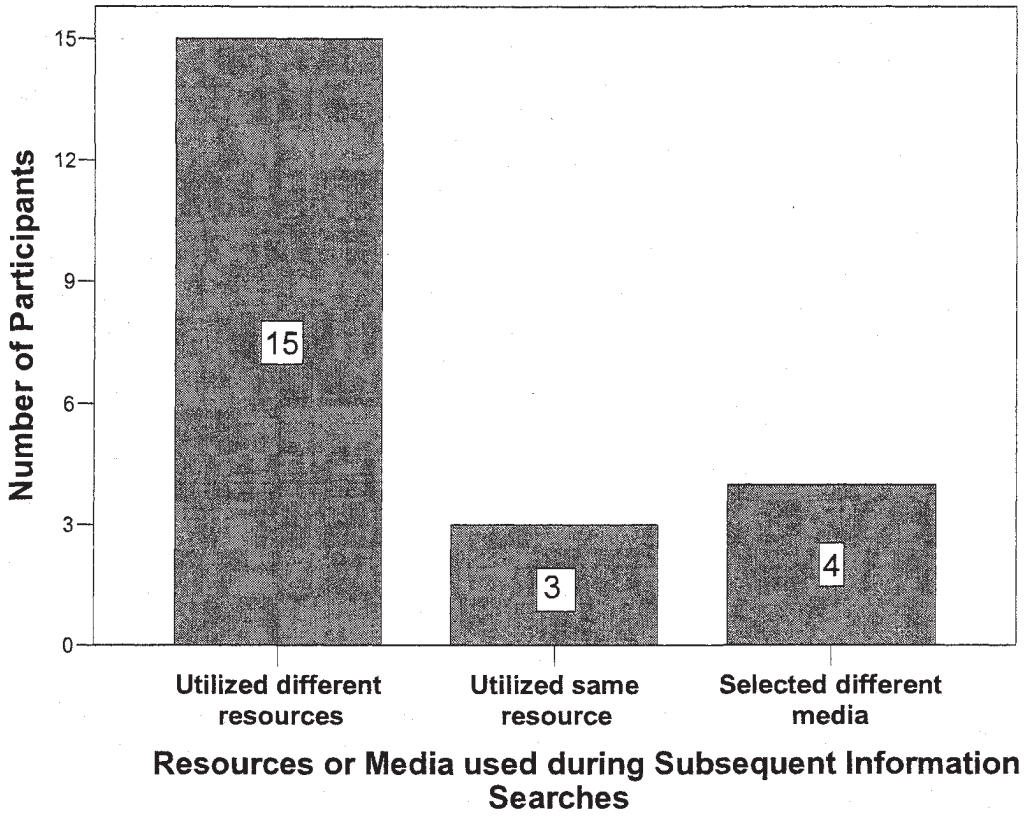


Figure 13. **Type of resources or media utilized by participants in subsequent information searches.**

Of all participants, 19 participated in a subsequent search for resources. Fifteen of them continued their information searches in the media in which they had begun but then moved to new resources. Four individuals changed the type of media they were using during the initial search, going from books to computers, microfilm to books, etc. Three additional participants' subsequent searches involved different volumes of the same resource. The three participants who did not do a subsequent search utilized microfilm for their initial resource.

New information problems

In subsequent searches, a number of participants adopted a different search strategy. Instead of continuing to investigate their current information problems, four participants began a new information problem and then started a new information search. When asked what caused the switch, participants provided a number of answers. Two participants moved on to new problems because they did not find anything useful in their initial searches. These participants had prepared and brought materials, anticipating they would not find anything for their initial problems, or they wanted to do multiple searches during their time at the facility. Public8 indicated her initial problem and search focused on city directories. After the search was completed, she moved on to an unrelated information problem that she had identified prior to entering the library.

The other individuals who changed their information problems did so because they found something in their initial searches that created a new information problem not related to their original information need. For example, Public10 was searching census records for a specific family in her initial search. During her search, she located other related families. In her next search, she looked through other microfilm records to find information pertaining to the related families, not the one indicated in her initial information problem. Public5 not only changed her information problem, but she changed media, moving from using a computer to searching for books. While performing her computer search in census records, she identified a family different from the one that was the focus of her original information seeking. She then went to a specific section of books and browsed titles until she found some she was interested in and took them back

to her table. Part of the new information problem included a change in the geographic location of the family for which she was now searching.

Reasons for Selecting Sources

In follow-up interview sessions, study participants were asked to describe why they selected the initial resources. Figure 14 summarizes their explanations.

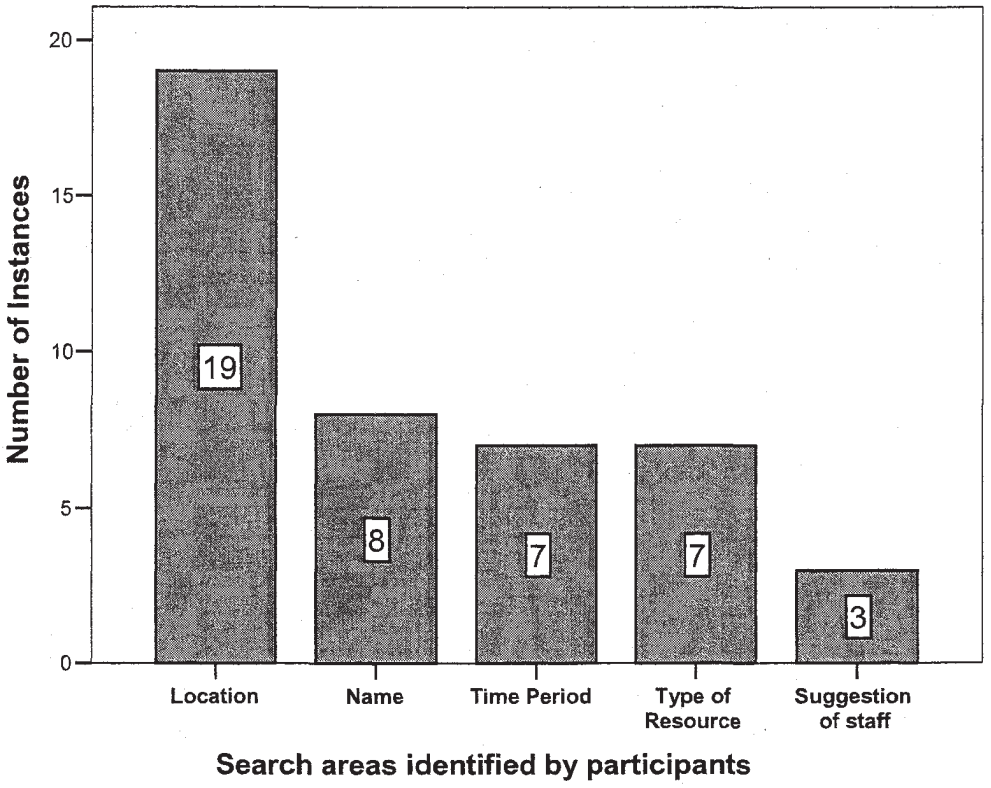


Figure 14. **Relevant areas identified by participants for selecting initial sources.**

Most participants indicated that the specific detail in their information problems led them to look at specific resources initially. For example, Public1 was investigating a specific family in a specific county. Her first resources were all of the materials published on that specific county available in the book collections at the library. Other examples

include selecting specific census microfilm rolls or city directories within a certain timeframe. Similarly, participants said the specific nature of their problems led to the initial search for information based on the known details. Generally, the participants who responded in this manner began their searches by referencing specific location sources or census sources.

Another reason for selecting information reflects the preparation done prior to the visit. This included continuing to use the same source from a previous visit and sources found on the library's catalog prior to their visits. Some participants indicated they selected their initial sources because it potentially contained general information on the locations or problems they were searching. The individuals who said they sought general information chose books that contained information by state. Similarly, these participants were also the individuals who tended initially to browse the collections instead of going right to a source and selecting it.

Types of Sources Selected

The last factor in describing search strategies for locating and selecting information is an analysis of the media and resources selected. Figure 15 provides the media and sources participants selected to begin their information searches. The sources selected by participants are broken down by the initial media type or resources they selected to begin their information searches. Included in this figure are the initial sources of the three individuals who began their search by communicating either with patrons or library staff. Two participants are excluded because their initial information search was done by library staff.

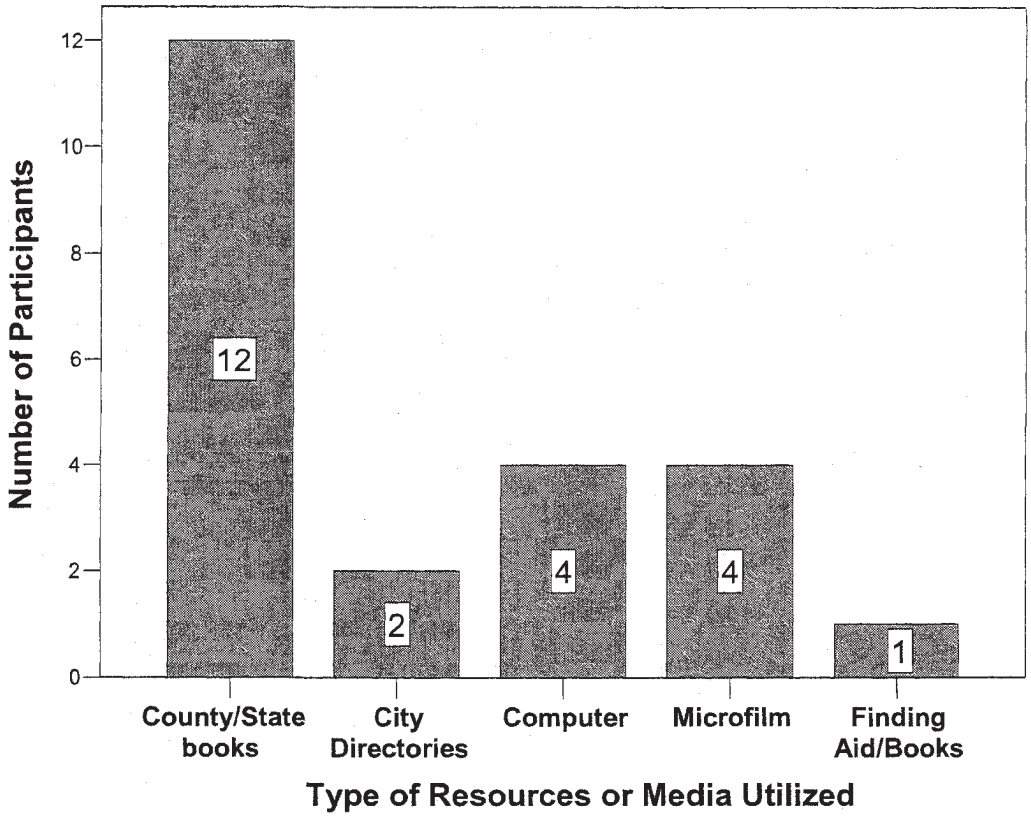


Figure 15. **Initial resources or media selected by participants at the onset of their information seeking episode.**

The most commonly selected sources by participants (n=12) were county or state books. Four participants used computers to begin their initial searches and the same number selected microfilm. Two individuals began by utilizing city directories.

In comparison, Figure 16 provides the types of sources used in subsequent searches for all searches occurring after the initial information search. In some situations, participants utilized multiple media or resource types during their overall information seeking episode.

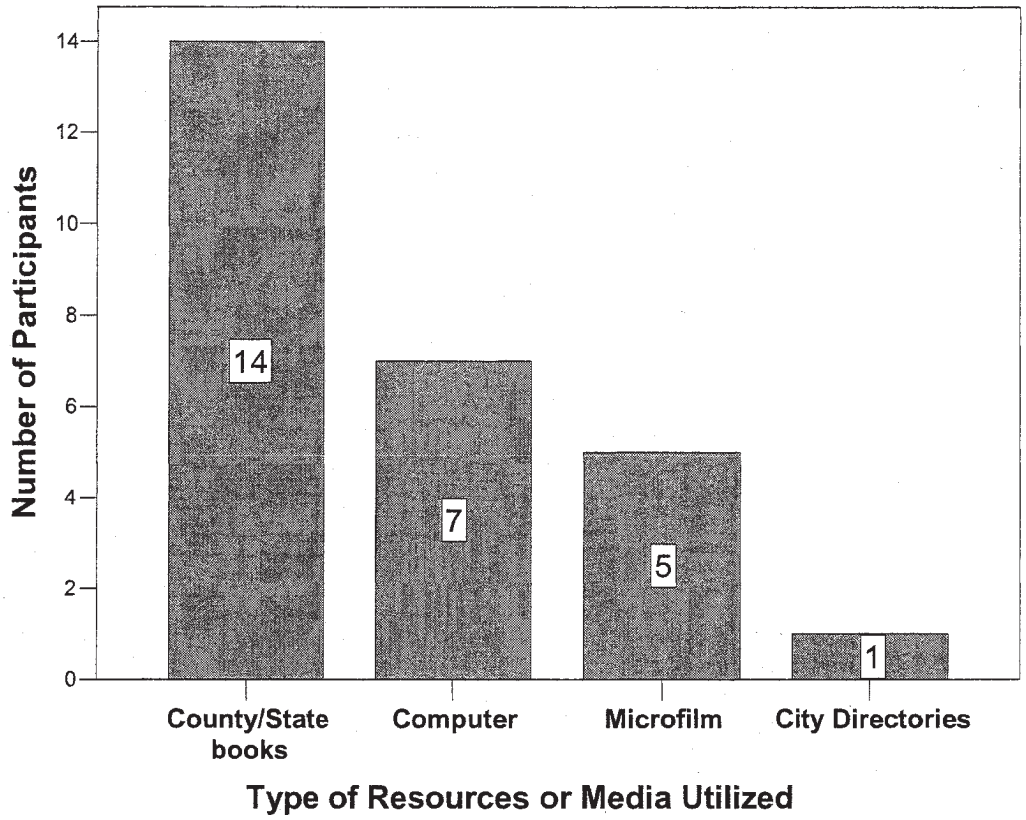


Figure 16. **Subsequent resources or media selected by participants during their information seeking episode.**

Figure 16 reveals that county and state books were still the preferred sources; however, more participants utilized computer and microfilm resources in subsequent searches. This includes three of the four participants who changed the type of media they used in subsequent searches.

The type of library and the collections and mission of the library apparently influenced the materials that were initially selected. For example, at the genealogical society, all but one participant used books in both initial and subsequent searches. At the proprietary library, the individuals who searched on their own utilized microfilm. At the public library, where more resources and more types of resources were available,

participants were observed selecting books, microfilm, and also computer-based databases. However, although the setting and collection may have played important roles, participants indicated the relevance to the information problem and previous knowledge were more important factors in their selection of sources.

Initial Strategy for Seeking Information.

The previous section discussed the steps that participants took when selecting their initial resources. After the participants selected these items, the next step was to look for information in each of the specific kinds of sources. Within each source, every participant was seeking specific information. This included surnames, locations, dates, and other information related their information problem. The type of source selected defined the strategies participants carried out while going through the source(s) they selected. In both initial and subsequent resources, participants searched sources for specific information. Within these searches, similar strategies were observed and confirmed in the follow-up interviews.

Book-related searching strategies. Sixteen of the 25 participants used books in their information searches. This included individuals who selected books of transcribed records such as cemetery listings, county records, state records, as well as participants who selected city directories. Two factors in the source determined the type of search strategy utilized: the presence of an index and/or a table of contents and the organization of the content.

The access tools (index and table of contents) provided in books determined the steps participants undertook while searching in sources. The first step when using a book source was to refer to the index. When using the index, the most-used search technique

was referencing keywords. These included specific family surnames, alternative name spellings, related family surnames, and specific locations. Once items had been found in the index, participants referred to the page(s) indicated and read the page(s) for relevant information. This strategy continued for all listings in the index. Some participants wrote the page numbers down on a separate piece of paper and then referred to these numbers instead of flipping back and forth. In some cases, participants used the same strategy as index referencing, but instead referred to the table of contents. GenSoc3 described using the index and table contents this way, "The general Kentucky record books were checked in the index and table of contents to see if records from specific counties were included."

When an index was not available, participants flipped through the book skimming a variety of pages. In these situations, the organization of the book became the key element within the search strategies. If a book was divided into specific sections by cemetery, county, type of record, or time frame, individuals briefly read through specific sections rather than skimming the whole book. The information in some books, such as city directories and some cemetery books is listed alphabetically by name. In these situations, participants searched directly for the names they were looking for rather than going to an index. However, skimming the contents of the book was still observed in these searches. GenSoc1 described her strategy while searching through cemetery records. "I knew which cemetery…to look at—although, I think I looked through every page of the Jackson County book, looking at the names to see if any popped up of interest." Figure 17 provides a summary of the number of observations of each search strategy used by participants while searching initial and subsequent book sources. This information is presented by number of occurrences.

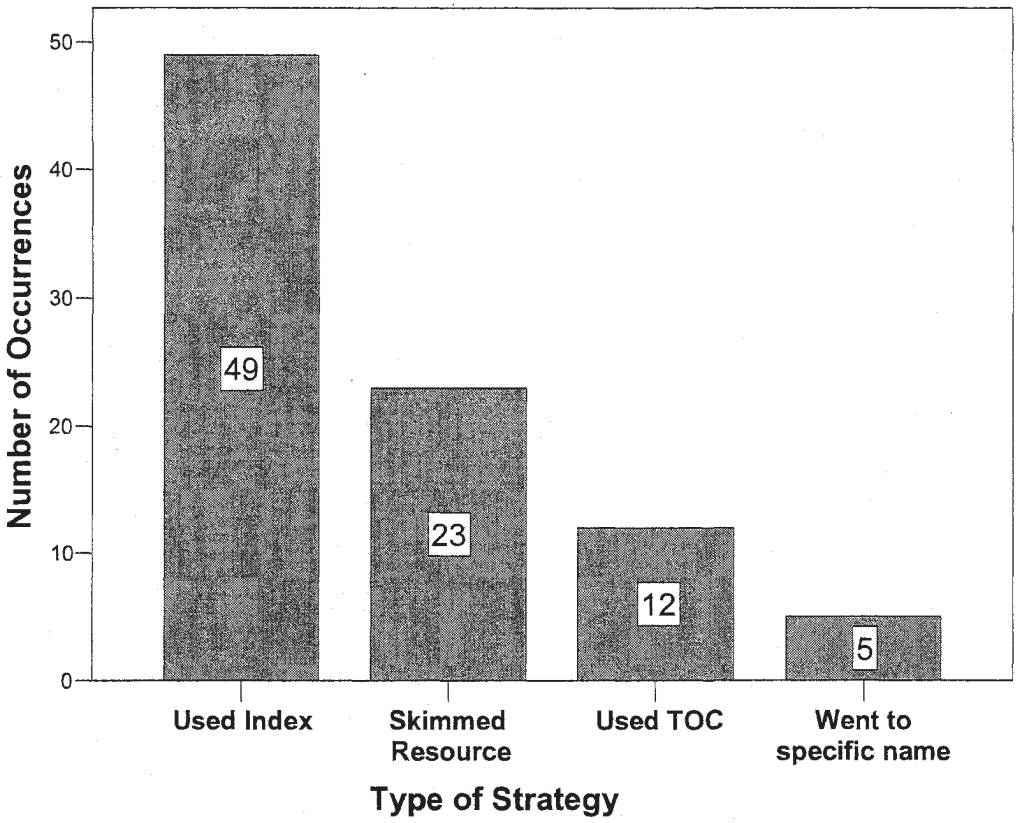


Figure 17. **Information seeking strategies utilized by participants when searching through books.**

Microfilm search strategies. The participants who selected microfilm sources utilized census records, specific county records, church records, and newspapers. Nine participants were observed using microfilm in initial or subsequent searches. Three of the nine had previously selected the films and had ordered them through interlibrary loan.

Participants approached information seeking in microfilm by also using two strategies. Most films used by participants were organized chronologically, alphabetically, or geographically. The main strategy for searching microfilm was skimming page by page looking for specific information. When skimming microfilm, two search techniques were observed: skimming the entire microfilm or skimming to

parameters presented within the source. These parameters could be by specific dates or, in the case of census records, by township or city districts. The other strategy used by participants was reeling to a specific page. In these situations, participants used indices to locate specific information.

In some situations, individuals preferred one strategy over the others. For example, Prop3 preferred to skim the microfilm even though an index was available. Three other participants were observed using census microfilm indexes in the initial search and then selecting the identified census microfilm to locate the specific information. In this example, two out of three participants still skimmed through the pages, even after knowing the specific location of the information he/she was seeking. Figure 18 provides a summary of the number of observations of each search strategy used by participants while searching initial and subsequent microfilm sources.

Computer sources search strategies. Initial computer searches differ from book and microfilm searches because each database offered a search engine to locate information related to the specific search terms entered by the participant. During the observations, the terms used within the initial search were specific surnames, specific given names, and locations, with searching parameters set up by the participant who usually limited searches by a specific type of record and/or timeframe. For example, Public2 began her search by selecting a specific census year and a specific state. She then entered a surname and given name. The results returned by the search engine were weighted, with the most relevant items provided first. The participant indicated that she selected sources based on the search results provided by the search engine. Skimming of

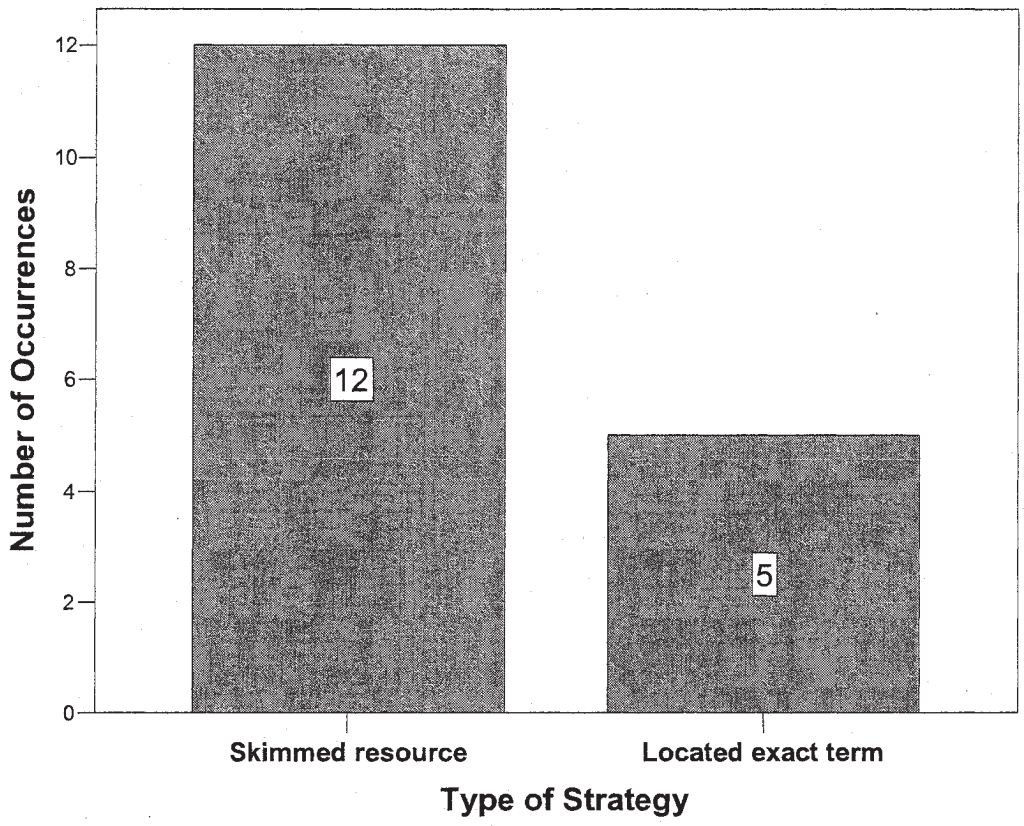


Figure 18. **Information seeking strategies utilized by participants when searching through microfilm resources.**

information was also observed in computer searches. In these situations, search terms were entered as described, after which participants chose to skim through the results. Figure 19 provides a summary of the number of observations of each type of search term used by participants while searching initial and subsequent computer sources.

Subsequent searching of resources. Although participants utilized the same search strategies for initial and subsequent sources, a few subtle variations appeared in the subsequent searches that were not identified in the initial search. One change came in the

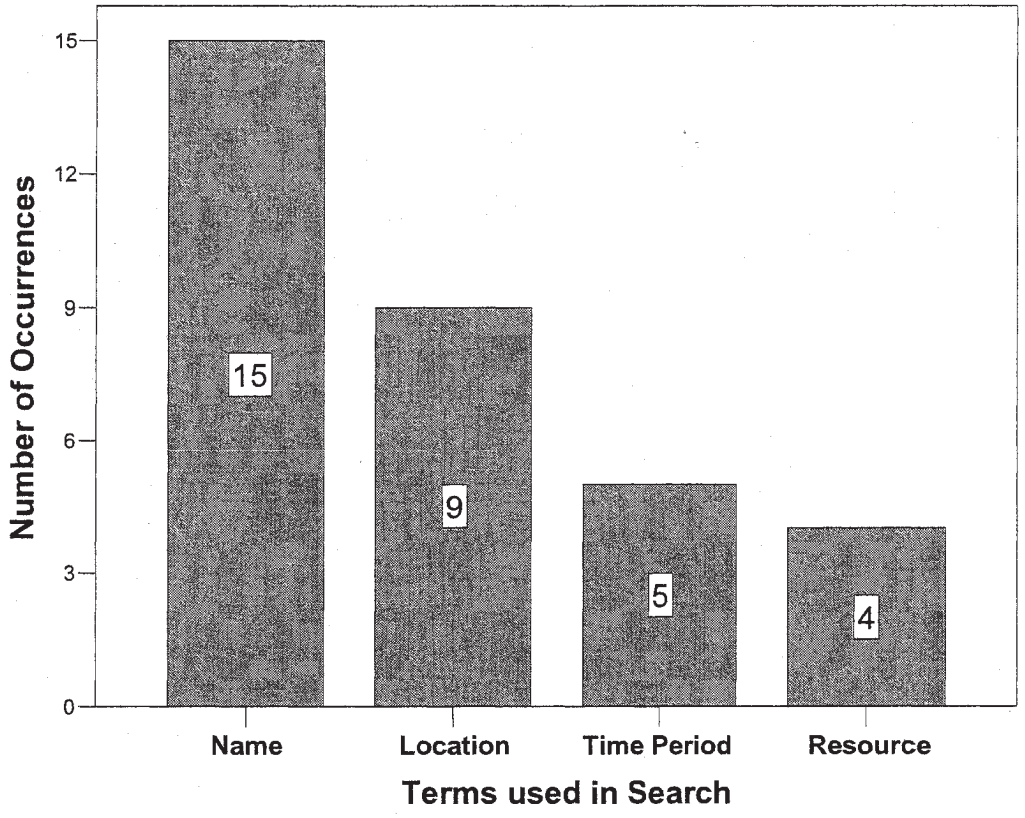


Figure 19. **Search terms used by participants while searching computer resources.**

form of cross-referencing materials. While searching for information within subsequent resources, participants referred to sources or information found in the initial search. Two different types of cross-referencing were observed. The most common referral was to materials previously copied or written from the original sources. Participants referred back to their notes and pages as they evaluated information in the new sources. In the other type, participants who kept the original resources on their tables opened them and compared the two sources side-by-side. Rather than a search process, these examples of cross-referencing represent an analysis process used while searching other sources.

Another change in subsequent search strategy was uncovered through the follow-up interviews. Instead of continuing the search to uncover new information, the subsequent search was undertaken to confirm a previous piece of information either uncovered in the initial search or from a past research either because the participant did not have the information on-hand and was relying on memory, or because the individual sought to confirm information via another source. For example, GenSoc6 found some information in her initial search and referred back to another source to compare the information that was found.

Evaluating information

Once individuals begin searching through information in the specific sources they selected, they had to decide whether the information that was presented was relevant to their information problems. These decisions included evaluating the information and deciding whether to accept or reject it. With each piece of information, a judgment had to be made to decide if the information was relevant to the problem. In the follow-up interview, participants were asked why they selected the information they did. The responses were categorized into three different categories of reasons for accepting and/or rejecting information.

The first category focused on the consideration participants had give to the source of the materials they were using in their work. Where the information came from, in terms of the specific source, was a factor for accepting information the source information contained. The origin or author of the source was considered. GenSoc8 provided an example, "Really what I was looking for the most was the newspaper accounts, because that type of thing is not just data; it's got personality to it."

The second category of reasons considered was the content of the information located. If the names, dates, and/or locations that were presented in the information matched with the expectations of the problem, then the information was accepted as "true." However, if the information did not match expectations, then the information was sometimes rejected. While searching through books on a specific state, GenSoc8 rejected information she found. When asked why she did so, in the closing interview, her response was, "They [the specific family members] weren't any where close [geographically] and the time period was wrong." She then affirmed that the information she did accept and record was relevant because it was close to what she expected time wise, was connected o the appropriate geographical area of interest, and there was a surname match.

The third category for accepting or rejecting information, when it did not exactly match, was its possible relevancy. The examples provided by participants included different name spellings, wrong dates, and differences in locations. An elaborate example was provided by GenSoc6. She was observed flipping through a number of different books and going through notes. When questioned on this process, she said,

> I went through the 1981 [city directory]. I had an aunt that showed up which was Verna. Then below a couple lines at a different address, there was VM; and I thought 'Well those were her initials but the address was different.' So I thought, 'It's possible but I don't know: so I'm not going to write it down.' Then when I went to the next year, it actually gave her name spelled out at that other address. And so, ok, then I want to go back and get that from the other one even though it showed in two different addresses for her.

Resolution of the information problem

The final step in the resolution of the information problem is determining whether or not participants actually found information that solved their problem. In the follow-up interviews, participants were directly asked: Did you find the information you were looking for? Figure 20 provides the responses for this question.

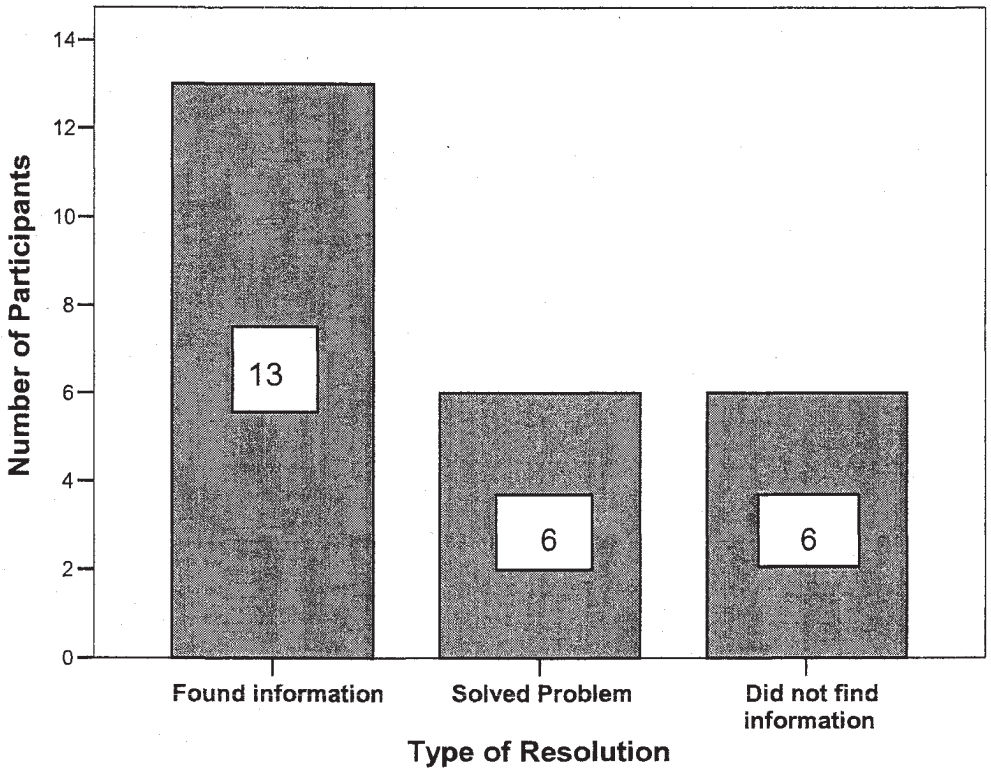


Figure 20. **Number of participants who resolved information problem.**

Six participants responded that they were able to solve their information problems during their information seeking episode. Conversely, six participants indicated they did not find any materials within their searches that related to their problems. The remaining 13 participants said they found usable information or clues; however, they indicated they did

not completely solve their problems or that they were looking through a specific resource or set of resources and did not have time to finish their searches.

Other factors influencing resolution process: Proof. Another factor of problem resolution considered by genealogists is the quality of the "proof" upon which they base their conclusions. By genealogical definition, proof is the sum of the evidence that supports a valid conclusion or assertion (Mills, 1999). Seeking proof of a specific fact or facts is a way to confirm or validate the information found.

The types of media and resources, and how these items are selected, along with the information within these sources, are important factors for individuals who believe, either consciously or unconsciously, the importance of providing reliable evidence for the statements they hope to be able to make as a result of their research. Within this study, participants' actions were analyzed to ascertain the level of concern for finding corroborative evidence they demonstrated during their information search. In addition, participants were asked in the follow-up interview, "Why did you select a certain resource?" These responses and responses to other interview questions provided indications of the participants' information seeking practices that align with genealogical proof standards.

The standards of genealogical proof have been set forth by genealogy scholars and professionals. These standards provide a framework for genealogists to gauge the validity of their research. Five conditions define the genealogical proof standards: thorough research; complete and accurate citation of sources; skilled analysis and correlation of data; resolution of any conflicts in the evidence; and a soundly reasoned, written conclusion that details all evidence, analyses, and documentation (Mills, 2007).

In the data-coding process, three groups of individuals were identified and categorized according for their acknowledgment of the importance of finding corroborative evidence to provide the validity of the information they accepted as true. The first group is made up of those individuals who did not discuss or demonstrate a concern for finding confirmatory evidence. During their entire information seeking episode, these participants did not display any actions that could be regarded as a concern for finding primary documents or other information that would provide evidence of their family history.

The second group included participants who did not consciously discuss validating or confirming the information they considered relevant but were observed using primary materials. By utilizing these materials and resources, they exhibited a concern for proving their assertions. The third group of genealogical research participants specifically mentioned the need or concern for validating information and meeting proof standards. They believed that accurate genealogical research could not be done without this type of evidence. Figure 21 provides a summary of these results.

Nine of the 25 participants did not demonstrate a concern for proof (validating or confirming information) within their interviews or information seeking episode. Seven of the nine individuals used county and state books as their sole research sources of information. These participants included all users who browsed the collections as

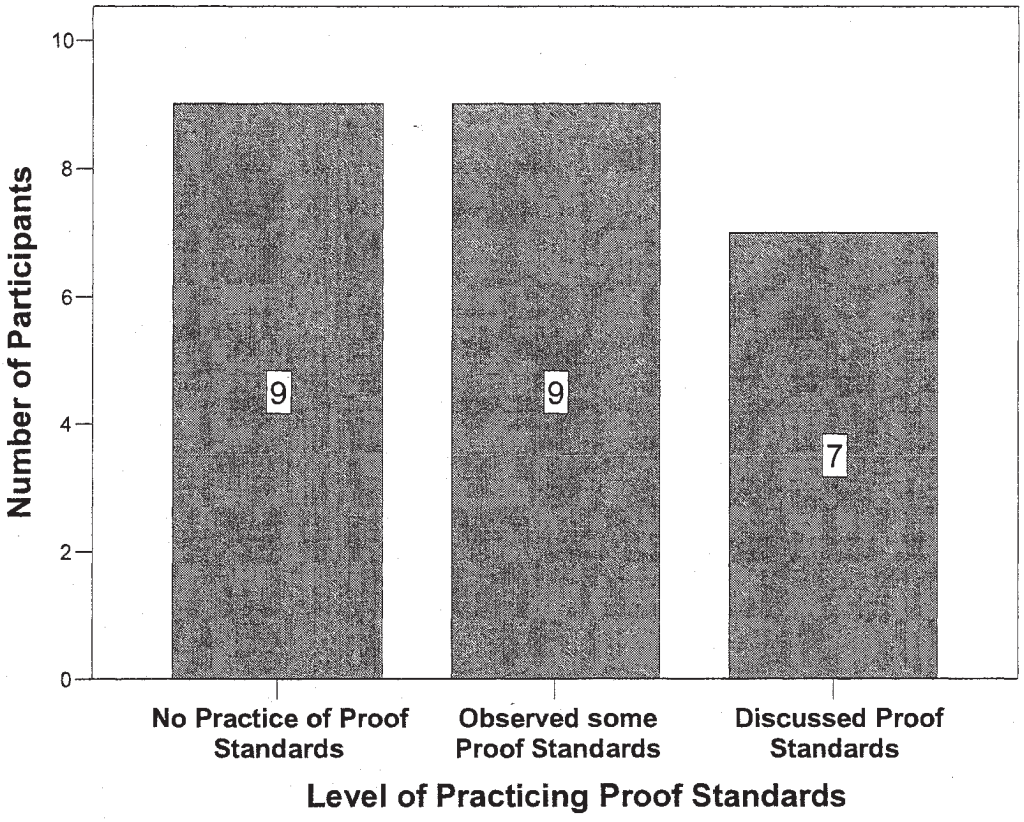


Figure 21. **Levels of practicing proof standards by participants.**

opposed to selecting a specific resource. Although not all book users' actions demonstrated behaviors consistent with what genealogists have defined as proof standards, there were book users who freely discussed proving or verifying information during the interview process. The other two participants who did not demonstrate proof used computers as their sole source. Both computer participants were observed writing down information from open-access websites, or websites where individuals are free to post information, with or without documentation or proof.

The rest of participants demonstrated behaviors in line with genealogical proof standards through an effort to validate information. Following proof standards, for the

purpose of this paper, was established by the participants' usage of primary sources. Among the participants (n=9) who were observed following proof standards, all used primary resources. These individuals may not have discussed validating or verifying information in their genealogical research; however, they were using resources that provide information that can be utilized in proof standards.

Seven participants articulated a need to validate, confirm, or prove their research and expressed a belief in research principles. These principles allow genealogists to document their research using primary materials. For example, Public9 stated,

> It [Primary Material] is the best way to avoid being misled by errors created by others and to get to the actual root of the facts; and in many of these original materials, you get a very clear feeling for what it was like for that time and place. … I want to draw my own conclusions and not be misled by someone else's misread. I used a transcription or an index to get me into it, but I want to go to the original.… I always tell people, 'Your end goal is to get to the end record source; see the original.'

Not all of these participants were using primary materials; in fact, three of the seven used only books in their information seeking episode. However, they indicated they were looking for specific information that would, in turn, lead them to an original document or other element of proof. In genealogical terms, this preliminary survey of published resources is called a "literature search." Gen3 provided the best example of the practice. She was browsing a number of state books looking for sources or information for a specific family. However, instead of using these books as her sole source of

information, she said, "It [the book] was a starting point for further research that can be verified … and also to find how I might be able to obtain a copy of a marriage bond."

Although participants were observed or indicated in the interview that they follow proof standards or that this was a concern, this study limited the observation to one research session. All, some, or none of these participants might believe, follow, and practice research strategies that align with proof standards; however, it was not demonstrated during this study.

Identifying participants' actions and acknowledgement of evidence as an important element within the information seeking process is a factor in determining strategies and processes participants used. Recognizing the actions related to genealogists' belief in proving their research claims illuminates the fact that they approach information seeking differently. Identifying this factor in information seeking allows a better understanding of the variety of approaches to solving information problems and utilizing this information is utilized.

Documenting Information

An additional element of problem resolution uncovered in this study is the method used by participants to record information. Two methods for recording information were observed. Participants were observed either writing or typing information from sources or photocopying the source for later use. The number and types of documentation is displayed in Figure 22.

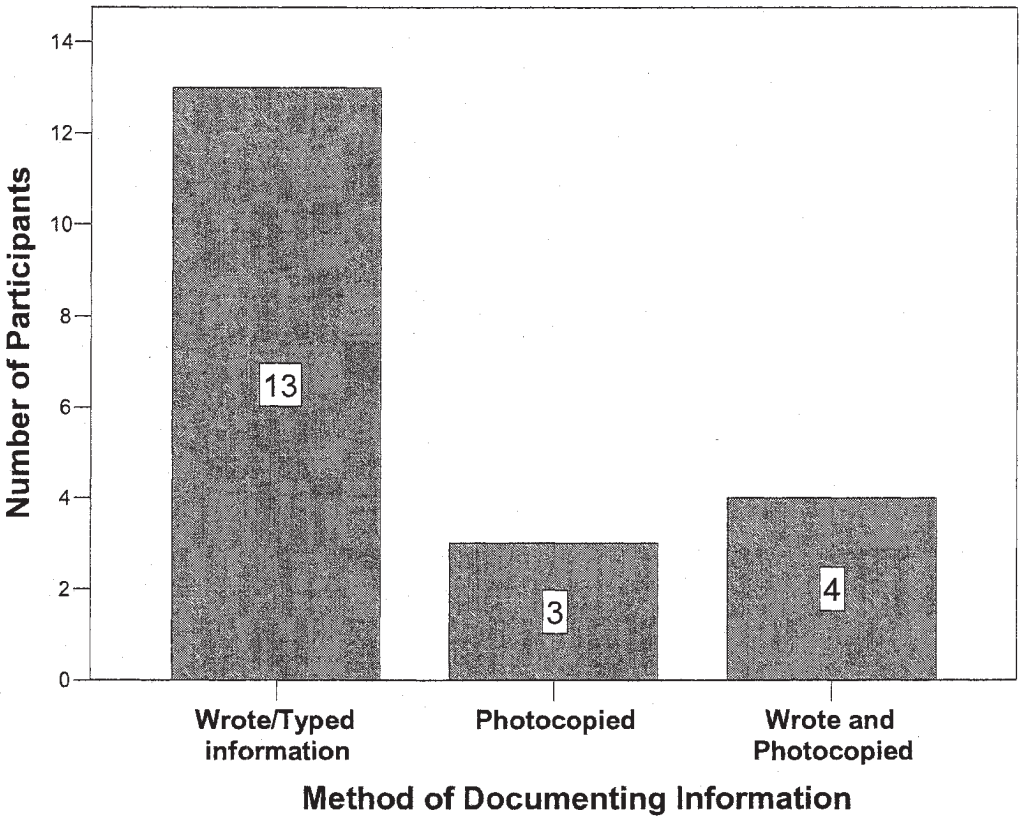


Figure 22. **Method of documenting information used by participants.**

Over half of all participants (n=13) included made a permanent record of the information in some way. Some made a personal copy of the information by making handwritten notes in a notebook, on a separate sheet of paper or on a note card. Others typed information into their laptop computers. In some cases, participants not only wrote or typed specific information, they also recorded the bibliographic information to document the resource. Others made note of genealogical information that potentially provided context to their research problems. Participants who photocopied information indicated that they wanted copies for future reference and as documentary evidence. Five participants did not document any information during their information seeking session.

All of these individuals indicated they did not find any information relevant to their genealogical research needs during their search.

Another variation of recording observed was the use of tools or forms. Two participants used forms specifically for recording certain kinds of information. All of the research sites provided forms to genealogists free of charge. Typically, these forms represented blank census forms appropriate for each specific census. These kinds of preprinted forms were utilized by one participant; however, the other participant had created her own form and used it to document specific family information from city directories. Finally, two participants utilized flash drives to save electronic versions of census records for future reference.

Other Tools

In addition to relying on forms, flash drives, laptops and paper and pencils for recording information and microfilm readers and computers for displaying information, participants used other tools in the search process. The tools used specifically in the information seeking process aided in resolving the information problem—including resources available on participants' computers, possibly not available to other patrons.

The most widely observed computer use as tool was the cross-referencing of information. Participants would examine a source and then compare that to family information stored in their computers. That is, these participants used their genealogical software to organize and cross-reference information. Prop2 was observed using this technique. However, instead of referencing her own genealogical software, she logged into an online genealogical database system that allows data entry and uploading. She used the information found on this database system to cross-reference information found

in her sources. Similarly, two patrons, in two separate incidents, used wireless Internet connections to locate additional Web sites not immediately available to other patrons working in the same facility.

The Next Step in the Research Process

The next question within the follow-up interview asked the participants to describe their next steps in their research process. Consistently, the responses to the question indicate that the next step(s) are directly related to the outcome of the previous search. A comparison of the next step based on the results of information search are provided in Figure 23.

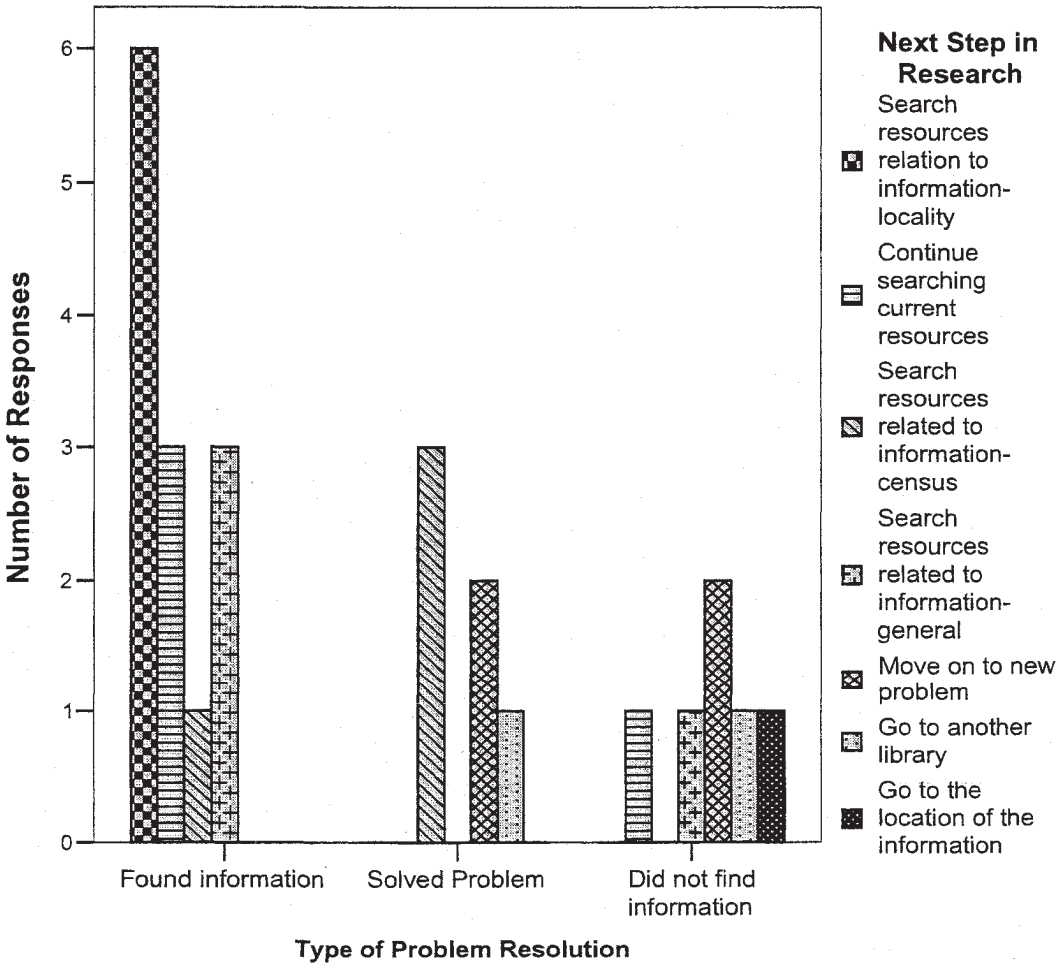


Figure 23. Comparison of type of problem resolution with the next step in the research process described by the participant.

The thirteen individuals who found some information but did not solve their information problems in their initial search activities all indicated they were going to continue to research for the resolution of their problems. However, four separate types of responses were provided. Six participants indicated they were going to search for resources related to the geographic areas relevant to their information needs. Three participants indicated they were going to continue with the resources they were currently using. Three other participants did not indicate specifics but only referred to searching information related to what they found. The other participant, along with three individuals who solved their information problem in the initial search activity, indicated they were going to search census records using the information they had found.

For two individuals who solved their information problems and two individuals who did not find any information, the next step was to begin a new search. Similarly, two individuals (one who solved their problem and one who found nothing) were going to search for new information in a different library. The remaining participants who did not find new information reported that they were going to follow up their search by continuing to look at the resource they were using, use new sources or media in the library, or venture out to the site of the actual information, in this case a cemetery.

Ultimately, the description of the next steps demonstrates the iterative nature of genealogical research. Consistent with findings in Yakel's (2004) study, participants in this study indicated that they were going to continue searching sources for clues to their family histories regardless of the outcome of their information seeking episode.

IUE Resolution Summary

Within this study, two separate processes for resolving problems were exhibited and described by participants. The first process was defined by the type of media or resources each participant selected. Separate strategies were used based on the type of media. Book users either browsed collections or selected specific titles. Microfilm users identified their specific film(s). Computer users employed specific terms to search for relevant information.

The second process was identified through the strategies participants chose while looking through resources. This process centered on key-term searching. Participants used indices, tables of contents, and skimming of texts to locate information related to their problems. Regardless of the process or strategies, specific factors common across many searches included preparing for the search, looking for confirmatory evidence for facts found, and documentation techniques. However, participants exhibited varying levels of involvement for each these factors.

Archival Intelligence in Genealogical Collections

The theory of archival intelligence was included in this study as a way to better understand the "knowledge about the environment in which the search for primary sources is being conducted" (Yakel & Torres, 2003, p.52). The theory implies that there are three areas of user knowledge: domain knowledge, artifactual literacy, and archival intelligence. In conducting their genealogical work, users drew from each area and expertise in each area assisted study participants in their search for information.

Domain knowledge. Domain knowledge consists of the knowledge that individuals have about the subject being researched. Domain knowledge is what is used

by the participant to form specific questions. For this dissertation, domain knowledge was determined by examining the specific historical and genealogical information provided by participants. Because all but one of the participants were able to clearly state their information problem, it was assumed that they had a basic familiarity with the subject matter. Furthermore, the approach each individual described prior to actual research also provides insight into the levels of their subject-matter expertise. The information problem outlines the name/geographic/temporal elements that guided the search. The approach determines which sources were selected based on these elements. Other factors, such as years of researching this family, the amount of related material that has been previously researched, and the use of the same or similar materials to what was being utilized, also influence and provide evidence of the domain knowledge of participants. For example, Public1's information problem focused on a specific family in a specific county. Through her previous research, she had built up her "domain" knowledge relevant to her family. Thus, when she began her research episode, she selected all of the cemetery and county history books for that specific county and began to look for her specific family. This type of behavior was demonstrated by other participants.

Artifactual literacy. The information problem and the subsequent searching strategies determine the level of artifactual literacy—i.e., the user's ability to interpret and analyze the importance of the information in order for it to be considered relevant to the information need.

Participants used their domain knowledge to select the problem and initial sources, but then turned to their artifactual knowledge to interpret the information that may be relevant to information problems. A good example of artifactual literacy was

demonstrated by Public11, who used census microfilm to look for a specific family in a specific location during a specific time period. Applying her artifactual literacy, she easily found her family in the census records and also recognized related families living next to hers.

Archival intelligence: Knowledge of Archival Theory, Practice, and Procedures

Three key elements identified by Yakel and Torres (2003) fit within a definition of archival intelligence. The first is the user's expertise with and understanding of the library's language system. This includes knowing library terminology, understanding access tools, and using these tools within the library system. The second element is the user's understanding of institutional rules. The third and final element is the extent to which users recognized the limits of their own knowledge. Included in this element is the ability to articulate a lack of knowledge and rely on reference staff to assist with bridging this gap.

Language use. Because the three institutions included in this study employed a common language system in the terms related to genealogical work, users had no difficulty understanding the vocabulary. Due to the familiarity with terms and rules, participants were able to work independently as they sought to find answers to their information problems. Ultimately, participants exhibited a high degree of knowledge of theory, practices, and procedures both for using the library and accessing genealogical collections. Yakel and Torres (2003) indicate that expert users are able to identify and use access tools in terms of function and have the ability to connect representations to records. Three Public Library participants were observed utilizing census indices. When

asked why they selected the finding aids, they described the connection between the function of the tool and the actual records.

Conversely, even though the libraries had catalogs, some finding aids, and visible classification cards, participants GenSoc2 and GenSoc4 struggled with locating sources. In fact, the classification system used, along with the posting of numbers on the bookshelf ends, did not appear to help these patrons. They browsed the shelves either walking around until they located the bookshelves they were searching, or finally asked a volunteer. In contrast, Public9 recognized his lack of knowledge of the classification system, as well as sources available to answer his information problem. His first step was to turn to the library staff member who, in turn, helped him begin his search by showing him possible sources and locations in the collections. His actions support the theory of archival intelligence because he was able to identify the limit of his knowledge and rely on the librarian to bridge his information gap. This reliance on reference staff, as pointed out by Yakel and Torres (2003), can be taken to an extreme, where patrons rely heavily on the librarian. In this study, two of the participants at the proprietary library allowed the volunteer librarian to direct their searches. In both situations, the librarian, not the participant, sat at the computer entering search terms and analyzing search results for relevance.

Internalization of rules. Participant genealogists working in these libraries were able to adapt to the rules of each location and focus on the research question. A possible way to examine archival intelligence within the expertise of genealogical rules usage is to examine each participant's ability to utilize library rules for accessing information. All three libraries offered access to other library collections via interlibrary loan. Expert users

displayed the ability to go beyond paper and book-based library collections and utilize interlibrary loan to access collections. By understanding the availability of collections and the limits of these rules, some participants demonstrated a higher level of expertise than others. GenSoc7 provides an example. She described looking for records in books and then stated, "If I really want to look at the deed records, I go to the Library and order a film and look it up on the film."

Awareness of knowledge. All but one participant in this study had a clear understanding of his or her information need and could express the problem in a way that indicated an understanding of the research project and task at hand. However, not all participants knew the best way to approach the problem. This is demonstrated by Prop2 and Prop4 who recognized that the library volunteers could help identify and work through their information problems. This was also demonstrated by participants at the public library. There is a third example that occurred twice at the genealogical society. Instead of participants identifying their lack of knowledge, other library patrons assisted them while they were researching their information problem. In both situations, library patrons overheard the participants' information problems and assisted them by directing them to a website that contained the answer to their problem. In these situations, where assistance was offered without being sought, the help was accepted and led to the solution of their information problem.

Archival intelligence: Strategies for Reducing Uncertainty and Ambiguity

The second element of archival intelligence focuses on how users manage the strategies used to approach or solve their information problems. This element assumes that most users have unstructured problems and expertise leads to the ability to structure

problems more efficiently. This element also consists of three areas: the ability to define information problems, usage of search tactics, and question asking.

The overwhelming majority of patrons (n=24) could state their information problems. In addition, within the initial interview, most participants could describe their search plans and strategies at the outset of the search session. In fact, nineteen had prepared for their trips to the library by creating lists or putting together notebooks of information. This indicates the majority of participants had developed specific strategies for reducing as much uncertainty as possible.

A number of issues could account for the differences I observed in this study and the conclusions drawn by Yakel and Torres (2003) in their study. One reason for the difference is the type of research that takes place in each study. Genealogical users tend to research very similar problems throughout their research (where did their ancestors live, what did they do, who were their children, etc.). Within this study, all users were looking for information on specific individuals. The users of archives in the Yakel and Torres study may have been looking for different types of information which accounts for the level of unfamiliarity with their problems. Another reason could be due to the frequency with which participants had used the library and had performed previous research. All participants indicated they had used the library on previous occasions to research genealogical information. Search tactics used by participants could be accounted for by these previous experiences and the increased likelihood of potential success of finding relevant information.

Most participants did not interact with staff regarding their information seeking activities. In fact, the majority of staff-participant interactions were collection location

questions. The interactions that were observed occurred between patrons-participants or, in two instances at the proprietary library, between library volunteers and informants, in which cases the volunteer did the searching and drew on his/her own expertise rather than on the participants' expertise.

Archival intelligence: Intellective Skills

The third and final element of archival intelligence is intellective skills, which consists of two areas. The first area is preparation. Expertise in preparation indicates the user has planned for the activity. The second element is the understanding of the representational relationship between surrogates and the original records. The ability to make this connection provides the framework for gauging intellective skills.

Of the three characteristics of archival intelligence, intellective skills are the most relevant to genealogists in libraries. Participants demonstrated preparation at all facilities, and this preparation reduced the use of browsing as a research strategy for some participants.

In genealogical libraries, only a handful of genealogists spontaneously discussed their understanding of the relationships between transcribed (typed) and original documents. In such instances, participants indicated that although they may gather information from the transcription, for example, until they have the original document, they did not consider a search complete. This demonstrates the ability to distinguish between surrogates and actual records. However, instead of referring to the relationship between surrogates and originals as a factor, the genealogists who made this connection indicated that this was due to the proof concerns. For example, GenSoc7 in discussing cross-referencing information said the following, "If I really want to look at the deed

records, I go to the [name] library and order a film and look it up on the film, because that's more proof." Although not all participants used the word *proof*, some of them referred to the proof standard while discussing their research. Gen 3 was searching for information on how "to obtain a copy of marriage bond[s]." As she further explained: "I already have the film number. I am looking specifically [for] where I might be able to get [order] a copy of something that is on film."

Segmentation of Genealogists

Another research area that potentially applies to the study of how genealogists seek information focuses on segmentation of the genealogical population. This is an important element of researching a social group because the goal is to uncover specific characteristics that allow definition of specific sub-groups within a user population. In particular for libraries, defining these segments allows development of user-based education and/or training opportunities to assist staff and genealogists to fine-tune their research skills, ultimately providing better service. A goal of this study was to segment participants based on their information seeking characteristics (Marchionini, 1995).

As presented in Chapter 2 and discussed in Chapter 3, one way to examine segments is to begin by examining the social worlds in which they occur. Introduced by Shibutani (1955), Strauss (1978, 1982), and Unruh (1979, 1980), social worlds are defined as "amorphous and diffuse constellations of actors, organizations, events, and practices which have coalesced into spheres of interest and involvement for participants" (Unruh, 1980, p. 277). Unruh further explains that social worlds offer participants voluntary entry, involvement, and departure capabilities. It is these capabilities that separate social worlds from more formal social organizations. Unruh further supplies four

types of membership in the social worlds: strangers, tourists, regulars, and insiders. The investment and involvement in the social world is what distinguishes the four types of memberships. The concept of involvement in developing segments in social worlds has been further researched and covered by recreation researchers (Scott & Shafer, 2001). Stebbins (2005) concurs with Unruh and others in suggesting that involvement and investment create types of members of social worlds. Stebbins (2001) discusses types of leisure activities and includes genealogists as a group that fits within his definition of a serious leisure social world. However, no discussion is provided to define the various segments that may be implicated.

Rather than focusing on involvement, Mills (2003) indicates that there may be different types of genealogists based on the level of research they are pursuing—or the level of seriousness with which they take this investment. Genealogists who gather names and dates indiscriminately, with little or no effort to verify identities, differentiate between "same name" people, or prove kinships are deemed "family-tree climbers." Other genealogists seek and gather historical information that provides in-depth information on their families, and they strive to meet the standards of the field, specifically "a sound knowledge of fundamental sources, thorough documentation, and careful examination of the evidence to ensure correctly assembled identities and relationships" (p. 272). Mills refers to these genealogists as "traditional genealogists." Her final group of genealogists is labeled "genealogical historians." These researchers go beyond "traditional genealogy" to complete exhaustive historical research and present their families in the context of social, temporal, geographic, economic, religious, cultural, and other historical issues. "Their measure of success is not the number of family

members found, but the extent to which they correctly portray each human life they study" (p. 272). In order to examine segments of the genealogical population in this study, both the informants' involvement and levels of investment in the research being pursued were examined. Although there were only a small number of participants, potential categories emerged from the data reviewed.

Involvement and Investment

Based on the work of Unruh (1980) and others, involvement and investment in a group is the major factor in determining the segments of a social group. The first way to examine involvement is to examine the longevity of involvement or the number of years an individual has been researching his or her family history. As previously presented in the IUE: People section of Chapter 5, Figure 24 provides a summary of the data related to years of involvement reported by participants in this study.

As seen in the figure, if "experience" is measured in terms of "years of involvement," then there is a wide variety of experience represented. Three participants or twelve percent reported having 2 to 4 years of experience and three others had over 30 years. Eleven had between 21 and 30 and seven had 5 to 15 years of experience. The wide range of experience reported by study participants does not provide an easy way to segment participants.

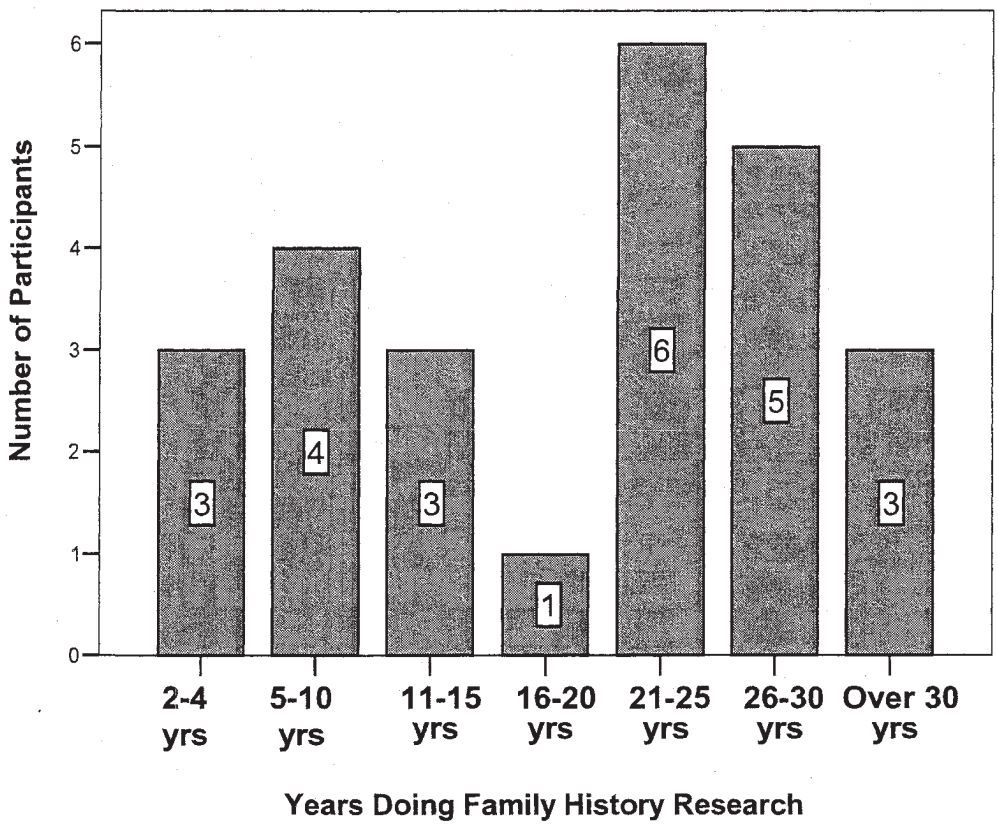


Figure 24. **Number of years participants have been doing family history research.**

Another potential way to establish involvement and investment is to examine persistence. Figure 25 (previously presented as Figure 3 in IUE: People of Chapter 5) provides this information in the amount of daily/weekly involvement each participant indicated he or she normally participates.

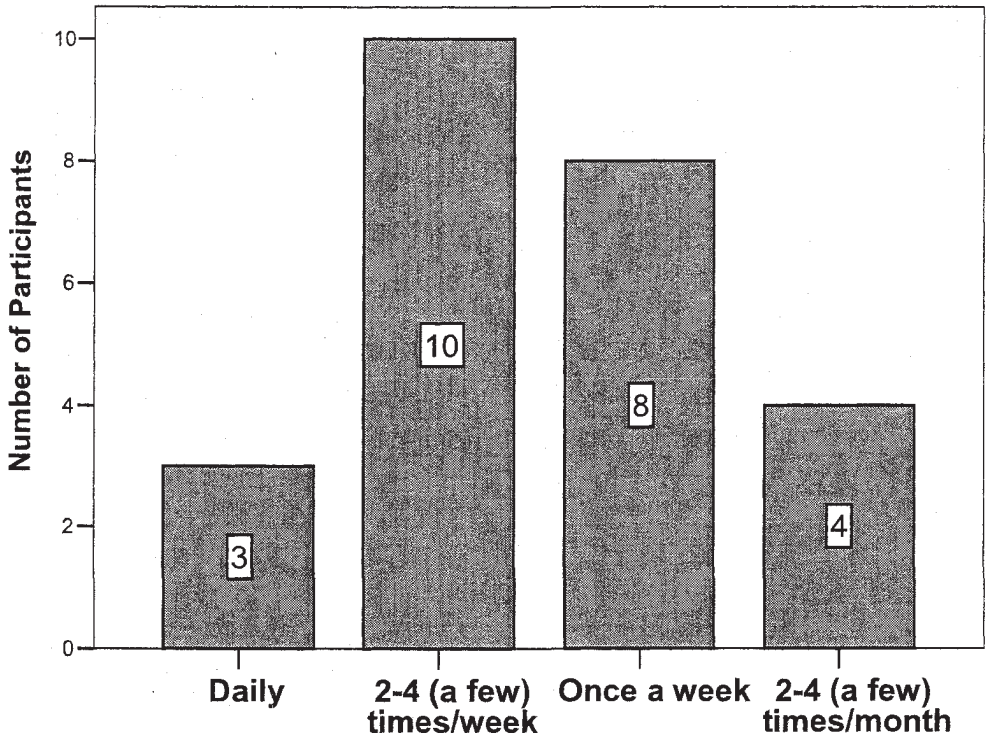


Figure 25. **Frequency of genealogical research per week or month for each participant.**

Similar to experience, persistence or frequency of research is also spread among all categories and does not provide a clear method of examining groups of participants. Figure 26 provides the combination of the previous two tables. This allows for an analysis to see if experience coupled with frequency of research provides a method for segmenting participants.

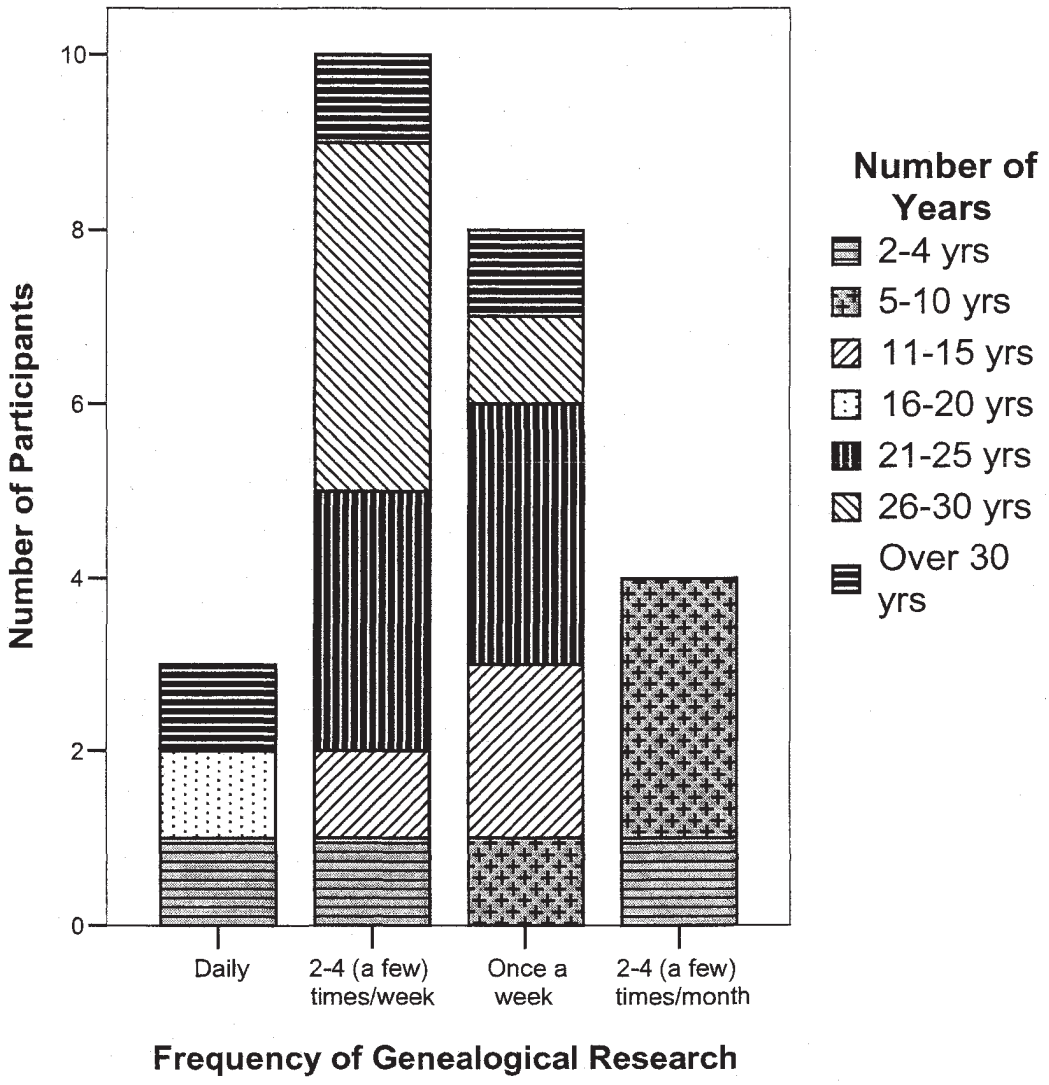


Figure 26. Frequency of research and number of years of experience for each participant.

The inconsistency of categories when comparing experience with frequency of research again does not provide a useful way to segment participants into groups. Overall, the involvement and investment of participants did not provide a useful way to segment this group.

Goal of Research

Following Mills' (2003) example, another possible way to segment participants is to examine the depth and breadth of their research and their commitment to standards of the field. Mills provides three categories: family tree climbers, traditional genealogists, and genealogical historians. Duff and Johnson (2003) provide similar categories. For this reasons, participants in this study were asked the following question: What do you want to accomplish with your genealogy? Participants provided responses that were coded into the four following categories: genealogies: ancestral, genealogies: extended family, books: ancestral, and books: extended family. Because a narrow focus on the direct line typically produces questionable accuracy and research roadblocks, the stated "goal" of each participant is a significant measure of the depth and breadth of his/her research and commitment to standards.

Genealogies of direct ancestors refer to the participants' intent to limit their research efforts to gathering information on their direct ancestors. This group includes participants who provided these types of responses: "Right now, I am trying to research my direct ancestry. I am at [sic] my great, great grandfather who lived in Missouri. My goal is to complete my ancestral chart before I move on to brothers and sisters" (Public13). Extended research expands the participants' research beyond their direct ancestors and includes extended families and family members such as cousins, aunts, and uncles. "I want to be able to document where and who the family [is]— the members and where they lived, what they did" (GenSoc6).

Although most people were researching information to compile family trees or extended family genealogies, there were those who indicated that their goals were to

advance beyond genealogical charts, to publish or to provide a historical perspective of their families in some sort of book format. "I've already completed three family books. The information I am investigating is for a fourth book" (Prop3). Figure 27 provides a summary of participants' research goals.

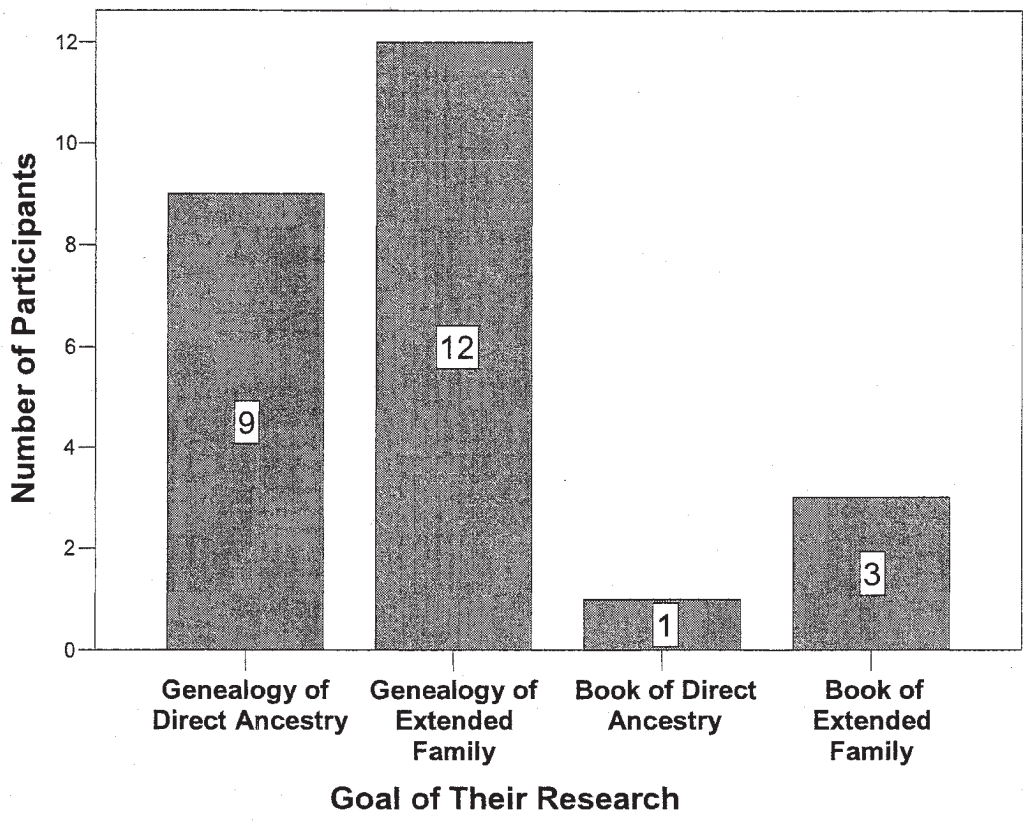


Figure 27. **The goal of participants' genealogical research.**

As seen in Figure 27, only four participants (n=4) were gathering material with an intent to publish in book format. The remainder (n=21) were putting together family trees, ancestral charts, or compiling genealogical information or narratives with no expressed intent to publish them as a book. Because of the large number of the later, the goal of their research does not provide a quality method of segmenting users.

Mills' definition of genealogist groups

Within Mills' (2003) explanation of her three groups, she explains that approach to research is the major difference among the three groups of genealogists. Family-tree climbers gather information regardless of the source. Traditional genealogists use sound genealogical principles and sound knowledge of "fundamental sources, thorough documentation, and careful examination of the evidence to ensure correctly assembled identities and relationships" (p. 272). Genealogical historians not only exhaust multiple sources and locations, they also carefully document their information and are critical of information and view information they find with a critical eye. As previously noted, "Their measure of success is not the number of family members found, but the extent to which they correctly portray each human life they study" (p. 272). To examine possible groups for the purposes of segmentation using Mills' approach to research, categories were created to analyze how each participant incorporated proof standards within their research. These categories were based on responses to interview questions and observed information seeking strategies. These strategies included use of primary records versus secondary sources and statements that identified a concern for proof standards. The incorporation of proof concerns was used as an identifier for potentially segmenting users. As previously seen in the IUE: Resolution of Information Problems section, Figure 28 provides the three categories.

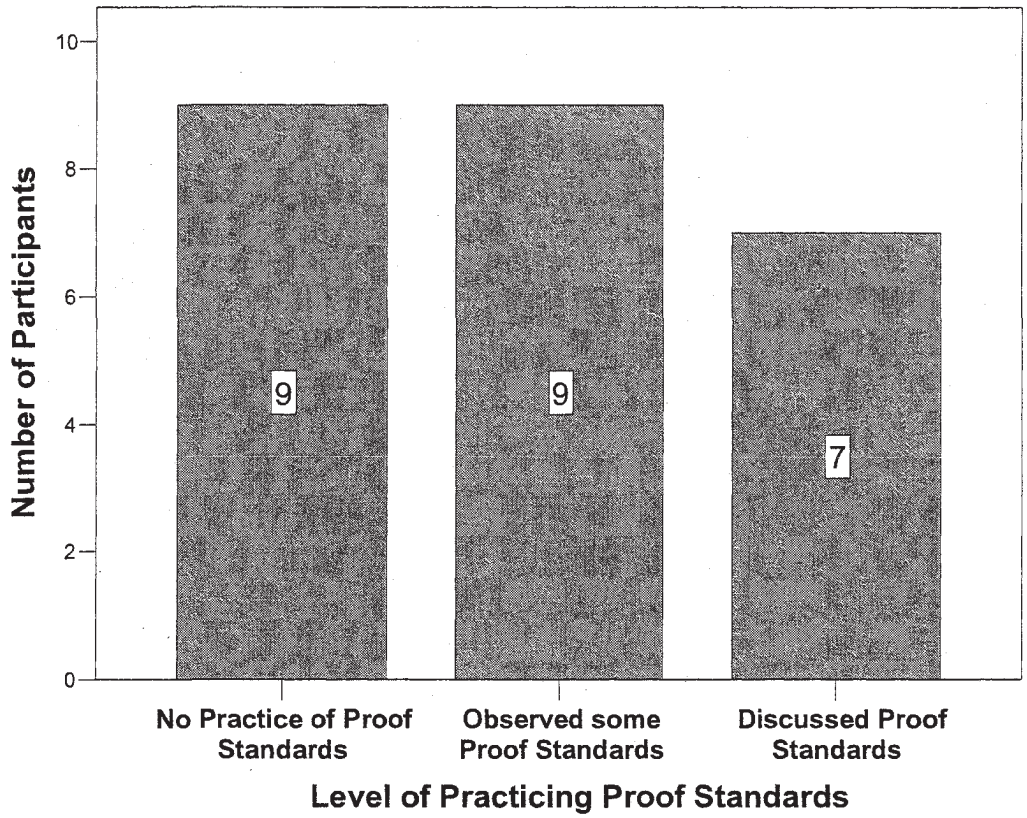


Figure 28. Levels of practicing proof standards by participants.

Three categories were created using concern for proof as a factor. The data used to create the proof categories was compared to the three groups identified by Mills (2003). Participants who did not demonstrate or discuss proof standards utilized books or open-access websites, all of which represent secondary sources. Furthermore, when asked why they selected their resources, none of these participants indicated a concern for verification, or an awareness of the difference between primary or secondary resources. These participants' examples closely resemble Mills' family tree climbers.

The participants who used primary sources, such as census records, newspapers, and city directories, while demonstrating an awareness of the importance of such sources

over secondary sources, did not articulate an awareness of the differences in their responses to interview questions asked to elicit an acknowledgement of concerns for validation and proof of information found. Even so, these participants were deemed to exhibit characteristics of those Mills defined as traditional genealogists.

Participants who freely discussed the importance of verifying or proving genealogical information during the research activity observed in this study constituted a third group that closely resembled researchers that Mills labeled genealogical historians. An analysis of these individuals in this group shows that experience researching is not a factor. In fact, the participant who had been doing genealogy for the shortest amount of time (three years) was included in this category. She was observed switching from books to computers in her information seeking episode, when asked why, she said, "I was looking for [family name]. I found a reference to him in a book and I wanted to confirm that he was living in the area and confirm his family members" (Public2). She then was asked why it was important to confirm the information. "I was taught that you always want to verify your [genealogical] information…so later you can prove your ancestry" (Public2). Three other participants in this category were observed using state or county books. They said they were looking for source information to track down original records. Finally, although Mills' definition does not identify the end product of genealogical historians, all four of the participants who were working on books were classified in this category.

Due to my limited engagement with the participants, it is difficult to conclude with certainty that these individuals were truly practicing principles that would classify by Mills' definition of "genealogical historians." Although this group may or may not be

classified as such, they consciously have included proof standards within their research principles and subsequently their information seeking processes.

By using proof standards as measure, these initial findings reflect Mills' contention that genealogists can be segmented into groups based on their approach to research. Participant involvement and persistence were not observed to allow for potential segmentation of the participant population. However, because this conclusion may be attributed to the size of the study sample in this research, it warrants further research attention in future studies.

How the Data Answered the Research Questions

Research Question 1

What do genealogists do when navigating information-seeking environments?

The most common research practices observed across cases in this study involved the preparation participants completed prior to coming to the libraries. All but one of the participants had formulated their initial information problem prior to entering the facility. Moreover, all but three of the participants had already thought through their plans of action and had developed their strategies in advance. By formulating their questions, as well as initial approaches, participants entered the library, went to resource areas, selected possible sources, and then accessed information. Even though each facility was unique in terms of the characteristics of its physical setting, in addition to providing specific and unique collections, most genealogists moved through the environments with relative ease.

Even though most of the participants' search activities were solitary in nature, some searchers sought the assistance of others while navigating the information-seeking

environment, indicating that for some information seekers, genealogy has a social dimension.

Research Question 2

How do genealogists seek answers to uncertain or ambiguous information problems?

This research question was based on previous research studies within LIS that indicated that LIS users struggle to articulate specific information needs (Wilson, 1999; Belkin, 1980; Kuhlthau, 2004). Perhaps surprisingly, the genealogical participants in this study were able to state their questions in quite specific and unambiguous terms. All but one of the participants could easily define their information needs prior to beginning their research tasks. The information problems that informants identified included surnames, specific counties, and other locations, and frequently included a temporal aspect such as a specific year or time period. Furthermore, in discussing their information problems, many participants also identified the specific types of records needed to solve their information problems.

Research Question 3

What skills do genealogists use when making connections while seeking information?

The skills demonstrated by participants were based on where they obtained their information. Participants recorded information based on relevancy, defined as specific information that matched or was related to the information problem. This information included names, dates, and/or locations. While the source is a major factor, the type of source and its relationship to the original records is also considered by many participants This represents genealogists' application of proof standards. While practicing proof standards, the types of sources and how these sources are selected, along with the

information within these sources, are important factors for individuals who feel that original records are necessary to verify or prove their historical information.

Research Question 4

How does the theory of archival intelligence relate to information seeking of genealogists?

Although archival intelligence theory is not a perfect fit with what was observed, this research provides support for a number of elements in Yakel and Torres' theoretical framework. Participants were observed practicing known rules, procedures, as well as using freely accessing information; in addition, they were also observed struggling with them. Furthermore, participants freely discussed how they had prepared for their visits. The individuals who came well prepared were able to find information they were searching for. By practicing and utilizing proof standards as a genealogical research principle, participants exhibited an expert level of intellective skills. The biggest difference in the processes exhibited by genealogists and those include as elements of archival intelligence is the uncertainty of information problems. Genealogists were observed displaying a knack for relying on their own knowledge to answer information problems that they had developed. Not only did they easily develop the problems, but they also formulated potential solutions to these problems and proceeded to information sources most likely to resolve these problems with relative ease.

Research Question 5

Based on information seeking characteristics, in what ways can genealogists be segmented into members of a social group?

Comparing the research of Unruh (1979, 1980) with Mills (1999, 2003), there is a sense that genealogists can be segmented into subgroups. However, the researchers differ in how they think this segmentation can occur. Sociologists and leisure researchers believe that segmentation of social groups is based on their involvement and investment in that group (Unruh, 1980; Scott & Shafer, 2001). Mills (2003), a genealogist and historian, indicates for genealogists that the characteristics of subgroups may be tied to the research principles a genealogist is applying and pursuing.

The conclusions reached in this study indicate that genealogists are a unique social world that cannot be segmented by involvement or investment in the sense defined by Unruh (1980) and others. Rather, commitment to research standards provides a better potential for segmenting genealogical researchers. The way participants approached their research, and the more consciously they discussed and used proof practices in their genealogical research, provided a potential means to classify genealogists.

Chapter 6: Conclusions and Implications

The purpose of this study was to examine the information seeking processes of genealogists who were researching in libraries that cater to genealogical patrons. The libraries provided the context in which participants searched for information that could likely offer solutions or clues to their genealogical information problems. The research framework of this study utilized Taylor's (1991) Information Use Environments (IUE) and Yakel and Torres' (2003) Archival Intelligence to explore different facets of the genealogical community and how they search for information. The theoretical framework of this study used social constructionism in order to allow for individual descriptions and representations of meanings as articulated by study informants engaged in genealogy information seeking processes. Examining different areas of the information seeking processes created the framework for the research questions. This included participants' approach to navigating within information seeking environments, seeking answers to information problems, and making connections while seeking information. The research questions also targeted the fit of the information seeking processes of genealogists within the archival intelligence theory. Finally, the research questions also focused on the possibility of segmenting participants into groups based on their information seeking characteristics (Unruh, 1980; Mills, 2003). The data collection methods employed captured actual research methods used and exhibited by participants, conversations that occurred within the context of researching, and uncovered the participant's view of their research. Data collected from participants occurred in one information seeking episode, from entering the institution to leaving the institution.

This chapter will first compare and contrast the IUE as described in this study with the definition of an IUE as described by Taylor (1991). The next section will compare and contrast my research results and conclusions with elements of the archival intelligence theory. Following this section, I will offer my conclusions related to the segmentation of participants based on information seeking processes. The impact of this study on library and information science research will follow the discussion of segmentation. The final section of this chapter will offer some suggestions for future research studies related to the information seeking processes of genealogists.

Taylor's IUE Structure

This study utilized Taylor's IUE (1991) because the model was structured to allow for a discussion of four elements of a specific information user-group: people, setting, problems, and resolution of problems. Taylor outlined aspects specific to each element, which allow for a description of the group of individuals, the information problems presented, the context in which the information problem is presented, and the methods used by participants to resolve their information problems.

To better understand how genealogists seek information with the goal of constructing an information seeking model, data was collected relevant to each area of Taylor's (1991) IUE. To this end, study participants were asked to provide information related to age, sex, marital status, education, employment, genealogical research background, and use of technology. Also asked was a question regarding use of social networks, specifically membership in genealogical societies. In addition, all participant observations and social connections conducted took place within the setting of each information seeking episode. Upon asking, participants described why they came to the

particular library and what kinds of information were being sought. These discussions explored both information problems and potential initial steps for resolution. In addition to my observation of each individual participant, I used a follow-up interview to capture how each genealogist described his or her approach for resolving the information problem, evaluating information, and determining the next step of his or her genealogical information search.

Each of the four sections of the IUE will be compared to the definitions of an IUE within Taylor's descriptions. Furthermore, each element will then be described in comparison to the current LIS literature to information seeking and use. The final section of the IUE will define the genealogy researcher IUE in a model adapted from the one created initially by Lillard (2002).

People

Within the structure of the Taylor's (1991) IUE model, a set of people are categories by the common demographic and nondemographic characteristics that "help to define the information environment and behavior of a restricted population" (p. 222). Taylor believes that problems differ from group to group. The development of an IUE deals with the group rather than individuals. The key is to identify the differences and similarities that define each group, thus allowing to "isolate the similarities and differences among varying populations in specific contexts" (p. 219). The goal is to then identify these similarities to apply to information system design.

Demographics. Taylor begins his formulation of people by analyzing demographics (age, sex, race, marital status, and education). He states that age, sex, and marital status do not define the IUE. However, all three define the IUE of the participants

of this study. All but one participant was over the age of 50 and over half (n=15) were over the age of 60. Furthermore, twenty were female and eighteen were married. Although these factors may not influence the information seeking processes, they do define the group. The significance of age and gender in defining the genealogical IUE was also identified in previous studies (Sinko & Peters, 1983, Lambert, 1995a; Kuglin, 2006).

Taylor also points out that education may be the most significant demographic characteristic. Participants in this study were found to have a mix of educational backgrounds. Moreover, the educational background of each participant did not affect their information seeking processes. Participants with less than a high school education were observed following the same processes as those participants with college graduate credit and beyond. This implies that genealogists are drawing not necessarily from research practices learned in formal education but from those to which they have been exposed within their genealogical research.

Nondemographic characteristics. Regarding nondemographic characteristics, Taylor includes media use, attitude towards technology, and membership in social networks. Taylor's examples are drawn from informants involved in professional and business careers. He indicates that specific occupational groups tend to prefer specific types of media. In this study, almost half (n=11) of participant genealogists were observed using a variety of media, including computers, family history software, and genealogically specific databases. This shows that Taylor's premise on technology holds for some, but not all participants.

Taylor (1991), using doctors and engineers as examples, provides support for the importance of social networks in the IUE. Yakel (2004) indicated that genealogists rely on similar social connections. For genealogists, these consist of the connections made via the Internet and memberships in societies. Social networks of genealogists have been previously identified and investigated by Dulong, 1986; Veale, 2004a; and Fulton, 2005. These studies found that genealogists developed social networks through genealogical societies and online communities. Duff and Johnson (2003) also discussed the importance of consulting with colleagues within genealogical research.

Participants in this study discussed numerous examples of the importance of social networking, including formal memberships in genealogical societies, Internet-based sites designed for genealogical exchanges and sharing, and personal and family-based networks. For example, some participants also discussed their reliance on other family members who are also researching family history. Kuglin (2006) previously identified this trend but down-plays its importance for experienced genealogists. In this study, however, the importance of family as network was identified in all levels of experience.

Other characteristics. Although the "People" for the IUE in this study differs slightly from Taylor's expectations, the structure he provides allows for the initial categories of investigation into who makes up the IUE and what their general characteristics are. However, other factors need to be included if the model is to be useful in describing genealogists. For example, how long participants have been researching family history, their normal research time investment, and their motivation for pursuing family history are aspects that allow for a more in-depth examination of the people aspect

of the IUE. Like other characteristics, they may or may not influence information seeking, but they do define the IUE. For example, Kuglin (2004) indicates her findings may not represent the overall genealogical population because her informants were frequent users of the library. These results reflect those of this study. I agree that results may only apply to frequent users, but I would disagree with the representation issue. The representative population of genealogists who frequently utilize libraries and seek information serves as potentially the best group to study and understand.

Setting

Taylor provides four factors that influence setting of an IUE: organization, interest, access to information, and experience. In all three libraries included in this study, each of the four factors was present in the library or was demonstrated by the participants. The common thread among the three libraries is the overall mission of the institution; each institution was created to assist patrons in discovering their family history. However, all three have different physical layouts, collections, organization systems, and types of reference services. Let's first examine Taylor's four factors and the general similarities between libraries.

Similarities. All of the libraries provided an organization system for patrons. The collections of each library were housed and organized based on the type of media being made available. Although the cataloging systems and physical locations were unique, all libraries housed their books and other print materials in specific areas. Similarly, microfilm collections were also housed and organized in a similar fashion. With regards to interest, each library provided collections that were aligned with their mission. In addition, each institution offered participants multiple types of access to information. All

libraries provided Internet access, microfilm readers, and collections open to all patrons. All three libraries made additional resources available to patrons through interlibrary loan. Most importantly, all libraries provided participants access to primary source materials. The experience factor of each institution is also determined by mission.

Differences. All of Taylor's examples analyze IUEs in terms of information seekers in professional positions (engineers, legislators, and doctors). Genealogists differ from these groups because researching family history is characterized as a hobby (Stebbins, 2001). Because the structure of the genealogical IUE is less structured (i.e., any one can participate in genealogy), the settings in turn are independently unique. All three institutions cater to genealogists, but all do so in their own unique way. These factors provide the differences in each of the three settings and, ultimately, in the IUE. For example, each facility has different organization systems for their collections. The Genealogical Society and the Proprietary Library both utilize unique "in-house" systems that were created specifically for their institutions.

Another difference is the access to information. Major differences were noted in each location. Only the Genealogical Society allowed patrons to check out book materials. The other two facilities limited patrons to in-house use library materials. The Proprietary Library did not contain a catalog of resources currently located at the library. Patrons either had to know exactly what they needed or had to browse the collection (which was organized within their unique system). Although all facilities offered Internet access, the Public Library was the only library that offered access to proprietary, Internet-based genealogical collections.

Another difference that was not discussed by Taylor (1991), yet determines the context of the institution, is the quality of reference services that are provided by each library. The three libraries included in this study offered different types of services: volunteers with little experience, volunteers with much experience, and paid librarians with varying levels of genealogical expertise. Due to the variations in reference service, the quality of assistance is difficult to determine. Two of the participants of the proprietary library were assisted by volunteers who essentially did the information search. Although this level of service was not exhibited at the public library, participants' questions were answered and assistance was provided when asked for. At the genealogical society, a lack of reference assistance was observed. The volunteer attempted to answer the question, but did not know enough about genealogical resources to truly help the participant. In this situation, a patron stepped in and provided the assistance. The assistance by library patrons was observed twice. In both situations, the patrons exhibited an enjoyment of helping others, solving problems, and ultimately a firm grasp of genealogical resources. Overall, the genealogical knowledge level and familiarity with resources exhibited by those in a position to assist others determined whether reference support was available and helpful regardless of institution or reference type.

Another factor that is not addressed by Taylor is the level of experience in information seeking. In the case of this study, all participants had previously utilized the institution they were visiting and reported that their choice was based variously on convenience, reputation of library, and helpfulness of staff. However, multiple informants indicated that the choice was made on the availability within a specific library

or particular types of sources. This response begs the question: Did participants select the institution based on the availability of resources rather than on their information needs? If so, then is the information seeking process of some genealogists ultimately guided by access and collections instead of by a preconceived and articulated information need related to a specific problem. Based on the data, the source of library selection is still focused on information problems. Although participants selected the facility to peruse collections, access computer records, or view microfilm, the information problem still drove the decision to go to a library to look for specific information on specific individuals. Regardless of their process or library, participants reported that they previously had thought about the who, where, and when of the information problem.

Armed with their information problems, some participants came to the library just to see if they could find a nugget of information about their ancestors. This raises the issue of barriers to access based on the design or characteristics of bibliographic systems in use in a particular location. Most genealogical collections are system based. The majority of these systems are based either on place/location and/or temporal elements, such as specific years or time periods. However, an examination of the information problems of participants in the study indicated that 23 out of the 25 were involved initially in searching by a family name. Because the systems are set up by place and time, locating people is particularly problematic issue. This issue has been pointed out in studies by Sweeney, 2002 and Duff and Johnson, 2003. In order to get around this access issue, participants rely on browsing and skimming of materials. However, what happens when browsing and skimming are not available as a research stragies? The genealogical society and the proprietary library both have unique bibliographic systems, but the

genealogical society allows for browsing of collections. Participants had to know the specific resource they needed prior to entering the library. However, two of the four users of the proprietary library did not know their resources. They instead focused their search process to reliance on the library reference staff.

Problems

Taylor (1991) indicates that problems have three characteristics. The first characteristic is that the problem is not static. Frequent changes result from new information or the member's position and perceptions. Specifically when discussing changes, Taylor suggests, "Sometimes the change is partly formalized…where recognizable steps are assumed each of which may require entirely different information responses" (p. 235). He continues by saying that in the beginning, problems are not well articulated and that responses at this level may be informal or unexpected. For many participants in this study, their problems were static, succinctly stated, and contained questions posed to elicit specific information and did not meet Taylor's other criteria. Their problems were succinct and contained specific information. Although the problems may require different information responses, they were well formed and required specific information to answer. The responses and approach to problems eliminated the possibility for informal and possible serendipitous responses.

The second characteristic focused on the class of problems, for example, in Taylor's (1991) model the problems can be classified based on the context in which they arise. This held true for participant genealogists, as their problems could indeed be classified and the context did help to define the types of problem. Particularly germane

were the focus of the collection, access to information, and the access to primary source materials.

The third characteristic deals with the dimension of the problems, specifically its structure. Participants approached their research with well-structured problems. Each problem contained specific elements and in most cases contained more than one.

Resolution of Problems

The final element of an IUE as defined by Taylor (1991) is the approach to resolving problems. Taylor provides categories of resolution and information traits as the structure for analyzing resolution of problems. He indicates the categories of resolution are built on user-need based on particular information situations. Although not inclusive, these classes represent an initial way to look at how problems are resolved. Taylor formulates eight classes of information use that are created by a specific information problem (presented on page 112). Overall, the majority of participant information problems presented fall into Category 4: Factual, "the need for and consequent provision of precise data" (p. 230). Finally, Taylor's Category 5: Confirmational, discussed "the need to verify a piece of information" (p. 230). Genealogists, when previously known secondary sources were available, used confirmational information. For example, Public11 looked for and found a relative's name listed in census records. She had been told that the relative was over 100 years old but had never found data to prove this claim. The census record listed the person's age as 101 at the time, thus confirming the information she had heard.

Although not represented by information problems observed in this study, another potential category is Enlightenment, or the need to develop contextual information to

make sense of situations. This category is a product of an information search rather than a reason for seeking information. Public9 discussed the basis for this. His initial problem focused on finding factual information to locate information for specific family members. He approached this problem by searching primary source materials. During his search, he did not find any information related to the problem; however, instead of dismissing the materials, he said, "I will definitely return to the New England Women's letters when I am ready to write up this [information problem] because there is a lot of good material to use to put families in context---what things were going on around them when they were at a certain locality." His responses fit with Taylor's (1991) category because the information had nothing to do with his family but allowed for a historical context of the social, political, and/or cultural events that were taking place at the same time and place in which his family lived.

Admittedly, Taylor (1991) indicates "more studies of differing populations working in varying contexts...how specific information is used and how its use (or nonuse) affects their concerns" (p. 231). My study was the first research to specifically focus on genealogists in the context of their research. Participants were able to describe the approach they were going to take to solving their research, were observed attempting to resolve their problems, and were asked following their research about potential next steps. These methods captured the ways in which participants approached problems and their steps for resolving these problems.

Participants exhibited multiple types of resolution. These types were based on the media or collection participants selected to investigate their information problem. The next section will describe the four types of resolution that occurred in the research

process. The basis for each type is the collection or media used by participants: books, microfilm, computers, or a mix of media and materials. Four different strategies for resolving problems were uncovered; some factors were consistent within each type. These factors will be discussed with emphasis on the influence each had on the search process.

Searching books. Participants who searched books and other paper-based materials exhibited two different types of information seeking strategies. Participants who did not select a specific resource revealed the first strategy. This does not mean the participants did not know what they were looking for; rather, they did not specifically identify a resource prior to searching. These individuals focused on names of counties, states, or family names instead of specific resources. In order to locate resources, they relied on browsing to identify potential sources of information. Prior to browsing, these genealogists would limit their search to books about specific counties, states, or family names. Upon locating these areas, participants would browse book sections, selecting potential resources. In some cases, they would return to their table or area and go through the book or they would quickly skim the book while standing in the collections area.

Rather than browsing, the other type of book or paper-based information seeking process centered on specific resources. Participants, prior to entering the facility, had identified the resources they wanted to utilize. Although the resource focused on a specific county, state, or family name, the participant specifically selected the resource rather than browse collections. In most situations, individuals who selected specific resources had previously used the resource in a prior visit to the library.

In both situations, participants were observed using access tools in the resources to locate specific information. The index, table of contents, and alphabetically arranged content were used within the search process. Participants frequently went straight to these tools to look for relevant information. When using these tools, participants indicated specific names and locations being sought were the terms being utilized.

The other type of process participants used while searching for information within print materials was skimming. Rather than refer to access tools when this information was missing, individuals would skim pages looking for information related to their problem. The commonality between the two types of search processes is the specific information that is being searched for.

Searching microfilm. All microfilm user participants did not browse for specific microfilm titles. Each participant either used an index to identify the films they wanted or knew the film prior to beginning their search. After selecting their source, researchers search within this resource, using either access tools to located key names and location or by skimming the resource.

Searching with a computer. Unlike microfilm and books, computer resources provide users with a search engine. This process allows users to input information related to problem; the search engine then provides the most relevant responses to the query. Although the computer users are able to limit their searches some participants also skimmed material.

Multiple media users. Five participants used two or more different media within their information search. Although multiple media types were used, these participants still utilized the same information seeking strategies as other users.

Within this variety of information seeking strategies, six factors were consistently observed or indicated by participants in each process. These factors either influenced or helped to define the information seeking process, regardless of media.

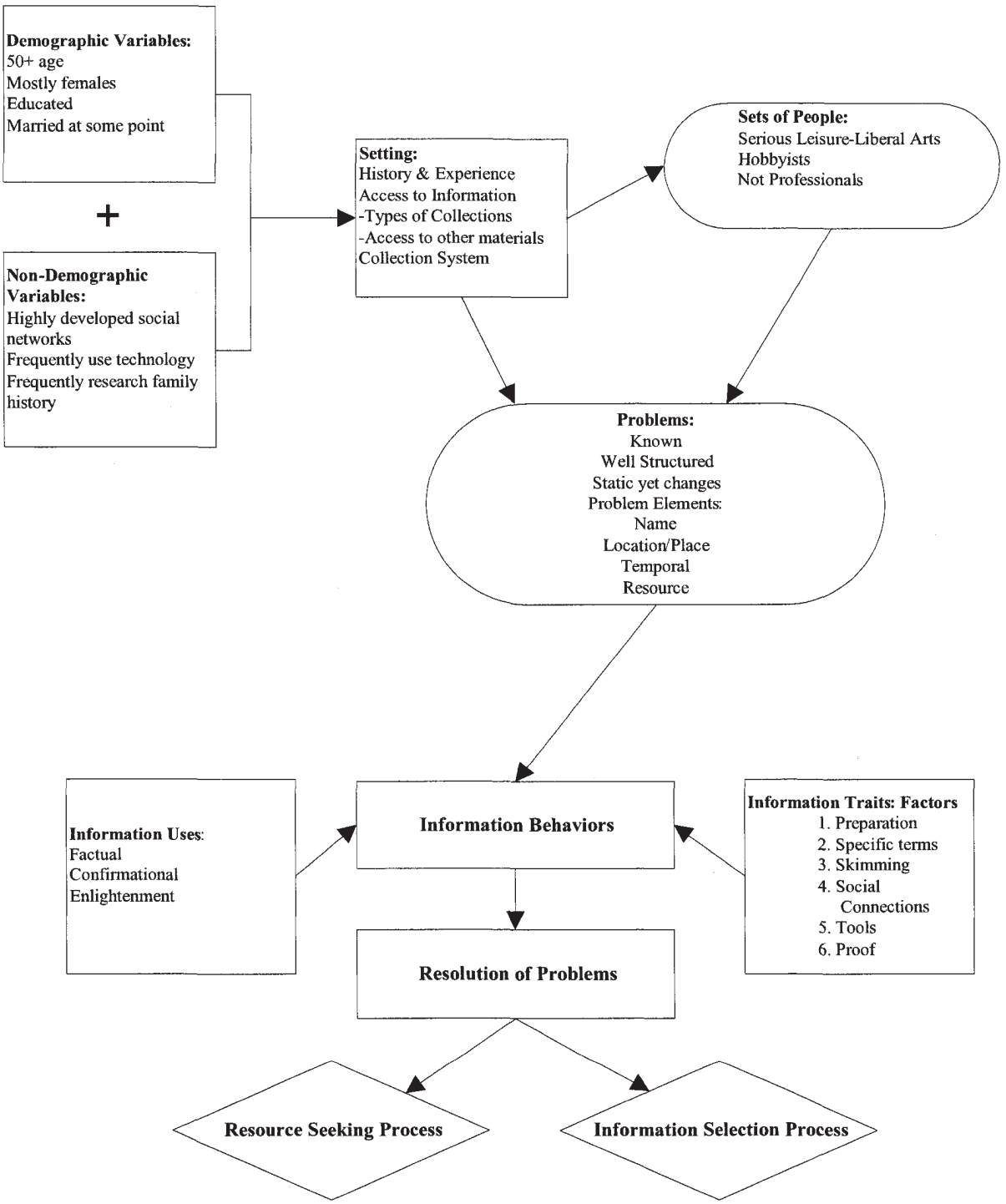
1. Preparation
2. Specific terms
3. Skimming
4. Social Connections
5. Tools
6. Proof

Genealogists who indicated they had prepared for the visit tended to use specific sources. Of the genealogists who did not do any preparation, all but one browsed book collections. All participants utilized specific terms. These included names, places, specific time periods, or references to specific resources. Regardless of the media used, some form of skimming was observed. Paper-based and microfilm users skimmed pages and computer users skimmed results looking for relevant information. Social connections influenced searches in different manners. There were examples observed where staff or patrons assisted participants; also, participants worked with others on genealogical information problems. Participants were observed using numerous tools to document information. Some used technology such as computers or flash drives, while others made copies or utilized forms. The final influence is proof, which shaped the information seeking process because it guided the resources and information participants selected.

IUE of Genealogists

To summarize, the IUE of genealogists is provided in Figure 29. This figure consists of the model provided by Lillard (2002) of Taylor's (1991) IUE structure. However, Taylor's characteristics of each IUE element have been replaced with the elements specific to the genealogical participants of this study. The characteristics for the IUE structures have been defined for participants. Furthermore, the resolution of problems structure has been divided into the two processes identified in this study.

Figure 29. Graphical representation of Taylor's (1991) information use environment data structure for genealogists.



* Used by permission of Lillard (2004)

Overall, Taylor's (1991) IUE supplied a vehicle for analyzing a specific user group and their information seeking characteristics. The four part structure allowed for a description of each area, as well as an emphasis on factors specific to information seeking. It not only permitted study of individual information characteristics but also stressed the context in which these actions were taking place. Due to the type of group being studied, variations in the elements related to each structure area are bound to turn up. This was apparent when examining the information problems structure of Taylor's study groups and those of genealogical users. However, Taylor acknowledges, as more groups are studied, the elements of each structure will be reinvented based on the groups' information characteristics. The additional elements identified by this study and past research on genealogists add new elements to the model. Combined with Taylor's elements and structure, differences and similarities among users have been identified. These defining elements are consistent with Taylor for an IUE in which people using different types of libraries share common characteristics found in researching their family history.

Archival Intelligence

Another goal of this research was to examine the theory of archival intelligence as proposed by Yakel and Torres (2003) as it fits with genealogists. Because this study took place in libraries and not archival settings, emphasis was placed on participants' focus on primary source literacy. Even though there was a difference in types of institutions from the study to the theory, the three major dimensions of archival intelligence still applied.

Within the first dimension---knowledge of archival theory, practices, and procedures--participants clearly demonstrated two of three characteristics (internalization of rules and awareness of knowledge). Participants were aware of the rules and clearly

indicated instances in which the rules governed collection access and usability. This is important because each institution had different guidelines and rules patrons must follow. Although a few participants requested help because of gap in knowledge, the observed examples provided valuable insight. Two participants went to the library specifically to work with reference staff because of the participants' unfamiliarity with sources. In addition, two other participants received and were open to suggestions from other library patrons. The usage of and reliance on assistance from library staff and other patrons exhibited a keen awareness of knowledge ability.

In terms of language use, participants tended to employ family history lingo and nomenclature rather than institutional jargon. This indicates a strong reliance on domain knowledge and a less on specific library or archival terms. Although this type of language use still fits within the archival intelligence framework, it demonstrates a key understanding of how genealogists approach research in archives and libraries.

The second dimension, strategies for reducing uncertainty and ambiguity when unstructured problems and ill-defined solutions are the norm, provided the biggest difference in theory and actual results. Participants did not have unstructured problems. In contrast, all but one participant entered the facility armed with well-articulated information problems and in many situations had already devised an approach for solving these problems. Uncertainty and ambiguity related directly to information need was not observed. However, there were examples of uncertainty as to what sources might provide the best information or solution for the information problem.

The other aspect of this dimension focuses on the type of questions genealogical users pose to reference staff. Among participants, the questions asked were related

directly to their problems and were not necessarily the best ones for accessing information, librarian knowledge, or strategies. This situation is not new. Sixty years ago, Rubincam (1949) identified this issue when discussing potential ways archivists could assist genealogists. I would argue that instead of archival intelligence gauging what are the right questions, the focus should center on how institutions and reference staff can work with genealogists to understand their questions in order to provide assistance. Genealogists have very specific information problems, which equate to very specific information questions. Reference staff must be educated in the types of problems and strategies for approaching these problems genealogists frequently provide.

The third dimension of archival intelligence examines the intellective skills patrons utilize when faced with surrogate or representative sources. This dimension was the best fit for participants. Yakel and Torres (2003) suggest in all dimensions that expert users will best display the characteristics of each dimension. For intellective skills this is exhibited through two skills: the level of preparation, and the ability to make connections between surrogate materials and primary records. For both skills, various levels were represented among participants. Furthermore, in both skill areas, better-prepared users could more easily search for resources and move from representations to primary sources. However, instead of speaking in terms of surrogates and primary sources, participants referred to proof. For genealogists, the principle of proof requires the ability to bridge the gap between surrogates and primary sources.

Overall, archival intelligence theory provides a framework for understanding how users seeking primary materials approach finding information in libraries. However, as a model for understanding genealogists as information seekers, some modifications are

needed. For example, instead of focusing on uncertain or ambiguous information problems and questions, the dimension should focus on types of information problems and ways to negotiate problems. Specifically for genealogists, strategies for verifying information they find, or proof, must be included as an intellective skill. I would also suggest that the relationships between domain knowledge, artifactual literacy, and archival intelligence as proposed and described by Yakel and Torres (2003) can be difficult to separate based on the results of this study. This could be due to numerous factors: research being conducted in libraries, participant familiarity with the library, experience researching subject, or the small number of participants.

Segmenting of Genealogical Users

A goal of this study was to segment participants based on their information seeking characteristics. Based on previous research, participant experience, involvement, and investment in genealogical research were analyzed for possibly segmenting into groups. None of these areas provided a method for segmenting participants. Mills' (2003) three genealogical groups, which segments genealogists into groups based on their appreciation of genealogy's standards and methodology, was then applied. When coupled with the proof factor, three categories of participants emerge.

The way participants approached their research, and the more consciously they discussed validating and providing their genealogical research, provided a potential way to classify genealogists. This includes the resources they selected. This suggests that the categories proposed by Mills may provide a beginning framework. Mills' description of "family tree climbers" fits with the practices of participants who were only interested in collecting names, dates, and vital information regardless of source. Some participants

who would be described as "traditional genealogists" were compiling information using transcribed information for their genealogies and did not indicate that further follow-up in primary records was necessary. Using Mills' definition, I would propose that only one participant could be classified as a "generational historian." This may indicate the low number of users of genealogical institutions that may be segmented in the classification.

To supplement Mills' classification, the practice of thorough genealogical research and the genealogist's end product must be considered. What users consider quality information, thorough documentation, and exhaustive research must be included in descriptions. This information must be coupled with what the genealogist plans to do with the information. Many thorough researchers that utilize only primary resources and exhaustive research may only be compiling extensive genealogies. Further research focusing specifically on the goal of the family historian, their acceptance of proof, and methodologies are needed to determine the extent of segmentation. Due to a small sample size, more research is needed to verify that these segments actually exist. This includes allowing for a representative sample in which novices, individuals who infrequently participate, and professional genealogists are accounted for. By including a representative sample, the study would more closely resemble the social worlds described by Unruh (1980). In this study, few, if any, participants could be defined as "strangers" or "tourists" based on Unruh's definition.

Relationship of the three frameworks

Taylor's (1991) IUE was selected to provide a framework to better understand genealogists as they seek information. The elements identified by Taylor allowed for an investigation into the people, context, and information characteristics of the participants.

Archival intelligence (Yakel & Torres, 2003) supported the IUE framework by providing a lens in which to examine how individuals in this study approached information seeking while potentially utilizing primary documents. In addition, segmentation included elements identified through the IUE and archival intelligence frameworks and examined these elements in order to place members of the group into potential categories. Overall, the three frameworks fit nicely together to provide both an examination of the characteristics of the group of genealogists and the information seeking characteristics of individuals.

The overall strength of the using both the IUE and the archival intelligence framework to describe information seeking rests with the ability of the frameworks to work together to explore how genealogists search for information. The IUE framework focuses on the genealogy "environment" as whole, whereas the archival intelligence allows for individual characteristics. Due to the difference of focus between the two frameworks, practitioners and researchers can use the two in conjunction to determine better ways to serve and understand genealogists from either the group or individual perspective.

The Information Seeking Processes of Genealogists

My interpretation of the data in this study, which applies the IUE structure and archival intelligence as frameworks to understand information seeking, produces a model that captures the information seeking processes of genealogists. The goal of grounded theory research is to contribute to theory development related to a central phenomenon (Strauss & Corbin, 1998). For this study, the information seeking processes of genealogists represents the phenomenon. Contributions to the development of a theory of

information seeking of genealogists consisted of two distinct processes. The first process captures how participants began their information search and went about finding and selecting resources. Participants utilized three media types: paper-based resources, computers, and microfilm. For each type, distinct information seeking strategies were employed.

Paper-based users employed two separate strategies when initiating their search. Participants either selected specific resources (i.e., city directories, specific cemetery directories) or they browsed collections. When selecting resources, participants also differed on strategies. Specific resource users selected resources based on their information needs. Participants who browsed book-based collections focused on specific geographic areas such as a specific county or state while scanning book titles. They would pull titles from the shelf, skim a few pages, and then either return the book or select it as a resource.

Microfilm users made choices based on film indexes or because the specific information they were looking for matched with the film. They selected specific census microfilm because it matched the location and year of information needs or they used the indexes to locate the specific individual who was the basis or a part of their information problem.

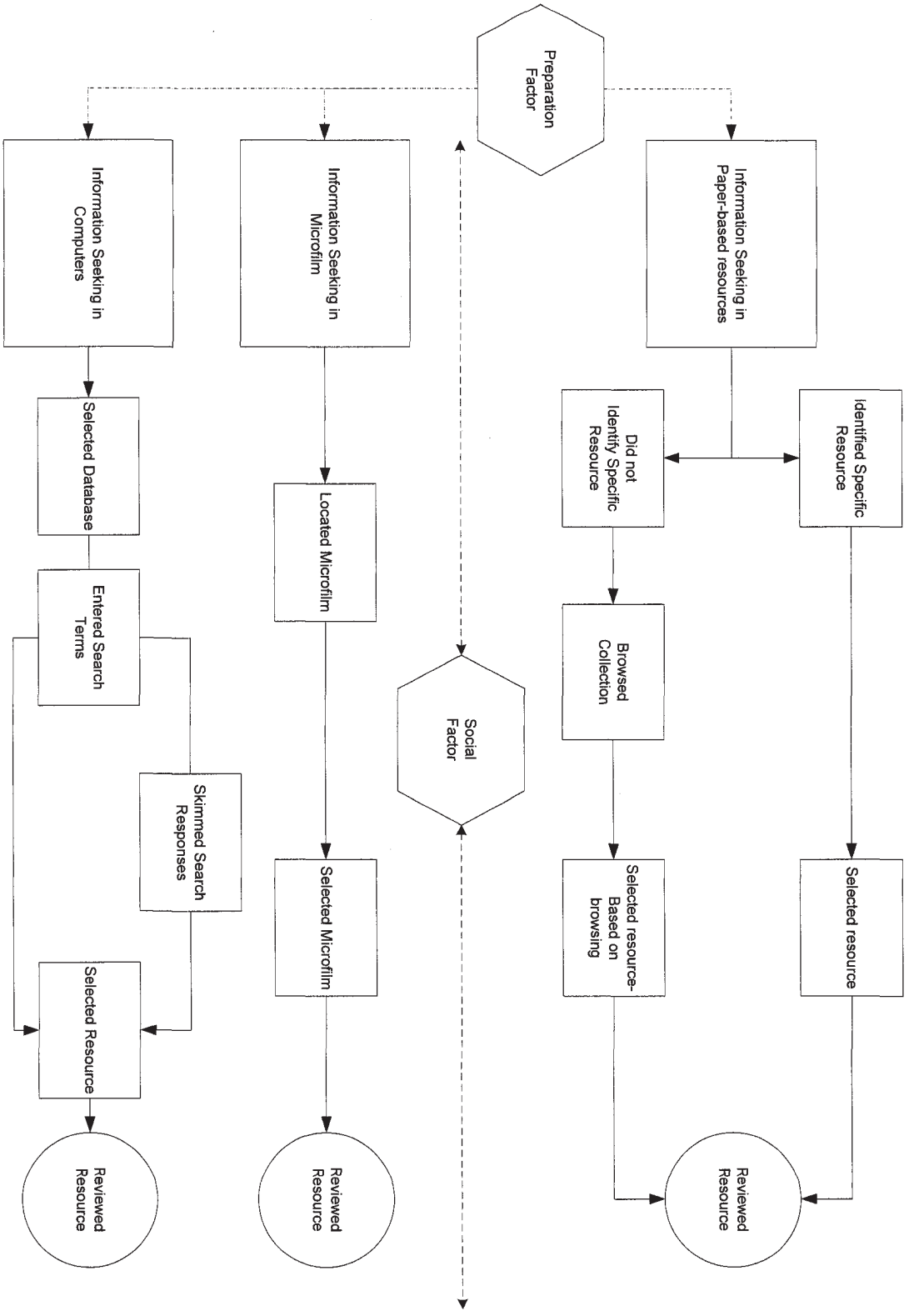
Computer users provided unique resource selection strategies, due to the unique nature of Internet searching. Within the database, participants entered keywords as delimiters in the database's search engine. When the search results were provided, participants utilized two strategies before viewing the document. If the results matched the specific requirements of the participant's information need, they selected the entry.

Other participants skimmed the search results until they recognized one that looked promising. These two types of strategies mimic those exhibited by participants who selected paper-based resources. However, instead of physically moving through collections, participants skimmed search engine results in a virtual context.

Regardless of whether participants utilized books, microfilm, or computers, the end result was a selection of a resource to review. In addition, throughout the resource search process, two factors influenced the strategies being utilized. The first factor is the preparation of each participant. Although not applicable to all users, participants who prepared for their information search were less apt to browse collections when using paper-based resources. The other factor that influences the resource selection process is social interaction. This factor not only includes social interaction that occurs during the information seeking process, but also includes the social interaction that influenced the search process. It includes, as well, working with family members and others to determine and find information and what information was still needed.

A visual representation of the resource selection process is presented in Figure 30. The preparation and social factors are represented by hexagons and the influence of these factors is described with dotted lines. The end result, the review of each resource, is the circle.

Figure 30. The resource selection process of genealogists.



The second process exhibited by participants was a review of the resource they had selected. Basing that review on keyword searching, participants employed three types of parameters: names, locations, and time periods. Additionally, they applied three strategies for keyword searching. One, they went to a specific reference, page, or location in a source that included the keyword. Two, they used the index and/or table of contents to locate their search term. Three, they skimmed all or a portion of the resource itself.

Kuglin (2004) also found the genealogical library patrons prefer to browse the genealogy shelves in libraries as their primary search tool. She also indicates that consulting a fiche/CD-ROM index was the most useful to family history research. Because her methodology limited respondents' answers to those presented on the questionnaire, it is unclear what exact strategies or resources information users actually used. Presumably, her respondents viewed fiche/CD-ROMs as actual sources of information. This aligns with the strategy uncovered in this study that shows that most participants who used computers and/or microfilm preferred to go straight to the information.

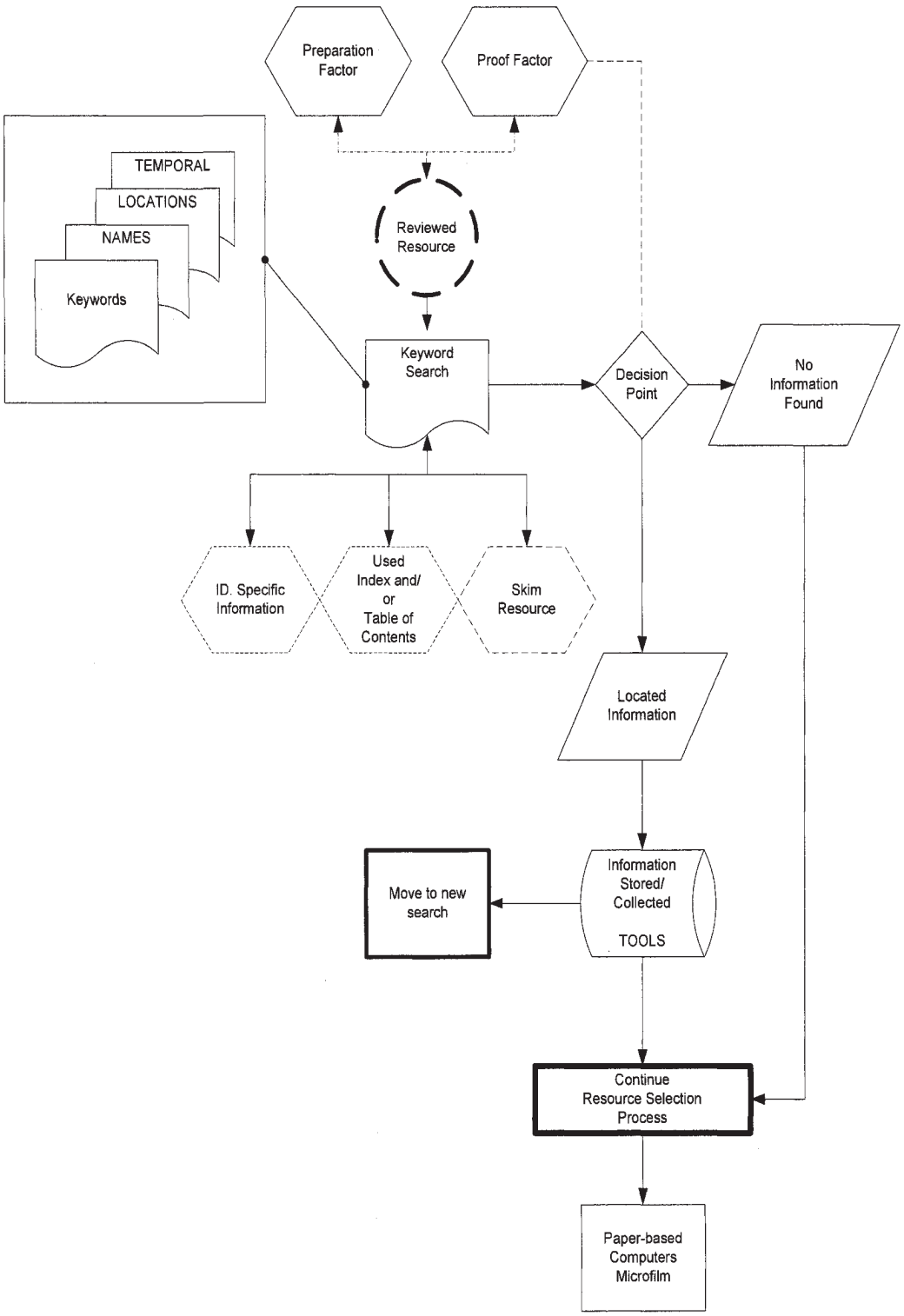
Once information was found in the resource, a decision was made whether the information was relevant to the information need. When it was determined not to be relevant, the resource was discarded and the participant went back to selecting a new resource. If the decision was made that the information was relevant, the next step was to document the information. Documentation included photocopies, written notes, or inputting information into a computer or storage device. After the participants finished documenting the information, they either would select new resources related to current

information problems or, in some cases, begin new searches based on new information problems.

As with the resource selection process, preparation is a factor that influences the type of strategies and decisions that are determined in the process. The factor of proof is another factor that specifically influences review of resources and selection of information.

The information selection process is presented in visual form in Figure 31. The preparation and proof are represented by hexagons and the influence of these factors is described with dotted lines. Keywords are represented by note cards. The end results are the shapes with darker lines.

Figure 31. A visual of the information selection process.



The two models (Figure 30: Resource selection process and Figure 31: Information selection process) presented were created from the observed and documented strategies and processes exhibited by study participants. Together the two processes create the information seeking processes of genealogists in context. Based on previous research, participant responses, and the two information seeking process, a model of information seeking can be created.

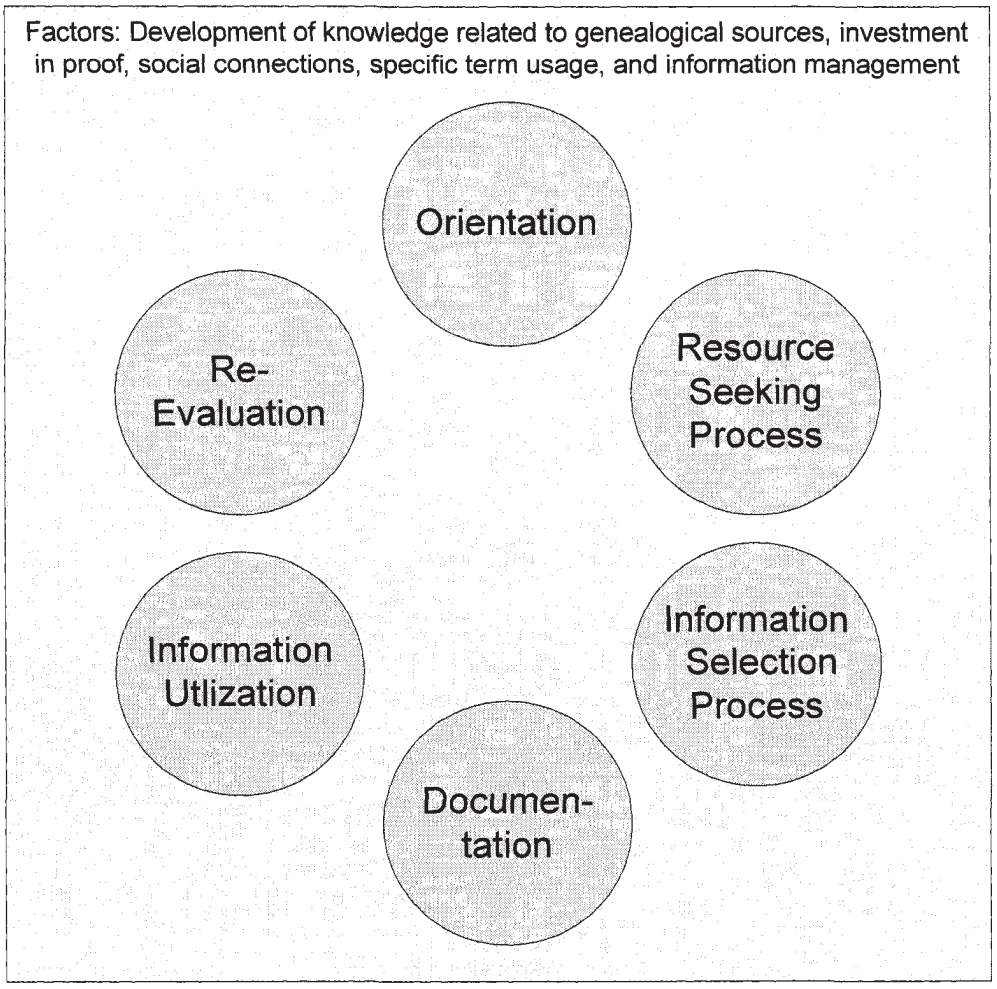
To begin genealogical research, not only do individuals orient themselves to their information needs but they also must orient themselves to genealogical research. Many begin by going to libraries or genealogical societies, learning from other genealogists, or attending workshops. The first stage of genealogical research also includes knowing what information problem(s) to investigate and possible locations of information to begin an investigation. Once the problem and the location have been identified, the next step is to access the appropriate institution or collections and locate specific sources. This process encompasses the resource information seeking process previously described. After these sources have been selected, genealogists then approach each source in the attempt to locate information specific to their problems. The next stage is the review, collection, and documentation stage. After locating information genealogists review it for relevancy. If the information is determined to be relevant, the information is collected and documented. After identifying this information, genealogists enter into the next stage of information utilization. This stage could be as simple as creating a line on a family tree or as complex as putting together a book on numerous generations of a family. The final stage of the genealogical research process is to re-evaluate in order to continue to research.

A Model of the Genealogical Research Process

As with the two information seeking processes described, there are factors that influence each stage of the overall model. These factors include development of knowledge related to genealogical sources, investment in validating and confirming sources, establishing social connections, knowing specific terminology, and investing in information management. As genealogists research, they gain experience so as to better understand what sources to use and where those sources are located; this development of knowledge allows for more efficient and effective searches. The confirming, validating, and proving genealogy as a principle and a process influences the way genealogists approach each stage. Genealogy is not done in a vacuum. Whether genealogists utilize social networks or family members, information is passed along through social connections. Genealogical research requires locating very specific information. The specific terms selected and utilized guide the whole process. The final factor is information management. Many genealogists rely on technology for storage, forms, and other functions. Others create paper forms, notebooks, and other materials. No matter what method is utilized, how the information is managed and stored influences all aspects of genealogical research.

Figure 32 provides a visual representation of the model. Although the model is depicted is circular in design, genealogists also can move from one stage to any other stage, including the first the stage. This was demonstrated by participants who were searching an information problem, found information relevant to a new information problem, and then switched their search to a new information problem.

Figure 32. A Model of Genealogical Research



Comparison to LIS research

Another way to compare and contrast the model is with other library and information science (LIS) research. Over the past twenty years, LIS have studied subgroup user populations. Many of these studies have examined and identified elements specific to information seeking.

Information problems

The findings of this study indicate genealogists have thought about specific terms useful in solving their information needs. One of the key elements identified in LIS research on information seeking is an element of uncertainty, ambiguity, or lack of knowledge experienced by library users in their information process (Belkin, 1980; Dervin, 1983; Taylor, 1991). In contrast to these concepts, genealogists clearly identify what they are searching for and the elements of their information problem—the specific nature of each question developed by participants and they apply that to their information seeking process. This study found that genealogists use names, place, and temporal elements within the search process, which was also found in historians and humanities researchers (Bates, 1996; Collins, 1998). All participants include specific information within their problem and in most cases had identified multiple types of information.

Sweeney (2002) found that genealogists have both broad and narrow goals. She defines broad goals as finding information about an ancestor and narrow goals as those goals that contain specific information but are difficult to articulate. I disagree with Sweeney's use of the term narrow goal and instead refer to the information problems of participants. Although her findings and the participants of this study do identify broad goals (i.e., creating a history of a family, finding information on an ancestor), they were able to identify specific information that shaped their information problem. In Sweeney's research, genealogists identified specific locations, names, dates, and resources. However, as she points out, "they already came to the repository with ideas of that they wanted to find" (p. 192). Thus, her participants and participants of this study both could define the narrow goal of their research. Genealogists in Duff and Johnson's (2003) project also "could transform their need for information about people into a request for

types of records that documented certain events" (pg. 88). They, too, identified names, place, dates, and types of records as the basis for information problems. The 24 participants who identified information problems in this study also identified these same items. Names, places, dates, and resources created the information problems. Based on the previous research and the support provided by this study, I would argue that these elements create information problems from the outset of the need to search for information.

Looking for and finding elements of the information problem very closely resembles Bates' (1989) berrypicking model. Participants demonstrated aspects of this model by gathering information in bits and pieces using a wide variety of search techniques and a wide variety of sources to solve their problems. For example, genealogists may be trying to find information on a specific relative; they may find a bit of information in a book and then this will lead them to census records, which in turn lead them to county records, and then back to census records. Although the problem remained static, the elements and resources changed with each bit of new information.

Social Networks

Another element discussed by participants is the reliance of social networks. Previous genealogical research indicates that most genealogists have developed social networks with family members and colleagues (Yakel, 2005). This was reinforced in this study by participants who frequently mentioned other active genealogist family members. However, the limited number of interactions at the libraries in this study also demonstrates a desire on the part of participants to work alone. This has also been found in humanities researchers (Wimberly and Jones 1989).

Information Seeking Processes

Orienting one's self to the context of research has been identified by Foster (2004) as an important element of information seeking. Within libraries and archives, Foster's idea of orientation can be viewed through the elements provided by archival intelligence theory (Yakel & Torres, 2003). In addition to orientation, participants utilized two different strategies in all three types of media to locate information: selecting specific resources and information and browsing and skimming. Both of these strategies have been identified by previous research of LIS user groups. Again historians were found to use specific sources and locate information using specific terms (Cole, 2000; Duff and Johnson, 2003). Browsing, scanning, and skimming have been identified for use in numerous models and by a variety of user groups (e.g., Bates, 1989; Tibbo, 2003; Kuhlthau, 2004; Foster, 2004). Genealogists browsed collections from the onset of searching for information and many utilized this strategy throughout their information seeking sessions.

Regardless of the strategy selected by the participants, most entered the institution armed with a specific information problem and in a many cases a specific approach to beginning their information search. Due to these actions, their thoughts were focused and the interest in their problem remained high throughout both information seeking processes. These activities contradict many of the opening stages defined by seminal information seeking models.

The End of the Process

Many LIS models end with search closure after information has been found that matches the information need (Bates, 1989; Kuhlthau, 2004). Previous literature and

findings from this study suggest that genealogical research is iterative; finding information, even enough to solve information problems, creates new problems that lead researchers to new investigations. For this reason, the genealogical search model proposes that users do not end the search but instead re-evaluate both the question and information problem in order to move on to a new search or to continue the current information search.

Applicability to LIS models

The proposed model of how genealogists seek information warrants further examination not only to validate how genealogists seek information, but also to add to LIS theory and literature to include a model specific to the information seeking process of this important user group. I do not believe the differences eliminate LIS models as useful; however, I would suggest that the structure of many of these models were researched and designed based on the needs, actions, feelings, and strategies of user groups that require information for reasons different from those of genealogists. Thus, many of these cannot explain genealogists' research processes because genealogists' problems, information, and sources differ from other types of library patrons.

The model that most closely resembles how participants searched for information is the berrypicking model mainly due to the inclusion and emphasis of browsing. "Berrypicking involves the use of a wide variety of techniques, some of which are very standard, and others which involve a considerable amount of browsing" (Bates, 1989, ¶ 44). Many of the participants in this study used browsing and scanning techniques within their search regardless of the type of source they were using. However, they also modeled

berrypicking techniques by employing a variety of techniques while using and searching for sources of information.

In addition to berrypicking, the information seeking traits of genealogists mimic those identified for historians and humanities researchers. In essence, genealogists and these other researchers are doing the same thing: researching the past. We would assume the approach each group takes would also be similar. Because genealogists, humanities researchers, and historians shared many of the same information seeking strategies and processes, I would set forth the challenge to LIS to examine and treat these user groups equally. Because genealogists are viewed as a non-academic group, this has not always been the case.

Implications for Change

The findings of this study provide librarians, staff, and administrators the structure for understanding how genealogists search for information. Understanding the processes these individuals utilize is vital for budgeting and planning for the future.

Genealogists chiefly rely on names in their information need. Other than compiled genealogies, books, or biographies, all other sources are not categorized by name. These sources are usually categorized by location, time period, record type or a combination. Librarians, archivists, and others must recognize the basis of many genealogical information needs and help patrons bridge the gap between knowing and looking for names and identifying specific information such as locations and records. This same concept can be said for arrangement of the library and collections. All three libraries visited in this study utilized different types of classification systems. Two of the libraries even used their own unique system. As much as possible, patrons must feel comfortable

with the arrangement of the library and the collections. This is especially true given the identification of browsing as a key strategy for searching for information. Assistance can be provided in a number of ways. Patrons can be assisted through training, staff knowledge, and large and clear signage on bookshelf ends and other locations. As long as small libraries serve genealogists, individual classification systems will be encountered. However, by working with patrons, libraries can help them better understand the system.

In addition to how collections are categorized, libraries should examine how they are designed. Given the popularity of genealogy, smaller libraries should rearrange their collections so that the materials most often in demand are located in a central area to facilitate the use of these collections—for locating and browsing potential resources. Table space should also be available for people who bring notebooks and laptops, with them to facilitate information seeking within resources and documenting the resources.

Another implication based on the findings of this study and other studies of genealogists focuses on the needs of the majority of users, in this case an older population. Libraries need to consider what modification to facilities and collections are needed to make their institution an appropriate environment for this user group. This could include increased lighting, building accessibility issues, collection access areas, and possibly even proximity of restrooms. All of these might be applicable as recommendations to consider in making genealogical libraries senior - friendly. Although genealogists are determined, physical, social, and access to information impediments may be significant enough to deter utilizing an institution.

Ultimately, all of the recommendations made thus far rest on the knowledge and actions of staff. Administrators must invest in training and educational opportunities for staff. These activities will help genealogists understand how and what genealogists are researching, as well changes in technologies and other resources. This call for human resource investment goes beyond paid library staff. These opportunities should be afforded to all staff including volunteers. Moreover, organizations who do not cater to genealogists but are heavily utilized by this group, such as county courthouses, should also invest in these activities. Intra and interlibrary training opportunities should also be created. For example, the librarian at the genealogical society had a wealth of knowledge; however, the volunteers who manned the reference desk often struggled to guide participants through the library's own collections. An investment in training may lead to better customer service from the volunteers. Because users are visiting and using multiple sites, these sites should work together to serve the needs of their community. This would include developing a working knowledge of local collections and historical information. In addition to boosting their knowledge of local genealogy, library staff should know their own collection thoroughly and what types of answers it can provide. They should also recognized that people will come looking for specific information and that part of the attention in the reference interview should be given to determining the particulars and the range of information that each person seeks. Also the staff should understand that those seeking to validate the information they find in one source in another will need a range of primary sources, not just one—and that this can be anticipated and thus planned for in the training of staff or the creation of pathfinders.

Recommendations for Future Research

The first area of future research concerns the targeting of specific user groups. The user segments proposed by this study are based on the goal of the research and the reliance on elements of validating, confirming and proving information. More in-depth investigations into the types of research that is taking place and the possible inclusion of proof as the foundation of genealogical research are areas of research that could inform librarians and create better sense of the thoroughness of historical records research performed by many genealogists. Conversely, this research will also need to focus on novice genealogists and those individuals who simply have not yet grasped the need for applying sound methodology and proof standards. Although many supporters of genealogy recognize that the observance of proof standards is the only way genealogy can be accurately researched, there are numerous researchers frequenting libraries and other information institutions who have not yet learned why accuracy requires the application of standards. An understanding of and focus on each unique group must be undertaken to better understand this extremely important user population.

As more people become interested in their family's history, it is imperative that libraries invest in resources relevant to this large segment of their user population. In order to make this investment in the most effective and efficient manor, libraries must be aware of the needs, patterns of use, and the make-up of their genealogical patrons. The library and information science community must continue to research genealogists but begin discourse of including this user-group within LIS curriculum and/or instruction. This study proposes a model of information seeking specific to genealogists; further study needs to be undertaken to reinforce, refute, augment, or deduct from the strategies,

processes, and principles presented. Longitudinal research, beginning with the application of information needs to information usage would also provide a better analysis of both information seeking processes and the impact and role of these processes within multiple information searches.

Expanding research on genealogists into other contexts would be beneficial. Genealogists utilize other information-rich institutions such as archives, local and state historical societies, and governmental agencies such as county courthouses. For genealogists, the online world is also a major environment. Some researchers (Drake, 2002; Veale, 2004b; Fulton, 2006) have studied online genealogical users, but their work remains the proverbial tip of the iceberg. Every day more and more genealogical information and resources are available on the Internet. How genealogists navigate, search, discuss, create social networks, locate, and utilize information could provide a wealth of knowledge and ultimately lead to better services.

Future research should focus on this unique user group with regards to the discipline of library and information science.The model proposed in this study differs from others models. Specifically, the approach to information problems and the iterative process of genealogy creates a new way to examine how library users seek information. Further investigations of genealogists in various contexts will provide insight into the validity of the model provided. However, the approach genealogists take lies outside the realm of traditional LIS research. Within their never ending process, genealogists track down very selective information from specific sources. "Yet, the search for this information is overshadowed by larger information needs concerning connecting and seeking identity" (Yakel, 2004, p. 5). This approach is unique and is not based on

traditional library usages such as reading for pleasure, school assignments, academic research, or occupational requirements. Genealogists do genealogy for themselves and others, especially other family members.

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Appendix A: Definitions

These definitions were used in conducting the study and analyzing the data.

Ancestry-An individual's direct lineage or bloodline.

Archival Intelligence-Knowledge of archival principles, practices, and institutions, such as the reasons underlying archival rules and procedures, methods for developing search strategies to explore research questions, and an understanding of the relationship between primary sources and their surrogates (Yakel and Torres, 2003).

Archives- 1. Materials created or received by a person, family, or organization, public or private, in the conduct of their affairs and preserved because of the enduring value contained in the information they contain or as evidence of the functions and responsibilities of their creator, especially those materials maintained using the principles of provenance, original order, and collective control; permanent records. – 2. The division within an organization responsible for maintaining the organization's records of enduring value. – 3. An organization that collects the records of individuals, families, or other organizations; a collecting archives. – 4. The professional discipline of administering such collections and organizations. – 5. The building (or portion thereof) housing archival collections. – 6. A published collection of scholarly papers, especially as a periodical (Pearce-Moses, 2005).

Artifactual Literacy-The ability to interpret and analyze primary sources (Yakel and Torres, 2003).

Census Record- A type of record created by various jurisdictional authorities (city, county, state, territory, colony, church, etc.) to collect demographic data; valued by genealogists for its family, social, economic, and other contextual information.

Cultural Institution-An institution that fosters scholarship and thought by housing a collection that has a systematic organizational structure (Carr, 2003).

Descendancy- The offspring of a given progenitor.

Domain Knowledge-Knowledge and understanding of the topic being studied (Yakel and Torres, 2003).

Family Historian-see Genealogists

Family History-see Genealogy

Genealogical Society-An organization whose mission is to foster the study of history and genealogy through teaching, dissemination, publication, ad the collection and preservation of source materials for a specific geographic location, era, event, or a specific family.

Genealogists- Individuals who study ~~of~~ a family's history. genealogists study their own families but some pursue genealogy as a profession or scholarly discipline. For the purpose of this study, the terms family historian and genealogist are interchangeable.

Genealogy- Genealogy is the study of families in genetic and historical context. Within that framework, it is the study of the people who compose a family and the relationships among them. At the individual level, it is biography, because we must reconstruct each individual life in order to separate each person's identity from that of others bearing the same name. Beyond this, many researchers also find that genealogy is a study of communities because kinship networks have long been the threads that create the fabric of each community's social life, politics, and economy (BCG, 2008). For the purpose of this study, the terms family history and genealogy are interchangeable.

Historical Society-An organization whose mission is to foster the study of history through teaching, publication, and the collection and preservation of source materials for a specific geographic location, era, event, or family.

Information Literacy- The set of skills needed to find, retrieve, analyze, and use information. (ACRL, 2005)

Information Seeking-The active gathering of information.

Information seeking session-A single, chronologically continuous information seeking episode (Sweeney, 2001).

Information Use Environment-Those elements that (a) affect the flow and use of information messages into, within, and out of any definable entity' and (b) determine the criteria by which the value of information messages will be judged (Taylor, 1991).

LIS professional-A staff member of a library or archives who assists patrons of their institution. LIS professionals are paid employees. This person has been formally trained either through education or vocational experience.

Name Collecting- The genealogical pursuit of collecting information on *names* rather than *people.* More specifically, a pejorative used within the social world of genealogy to connote the practice of gathering information indiscriminately when "the name's the same," with little regard for proving identity and relationships.

Non-LIS professional-A staff member of a library, historical, or genealogical society who has not been formally trained as a librarian or archivist. This includes volunteers. This also includes those individuals who may be trained as historians, civic employees, or any other employees of cultural institutions.

Primary Source-Material that contains firsthand accounts of events and that was created contemporaneous to those events or later recalled by an eyewitness (Pearce-Moses, 2005). For a more thorough genealogical definition, which is not utilized by this study, see Mills (1999).

Proof-The sum of all evidence found in the evaluation process that supports a conclusion or assertion about an aspect of family history (Mills, 1999; Mills, 2007).

Public Library-A governmentally funded library, open to the public.

Secondary source- The sum of all evidence found in the evaluation process that supports a conclusion or assertion about an aspect of family history (Mills, 1999; Mills, 2007).

Social World- Actors, events, practices, and formal organizations that can coalesce into a meaningful and interactionally important unit of social organization for participants have been defined as a social world (Unruh, 1980).

Vital Record-Original record that provides one of the following pieces of information: birth, marriage, or death.

Appendix B: Approval to use Human Subjects

EMPORIA STATE UNIVERSITY™

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Emporia, Kansas
66801-5087

620-341-5351
620-341-5909 fax
www.emporia.edu

GRADUATE STUDIES AND RESEARCH
RESEARCH AND GRANTS CENTER
Campus Box 4003

December 7, 2006

Scott Lucas
SLIM
219 S Prospect
Clearwater, KS 67026

Dear Mr. Lucas:

Your application for approval to use human subjects, entitled "The Information-Seeking Processes of Genealogists," has been reviewed. I am pleased to inform you that your application was approved and you may begin your research as outlined in your application materials.

The identification number for this research protocol is 07047 and it has been approved for the period 12/7/06 - 12/6/07.

If it is necessary to conduct research with subjects past this expiration date, it will be necessary to submit a request for a time extension. If the time period is longer than one year, you must submit an annual update. If there are any modifications to the original approved protocol, such as changes in survey instruments, changes in procedures, or changes to possible risks to subjects, you must submit a request for approval for modifications. The above requests should be submitted on the form Request for Time Extension, Annual Update, or Modification to Research Protocol. This form is available at www.emporia.edu/research/docs/irbmod.doc.

Requests for extensions should be submitted at least 30 days before the expiration date. Annual updates should be submitted within 30 days after each 12-month period. Modifications should be submitted as soon as it becomes evident that changes have occurred or will need to be made.

On behalf of the Institutional Review Board, I wish you success with your research project. If I can help you in any way, do not hesitate to contact me.

Sincerely,

Jeffrey Tysinger
Chair, Institutional Review Board

pf

cc: Nancy Thomas

Appendix C: Institutional Permission Form

Researcher: Scott Lucas
219 S Prospect
Clearwater, KS 67026
620-584-4291
scottielu@hotmail.com

The <Facility> grants permission to Scott Lucas, a doctoral student at Emporia State University, to perform research using patrons of the library/institution as participants for the study entitled: The Information Seeking Processes of Genealogists.

The library/institution has been made fully aware of

1) The purpose of the study
2) The methods to be used in the study
    a. Survey
    b. Interviews
    c. Recording conversations
3) All of the information that will be provided to the subjects-survey, interview questions, staff, patron, and participant consent forms.
4) Benefits of the study
5) Research time table

The researcher agrees to provide a copy of any and all reports/studies that were or are going to be developed using the research information obtained from patrons of <Facility>. The researcher also will provide a continuous stream of information about findings, research times, locations, and any other information that the library requires regarding the study.

The researcher will ask patrons to participate in this study, which will include a survey, interviews, observations, and recordings of the participant during their stay in the facility. These individuals will be asked to fill out a consent form prior to participating in this study.

Furthermore because this study will audio record participants as they seek information and interact with librarians/staff or other patrons, permission will be needed from both groups. By agreeing to this study, all employees and volunteers of <Facility> who possibly interact with patrons are giving their permission to be recorded when interacting with the participant.

As individuals enter the facility and check in, they will be notified that a research study is taking place. The researcher will rely on institution assistance in providing this information. Each patron will be provided a sheet with a brief explanation of the study and told that there is a possibility that their interactions with the study informant may be recorded. For patrons who interact with the participant, permission will be asked following individual interactions.

If any of the staff or patrons refuses permission at any time, any and all recorded interactions between the informant and the individual that refused participation will be destroyed. Privacy and anonymity of all individuals involved with the project will be ensured. The facility, all informants and any other individuals that are utilized in this study will receive an alias or a generic term for reporting purposes.

The library/institution has the option at any time to ask the researcher to leave and/or not continue the research project at any point during the research time frame, for any reason, and without any prejudice, and the information collected and records and reports written will be turned over to the library/institution.

I agree to the terms:

Representative of <Facility> _____
Title_____
Date_____

I agree to the terms
Researcher__Scott Lucas_____Date_____

Appendix D: Participant Consent Form

Researcher Name: Scott Lucas
Address: 219 S Prospect
City: Clearwater, KS 67026
Phone: 620-584-4291
Email: scottielu@hotmail.com

The School of Library and Information Management at Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach. Likewise, if you choose not to participate, you will not be subjected to reprimand or any other form of reproach. This form outlines the purposes of the study and provides a description of your involvement and rights as participant.

The purposes of the project are:

1) to fulfill a degree requirement for the Library and Information Management Doctoral program at Emporia State University.
2) to gain insight in the topic of information seeking of genealogists, who are utilizing institutions that cater to genealogical patrons

The methods to be used to collect information for this study are interviews, observation, and talk-in-action recording. The interviews will explore how you describe how you seek family history information. Observation will be conducted to analyze your non-verbal traits while you seek information. Talk-in-action will capture verbal interaction you may have with library staff, other patrons, or other verbal remarks you may have while interacting with genealogical materials. From this information, I will describe how you and other genealogists seek information. For more information on the methodology, please ask for a list of methods to be used.

I guarantee that the following conditions will be met:

1) Your real name will not be used at any point of information collection, or in the written case report; instead, you and any other person and place names involved in your cases will be given aliases that will be used in all verbal and written records and reports.
2) If you grant permission for audio recording, no audiotapes will be used for any purpose other than to do this study, and will not be played for any reason other than to do this study. If at any time during the interview or talk-in-action you wish to discontinue recording, these tapes will either be destroyed or returned to you.
3) Your participation in this research is voluntary; you have the right to withdraw at any point of the study, for any reason, and without any prejudice, and the information collected and records and reports written will turned over to you.

4) Any reports or further research generated from your information will available for you to read and suggest any changes. You will be notified of any future research based on the information you provide.

Do you grant permission to be audio taped? Yes_____ No_____

Do you grant permission to provide your home phone and email in case further follow-up is needed? Yes_____ No_____
Phone_____

Email:

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

_____

_____
Participant Name Date

Appendix E: Library Staff/Patron Consent Form

Researcher Name: Scott Lucas
Address: 219 S Prospect
City: Clearwater, KS 67026
Phone: 620-584-4291
Email: scottielu@hotmail.com

An individual currently utilizing this facility is participating in a research study that seeks to describe how genealogists search for information. One of the methodologies that is being utilized captures the verbal interactions between the study participant and anyone else within the facility they may interact with. Therefore, there is a possibility that your interaction with this individual maybe recorded.

The purposes of the project are:

3) to fulfill a degree requirement for the Library and Information Management Doctoral program at Emporia State University.
4) to gain insight in the topic of information seeking of expert and novice genealogists, while utilizing institutions that cater to genealogical patrons

I guarantee that the following conditions will be met:

5) Your real name will not be used at any point of information collection, or in the written case report; instead, you and any other person and place names involved in your cases will be given aliases that will be used in all verbal and written records and reports.
6) If you grant permission for audio recording, no audiotapes will be used for any purpose other than to do this study, and will not be played for any reason other than to do this study. If at any time during the interaction you wish to discontinue recording, the recording will end and previously recorded material will be destroyed.
7) Your participation in this research is voluntary; you have the right to withdraw at any point of the study, for any reason, and without any prejudice.

Do you grant permission to be audio taped? Yes_____ No_____

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

_____ _____
Subject name Date

Appendix F: Initial Interview Protocol

Interview Protocol-Information Seeking Processes of Genealogists
Scott Lucas-Ph.D Candidate
Emporia State University

Institution:

Day and Time:

Interviewer: Scott Lucas

Interviewee:

Introduction
In order better to facilitate this interview, it will be audio recorded. The tape will serve as an aid and extension of my memory, and will not be used for any other purpose nor shared with anyone else. As indicated on the permission form that you signed, I will be the only individual that will have access to these recordings. If you feel uncomfortable or wish to withdraw or stop recording at any time, you may do so without reprimand. Furthermore, any materials recorded during this time and the tape made will be destroyed. In addition, and as the permission form states, your name will not be associated with this study and an alias will be used by me in its place. You will be notified of any reports or further use of the information you provide during this interview.

This interview can be completed in about one hour and involves a set of predetermined questions that will be asked of everyone who participates. The topic we will be covering in the questions refers to how you go about seeking genealogical information.

You have been selected to participate in this interview because you have been identified as someone who has a great deal to share about how you search for genealogical information. This interview will focus on four areas of information seeking: your genealogical research background, your research processes, strategies for answering questions, and connecting to records. Your responses to the questions that cover these four areas will help me understand how people search for genealogical information.

Please be assured that there is no right or wrong way to search nor are there right or wrong answers to the questions that I will raise. Your own opinions and responses are what I am looking for.

Do you have any questions? Ok then we will begin recording and start the interview.

1. Demographics

Age-range
Education
Employment
Marriage
Number of years doing genealogy
How often do you do genealogy?
How much do you normally spend in a facility?
Number of society memberships

2. What would you describe as your reasons for doing genealogy?
   Please explain why [these reasons] are important to you?

3. What first drew you to do genealogy?

   Subquestions
   How have you learned to be a genealogist? Were there any groups or people involved?
   Have you taken any classes, workshops, attended any conference?
   Do you participate in any other activities to help you fine tune your genealogical research skills?

4. What do you want to accomplish by doing genealogy?

   Probes
   Please explain whether you consider these short or long term goals?

5. Why or how did you choose this particular location?

   Probes
   Do you generally select locations based on the reason you stated?

THE NEXT SET OF QUESTIONS FOCUSES ON HOW YOU APPROACH GENEALOGICAL RESEARCH

6. What kinds of information are you looking for today?

   Probes:
   Do you have a specific goal in mind, a specific document or document set?
   What would you like to accomplish today?
   What…..
   Time period
   Ancestry
   Sources/collections

7. How did you determine what you want to investigate?

Probes
Does this represent your typical/usual reason for identifying what you research? Why not?

What types of questions do you generally formulate when you identify your research need?

8. What did you do today before coming to the library to prepare for today's session? Is this what you usually do before coming to the library/archives? If not, could you describe what you ordinarily do to get ready?

Probe
What resource and tools did you utilize to perform this? Probe internet sources if provided

9. You told me what you want to accomplish today. Tell me how you plan to proceed in your research today?

Probe
Explain if this changes when you are looking for specific or general information

Explain if this changes when you are doing new or continued research

10. What type of materials did you bring with you today?

Probe
Do these change depending on the facility, how so.

11. Are there any initial steps you normally do when you first enter the facility?

Probe
Any issues and problems you faced when entering the facility?

Describe any interactions you encountered with others when first entering

Are there any physical features of this library or setting that make it difficult for you to seek information here?

Appendix G: Post-Interview Protocol

Post Interview

1. How did you choose the resources you use to **begin** your search?

   Probe
   What processes did you use to eliminate other resources?

   Do you consult with anyone to help make this decision?

2. How did you decide what sources to **select** including sources requested, looked up, and examined?

   Probe
   What processes did you use to eliminate other resources?

3. Did you ask for help or assistance when conducting your genealogical research?

   Probe
   Whom do you ask for assistance?

   Was this experience helpful in providing assistance, and why?

THE LAST SET OF QUESTIONS EXAMINE HOW YOU CONNECT TO INFORMATION

4. What did you do when you reviewed a source?

   Probe
   How did you interpret a source and the information it contains? Interpret means to decide what is relevant, useful, not relevant, proof, etc.

5. How did you decide what is a good source of information?

   Probe
   What makes this source valuable to you? Or why did you select this specific piece of information?

6. What did you normally use to collect the information that you have identified? EXAMPLES

Probe
How did you document the source of information that you have identified?

7. How do you plan to utilize the information that you have identified? Utilize meaning build a family tree, compose a history, write biography, etc.

8. Once, you selected this information, what is your next step in your research process?

Probe
How do you decide to make this your next step? What information did you use to make this decision?

9. What are your plans for the information you have collected?

What will you do with the information that you obtain today? For example, are you planning to add it to a family history you are working on, do you plan to share the information with anyone? If so, with whom?.

Probe
Do you plan on sharing it with anyone?
Do you plan on passing any of your information on to family members?

Any additional comments you would like to make regarding how you search for genealogical information?

Appendix H: Observation Categories

Structured Observation-Information Seeking Processes of Genealogists
Scott Lucas-Ph.D Candidate
Emporia State University

Initial Observation Categories to look for and note

Orientation to the facility
- Location
- Body movements
- Overall-length of time spent

Seeking information in the facility
- Location
- Body movements
- Overall-length of time spent

Interaction with Facility Staff
- Location
- Body movements
- Overall-length of time spent

Interaction with other researchers
- Location
- Body movements
- Overall-length of time spent

Interaction with resources
- Location
- Type (if known)
- Body movements
- Overall-length of time spent

Comments and Conversations made during research:

Appendix I: Demographic Profile of Participants

	Age	Gen-der	Marital Status	Education Level	Years doing research
Genealogical Society					
Participant 1	51-60	F	M	Some College	16-20
Participant 2	71-80	M	M	Some High School	5-10
Participant 3	61-70	F	M	Bachelors Degree	21-25
Participant 4	71-80	M	M	Masters Degree+	26-30
Participant 5	71-80	F	W	High School Grad	21-25
Participant 6	61-70	F	D	Some College	11-15
Participant 7	71-80	F	M	High School Grad	26-30
Participant 8	61-70	F	M	Some College	26-30
Proprietary Library					
Participant 1	51-60	F	M	Bachelors Degree	26-30
Participant 2	51-60	F	M	Masters Degree+	2-4
Participant 3	61-70	F	M	Some College	Over 30
Participant 4	Unk.	F	S	Some High School	5-10
Public Library					
Participant 1	61-70	F	M	High School Grad	Over 30
Participant 2	51-60	F	M	Some College	2-4
Participant 3	80+	F	M	Bachelors Degree	26-30
Participant 4	80+	M	M	Bachelors Degree	21-25
Participant 5	61-70	F	D	Bachelors Degree	21-25
Participant 6	61-70	F	M	Masters Degree+	21-25
Participant 7	51-60	F	M	Some College	11-15
Participant 8	51-60	F	S	Bachelors Degree	21-25
Participant 9	61-70	M	M	Some Grad Work	Over 30
Participant 10	51-60	M	M	Bachelors Degree	11-15
Participant 11	51-60	F	D	Some High School	5-10
Participant 12	71-80	F	W	Masters Degree+	5-10
Participant 13	U30	F	M	Some College	2-4

Appendix J: Initial Coding Categories

Search Techniques
By specific county
specific state
specific source type
used index first

specific family
related families
looked for multiple names
looked for alt. spelling
used library sources
used table of contents first
browsed collection
browsed books for name
browsed books for county

Next step in research
continue with family
continue with specific source
look for items that can be verified
go through new individuals in the family
consolidate info to create historical perspective
review info on computer
go to a different facility
review with others
start a different family

Sharing activities
family
friends
internet

Storage
paper
files
computer

Use of information
copy specific records
wrote down specific info
entered into computer

Secondary sources
county-transcribed

state-transcribed

city-transcribed
family history
cemetery records-transcribed
county history books

How did they locate resources
call#s

location

previous research
used references
librarian
patron

Level of proof
need to get documents
need to verify documents
actually mentioned
proof
go to cemetery

Types of interactions
with librarians-patron initiate
with librarians-librarian initiate

with other genealogists
genealogists over hear and help
w/lib. Administrative-computer use
w/lib. helping using facility
w/lib. Locating source
w/patron technology issue
w/patron help locating source
w/patron teacher role
genealogists over hear and talk
w/ person they came with--gen
w/ person they came with--non-gen

Preparation
printed something from computer
reviewed materials

just brought all materials-paper

none---from memory

brought all materials-computer
brought specific family folder

Primary sources
census-computer
census-microfilm
county records-microfilm

cemetery photos

city directories

Experience
10-ii
25
20-25-iii
30-40-ii
30
less than 5

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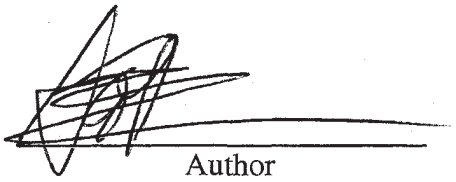

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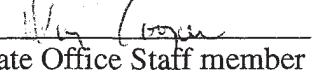

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