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## **PROBLEMS AND PROMISES OF QUALITATIVE SECONDARY ANALYSIS FOR RESEARCH IN INFORMATION SCIENCE (PAPER)**

**Abstract:** Qualitative secondary analysis (QSA) is a method that has been applied in other disciplines even though it has rarely been explicitly used or discussed in information science. This paper discusses the epistemological and ethical issues surrounding QSA, explains the value of the method for information science research, discusses its benefits and challenges, and provides an example case study.

### **1. Introduction**

Re-use of qualitative data, or *qualitative secondary analysis* (QSA), especially by researchers who were not involved in the original studies, has been explored across several disciplines. Scholars in the social and health sciences have debated its epistemological and methodological merits and challenges. Although Johnson (2014) has argued for more re-use of data in information science, both qualitative and quantitative, QSA has received little attention and is rarely explicitly used. Given the time, expertise and expense involved in collecting qualitative data, as well as recent mandates to publicly archive funded data, it is time for information scientists to explore the method and contribute to this interdisciplinary debate.

### **2. Defining Qualitative Secondary Analysis**

There are competing definitions of QSA, and, as a process, it is “ill-defined and underdeveloped” (Heaton 2004, xiii). However, several scholars offer competing schema for understanding it and debate rages about whether particular types of data re-use constitute QSA. Definitions of QSA tend to focus on two dimensions: the purpose of the study and the types of the datasets used. Heaton (2004), writing from social policy and work, and Thorne (1994, 1998), a health researcher in nursing, offer competing, but similar schema for QSA studies. The table below shows similarities and differences between these two schema:

Insert Table 1 here

Corti, a specialist in archiving of qualitative data, and Thompson, a scholar from sociology who specializes in oral history, (2004), focus more on purpose than on types of data. They classify QSA studies into six “approaches”:

- description
- comparative research, restudy, or follow-up study
- re-analysis
- research design and methodological advancement
- verification
- teaching and learning

One of the problems with defining QSA is that it is an umbrella for many different models of research. Debate about whether some manifestations “count” as QSA compounds the difficulty with defining it, which could lead researchers to avoid it or avoid identifying their work in this way.

### **3. Benefits**

Despite the challenge with articulating a universally, satisfying definition, QSA offers ethical, pragmatic, and economical benefits. Qualitative research processes, such as recruiting participants, obtaining access to sites, and collecting and transcribing data are time-intensive, expensive (Glaser 1963), and require researchers with skill and experience. Thus, re-using data provides an additional benefit from this initial investment (Corti and Bishop 2005; Medjedović 2011).

Ethically, QSA may offer benefits related to hard to reach or over-researched populations. For instance, although research on minority groups uncovers their “invisible work” (i.e., work that is overshadowed by virtue of their group membership or status) (Evans 2007; Hart et al. 2009), these and other populations and research participants may appreciate re-use of their data as a means of more efficiently making their voices heard (Broom et al. 2009; Santacroce et al. 2000).

### **4. Challenges**

There is debate about the challenges of secondary analysis of qualitative research and whether it is an appropriate method. First, the nature of qualitative research may not be conducive to re-use. Heaton (2004) calls this a “data fit” problem. Often as qualitative data is collected, the researcher adjusts questions, albeit under a specific research aim, as a result of some initial analysis; the semi-structured or unstructured nature of qualitative interviews serves a purpose, as the participant (or co-researcher) redefines the question more appropriately for the researcher. Thus the data collected is tailored specifically to the single research question at hand (Broom et al. 2009; Hammersley 2010).

There is an hermeneutical concern due to a third-party researcher's lack of "proximate knowledge" (Coltart et al. 2013) with the original study. In doing qualitative studies, a researcher is often closely involved with participants, has developed a rapport with them, has become immersed in the context, and perhaps has taken in information that may or may not be deliberately desired. This concept of "being there" is considered an important aspect of this research. With re-use of qualitative data, the researcher may not have the advantage of having interacted with a participant and been in his or her space (Coltart et al. 2013; Corti and Thompson 2004; Heaton 2004; Mason 2007).

A third impediment to QSA concerns the intimacy of the data. Rapport between participants and researchers during interviews and focus groups creates a dataset that is personal and intimate. Re-use of data may be perceived as breach of trust between participant and researcher. In addition, sufficiently anonymizing data may cause the loss of important information or inclusion of false data (Medjedović 2011; Yardley et al. 2014).

A final issue involves the incentive to share. Pragmatically, preparing data for re-use and in particular, anonymizing it, requires significant effort. Beyond this, there is the broader cultural context of research that discourages sharing of research data without clear credit or appropriate recognition for credit given. Unless the original researcher is invited to be a part of the secondary analysis, there is little incentive in the current research culture for the researcher to give up his or her data (Coltart et al. 2013; Medjedović 2011).

## **5. An Information Science Example**

A challenge to discussing QSA in information science is that studies are not always explicit about the re-use of data. There may be studies where an author re-uses his or her own data for a subsequent study but does not call this secondary analysis. Thus, to start an explicit conversation about re-use, we analyze our own recent qualitative secondary analysis in light of the benefits and challenges raised by others.

In our qualitative secondary analysis, originally presented at the CAIS/ASCI conference in 2015, we re-used interview data from two studies of the lived experience of reference and information service (RIS) work to explore the experience of time (VanScoy and Burns 2015). The original phenomenological studies sought to uncover how academic librarians experienced their work lives (Burns and Bossaller 2012; VanScoy 2013). Although time was not a theme in the original studies, we noticed mentions of time in various ways in the data and realized how this concept might offer an important, unexplored framework for thinking about work life (Bossaller et al. 2017).

Our follow up study might best be categorized as a supplemental analysis (Heaton 2004), or a retrospective interpretation (Thorne 1994; 1998). We were able to apply supplementary analysis or retrospective interpretation because each primary study applied similar research designs and each examined the lived experiences of academic reference librarians and how these librarians

make meaning of these experiences. Additionally, the researchers were already intimately familiar with the original contexts.

There were some unique aspects to this QSA that helped avoid “data fit” problems. The research question for the secondary analysis was similar to the original research questions, but the secondary analysis focused more narrowly on the concept of time. In addition, both research studies were epistemologically and methodologically similar. Both were phenomenological studies in which extensive data was collected through semi-structured interviews.

We carefully considered the ethical implications, since the original studies were not designed with data re-use in mind. Both data sets were anonymized, so the risk of participant identification was very low. However, to avoid violation of trust, the original data from each study was re-analyzed only by the author(s) who had originally collected it. References to time were compiled and then analyzed thematically by the entire research team. This situation highlights the need to consider potential re-use of data at the beginning of the study and secure participant consent at that point.

This two-stage process was beneficial, not only for ethical reasons, but also for the challenge referred to as researcher proximity or “being there”. With each researcher analyzing his or her own original data, the context was preserved.

Consistent with the studies of researchers in other disciplines who have re-used qualitative data, the researchers were known to each other and shared their data for mutual benefit. Thus, we did not explore the pragmatic challenges of preparing data for public sharing or the cultural challenge of turning over valuable and hard-won data for others to use. There was also no need in this study to use systems for archiving the data.

Overall, QSA proved to be a useful method for this study in that it provided rich, new exploration of two existing data sets. There were some problems that the researchers had to negotiate, such as sharing data and creating meaningful codes from disparate datasets, but negotiations about the method opened up new ways of thinking about qualitative data, and how it might be shared between researchers to discover answers to arising practical or theoretical problems.

## **6. Conclusion**

We suggest there is potential for qualitative secondary analysis to further research in information science, especially with topics where a deeper understanding of an issue and a greater sample size of data might be helpful. It might be especially useful for research involving hard to reach populations, such as children, or those suffering from research fatigue, such as minority populations. Another area would be research on emerging or critical issues where the time saved in recruiting participants, scheduling and conducting interviews, and transcribing data might allow faster dissemination of results.

Several disciplines have explored epistemological, practical, and ethical benefits and challenges of QSA. Information science should follow suit. Which areas of research might most benefit? Which ethical and practical issues are of most concern for our discipline? What methodological and epistemological challenges are presented? What procedures would researchers need to adopt to address these concerns? Discussing these questions would help to encourage appropriate use of the method in information science and contribute our discipline's voice to the larger interdisciplinary conversation.

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Heaton (2004)	Thorne (1994, 1998)
<b>Supra analysis:</b> uses original data to ask new research questions	<b>Analytic expansion:</b> further use of one's own data
<b>Supplementary analysis:</b> uses original data to ask additional questions	<b>Retrospective analysis:</b> new research questions raised by one's original study
<b>Re-analysis:</b> re-examines the original data and asks the original research questions	<b>Cross-validation:</b> confirm or discount findings
<b>Amplified analysis:</b> multiple datasets that share topics	<b>Armchair induction:</b> using others' datasets for inductive theory development
<b>Assorted analysis:</b> multiple datasets to ask new research questions	<b>Amplified sampling:</b> comparison of distinct and theoretically representative datasets

Table 1. Comparison of approaches and types of secondary qualitative data analysis.