Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, Vol 7, No 1 (2006)

Volume 7, No. 1, Art. 21 – January 2006

The Use of Qualitative Content Analysis in Case Study Research

Florian Kohlbacher

Abstract: This paper aims at exploring and discussing the possibilities of applying qualitative content analysis as a (text) interpretation method in case study research. First, case study research as a research strategy within qualitative social research is briefly presented. Then, a basic introduction to (qualitative) content analysis as an interpretation method for qualitative interviews and other data material is given. Finally the use of qualitative content analysis for developing case studies is examined and evaluated. The author argues in favor of both case study research as a research strategy and qualitative content analysis as a method of examination of data material and seeks to encourage the integration of qualitative content analysis into the data analysis in case study research.

Key words: case study research, content analysis, qualitative content analysis, qualitative research

Table of Contents

1. Introduction: Qualitative vs. Quantitative Research?

There has been an ongoing debate on the appropriateness of different approaches and methods in social research. As a matter of fact, many authors point to the heated

discussions, sometimes even "wars" (the so-called "paradigm war"), between the adherents of quantitative (so-called "QUANs") and qualitative research (so-called "QUALs") designs (e.g. BRANNEN, 1992, pp.3-5; BRYMAN, 2004, pp.452-454; HAMMERSLEY, 1992, pp.39-41; KELLE, 2001, [1]-[5]; TASHAKKORI & TEDDLIE, 1998, pp.3-13). One main characteristic of this dispute seems to be the dichotomous way in which qualitative and quantitative research (methods) were presented as well as the resulting strict contraposition of the two (cf. also BRYMAN, 1992, pp.57-59)[1]. CASSELL and SYMON (1994) for instance give the following list of defining characteristics for qualitative research:

> "a focus on interpretation rather than quantification; an emphasis on subjectivity rather than objectivity; flexibility in the process of conducting research; an orientation towards process rather than outcome; a concern with context—regarding behaviour and situation as inextricably linked in forming experience; and finally, an explicit recognition of the impact of the research process on the research situation" (p.7). [1]

On the one hand, this definition puts forth the main points of what qualitative research is about, but it also demonstrates how it is positioned or tries to position itself in contrast to quantitative research. NEUMAN (1997) goes even further by stating that there are basically two categories of data collection techniques: quantitative and qualitative (p.30). While the first means collecting data in the form of numbers the second means collecting data in the form of words or pictures (ibid.). This is of course only a very superficial and over-simplified assumption of the distinction between quantitative and qualitative research methods. [2]

Moreover, qualitative research methods have often faced acceptance problems and academic and disciplinary resistances, which are partly due to the politics embedded in this field of discourse (cf. e.g. DENZIN & LINCOLN, 2000, p.7): qualitative researchers are called journalists, or soft scientists, and their work is termed unscientific, or only exploratory, or subjective. However, great efforts have also been made to reconcile both sides (or, where not possible, at least to soothe the dispute), thus providing the opportunity to exploit the advantages of both approaches and opening the way for synergy effects (e.g. MAYRING, 2001, [3]-[9]; TASHAKKORI & TEDDLIE, 1998, pp.16ff). These attempts share the conception that qualitative and quantitative methods should be viewed as complementary rather than as rival camps (JICK, 1979, p.602). This has led to the appearance of mixed method approaches and the use of triangulation (e.g. BRYMAN, 2004, pp.454ff.; CRESWELL, 2003, pp.208ff.; JICK, 1979, p.602; cf. also Section 5.1). Besides, in the course of the last century (especially the second half of it), the development of qualitative methods showed impressive advances and results, thus helping to gain more acceptance not only in the field of social research (cf. e.g. MAYRING, 2002, pp.9-18). [3]

This paper also aims at helping to overcome the strict contraposition of qualitative and quantitative research. As the following sections will show, the combination and mixing of different research methods bears an enormous potential for the advancement of social research. [4]

2. Research Question, Aim and Structure of the Paper

This section presents the research question underlying the analysis and discussion in the following sections and gives a short outline of the paper, explaining its aim, structure and scope. [5]

2.1 Cognitive interest and research question

Since its development in the beginning of the 1980s, MAYRING's qualitative content analysis has achieved popularity (TITSCHER, MEYER, WODAK & VETTER, 2000, p.62). However, this qualitatively oriented approach to content analysis—a discipline traditionally dominated by quantitative methods—has mainly been discussed and used within the German-speaking scientific community and does not seem to have attracted as much attention internationally as it actually deserves[2]. In fact, GLÄSER and LAUDEL (2004) contend that qualitative content analysis is hardly used (p.44) and TITSCHER et al. (2000) in their bibliometric survey

of the prominence of methods text analysis come to a similar conclusion as far as method literature citations are concerned (pp.217-218). However, when analyzing the frequency of keywords considerable deviations from the citation analysis turned up: a marked dominance of qualitative (and also quantitative) content analysis (TITSCHER et al., 2000, pp.219-221). [6]

Case studies are widely used in organizational studies and across the social sciences, and there is some suggestion that the case study method is increasingly being used and with a growing confidence in the case study as a rigorous research strategy in its own right (cf. e.g. HARTLEY, 1994, p.208; HARTLEY, 2004, p.323). STAKE (2000) concurs, suggesting that case studies have become "one of the most common ways to do qualitative inquiry" (p.435). However, there have also been traditional prejudices against case study strategy in such a way that case studies have been viewed as a less desirable form of inquiry for instance (cf. e.g. YIN, 2003a, pp.10-11). Besides, it was claimed that case studies lack in rigor and reliability and that they do not address the issue of generalizability in contrast to quantitative methods (HARTLEY, 1994, p.208). [7]

The author argues in favor of both case study research as a research strategy—trying to disprove the critiques just mentioned—and qualitative content analysis as a method of examination of data material. At the same time he seeks to encourage the integration of qualitative content analysis into the important step of data analysis in case study research. [8]

Therefore, the research question which is to be answered in the course of this paper is the following: *What is the contribution qualitative content analysis can make as a method of text analysis (for interpreting interview transcripts and other documents) in case study research? Or, put more generally: What is the contribution of using qualitative content analysis as an interpretation and analysis method for developing case studies?* [9]

2.2 Aim, structure and scope of the paper

This paper aims at exploring and discussing the possibilities of applying qualitative content analysis as a (text) interpretation method in case study research[3]. First, case study research as a research strategy within qualitative social research is briefly presented. Then, a basic introduction to (qualitative) content analysis as an interpretation and analysis method for text documents—especially the transcripts of qualitative interviews—and other data material is given, with the focus on Philipp MAYRING's approach to qualitative content analysis. Finally, the use of qualitative content analysis for conducting case study research is examined and evaluated. [10]

Since this paper only aims to serve as the starting point for a more thorough discussion of the application of qualitative content analysis for case study research, the scope is rather narrow. Providing only an introduction to the theoretical argument, the need for further theoretical discussion as well as the empirical testing of the argument is obvious. Besides, due to the limited scope of this paper and my own research interests, the focus will mainly be on organizational and managerial research, even though both qualitative content analysis as well as case study research can be used in a much wider range of research fields (see also Sections 3. and 4.2). [11]

3. Case Study Research

Case studies are widely used in organizational studies and across the social sciences, and there is some suggestion that the case study method is increasingly being used and with a growing confidence in the case study as a rigorous research strategy in its own right (cf. e.g. HARTLEY, 1994, p.208; HARTLEY, 2004, p.323). STAKE (2000) concurs, suggesting that case studies have become "one of the most common ways to do qualitative inquiry," but at the same time concedes that "they are neither new nor essentially qualitative" (p.435). In any case, quoting one of the most prominent experts in case study research, Robert K. YIN, we can say that "[u]sing case studies for *research* purposes remains one of the most challenging

of all social science endeavors" (YIN, 2003a, p.1, original emphasis). [12]

This section gives a brief overview of case study research. As the word *research* implies, the subject of interest here are research case studies. These must be distinguished from teaching case studies—i.e. case studies as a pedagogical device—which are widely used particularly in business and law schools (cf. e.g. HARTLEY, 2004, p.324; REMENYI, MONEY, PRICE and BANNISTER, 2002, pp.2-4; YIN, 2003a, p.2). The main points of case study research are presented only as far as they seem to be relevant for the analysis of the research question (see 2.1). Given this purpose and the scope of the paper, this brief description can by no means serve as an introduction to case study research. For an extensive review and analysis of case study research reference should be made to the state-of-the-art literature (e.g. GILLHAM, 2000; GOMM, HAMMERSLEY & FOSTER, 2000; HAMEL, 1993; STAKE, 1995; YIN, 2003a). [13]

3.1 The case study as a research strategy

According to YIN (2003a, p.2) "the distinctive need for case studies arises out of the desire to understand complex social phenomena" because "the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events," such as organizational and managerial processes, for example. In fact, case studies seem to be the preferred strategy when "how or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (YIN, 1981, p.59, 2003a, pp.2, 5-10). In such a setting, a case study would be an *explanatory* one (ibid.). Depending on the type of research question posed, the extent of control an investigator has over actual behavioral events, and the degree of focus on contemporary as opposed to historical events, there are also *exploratory* and *descriptive* case studies (YIN, 2003a, pp.1, 3-10)[4]. In contrast to this, STAKE (2000) identifies three types of case studies—*intrinsic*, *instrumental*, and *collective*—with the distinction between intrinsic and instrumental (a collective case study is instrumental study extended to several cases) addressing the degree to which the focus is on the unique or the generalizable features of the case research (pp.437-438, cf. also HARTLEY, 2004, p.326). As a matter of interest, a common concern about case studies put forward by their critics is that they provide little basis for scientific generalization (YIN, 2003a, p.10). YIN's (2003a) answer to this:

> "case studies […] are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study […] does not represent a 'sample', and in doing a case study, your goal will be to generalize theories (analytical generalization) and not to enumerate frequencies (statistical generalization)" (p.10). [14]

Before we take a look at the individual steps in the process of conducting case study research, it is now time to deliver a definition of what case study research actually is. HARTLEY (2004), for instance, states that case study research "consists of a detailed investigation, often with data collected over a period of time, of phenomena, within their context," with the aim being "to provide an analysis of the context and processes which illuminate the theoretical issues being studied" (p.323). In this respect, it is important to note that case studies have an important function in generating hypotheses and building theory (cf. e.g. EISENHARDT, 1989; HARTLEY, 1994, p.211; HARTLEY, 2004, p.325). Finally, YIN (2003a, pp.13-14) offers a more detailed and technical definition of case studies:

1. "A case study is an empirical inquiry that
    - investigates a contemporary phenomenon within its real-life context, especially when
    - the boundaries between phenomenon and context are not clearly evident
2. The case study inquiry
    - copes with the technically distinctive situation in which there will be many more

variables of interest than data points, and as one result

- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis". [15]

Given this definition it might be important to note that a case study is not a method but a research strategy (cf. e.g. HARTLEY, 2004, p.323; TITSCHER et al., 2000, p.43)[5]. Or, put differently: "[c]ase study is not a methodological choice but a choice of what is to be studied. By whatever methods, we choose to study the case" (STAKE, 2000, p.435). As matter of fact, case study as a research strategy comprises an all-encompassing method, which means that a number of methods may be used—either qualitative, quantitative or both (cf. e.g. HARTLEY, 2004, p.324; YIN, 2003a, pp.14-15). Therefore, a case study cannot be defined through its research methods, but rather in terms of its theoretical orientation and interest in individual cases (HARTLEY, 2004, p.324; STAKE, 2000, p.435). Besides, case study research design can be used with other research strategies to address related research questions in different phases of a research project, and yet a further strategy would be to start with exploratory case study research and then to test the emerging findings in wider survey-based research (HARTLEY, 1994, p.215, 2004, pp.326-327). [16]

To sum up, let us once again cite HARTLEY (2004):

> "Case study research is a heterogeneous activity covering a range of research methods and techniques, a range of coverage (from single case study through carefully matched pairs up to multiple cases), varied levels of analysis (individuals, groups, organizations, organizational fields or social policies), and differing lengths and levels of involvement in organizational functioning" (p.332). [17]

3.2 Designing case studies

According to HARTLEY (2004) research design is "the argument for the logical steps which will be taken to link the research question(s) and issues to data collection, analysis and interpretation in a coherent way" (p.326, cf. also YIN, 2003a, pp.19-21). YIN (2003a, p.21-28) identifies the following five components of research design as especially important for case studies:

- A study's questions;
- its propositions, if any;
- its unit(s) of analysis;
- the logic linking of the data to the propositions;
- the criteria for interpreting the findings. [18]

Subsequently, it will be helpful to consider whether the case study will be exploratory, descriptive or explanatory and a key decision to be made is whether the research will be based on a single case study or on multiple cases (HARTLEY, 2004, p.326). However, going into greater detail concerning these issues would be beyond the scope of this paper. [19]

Furthermore, for case studies, theory development as part of the design phase is essential, whether the ensuing case study's purpose is to develop or test theory, with theory development taking place prior to the collection of any case study data being an essential step in doing case studies (YIN, 2003a, pp.28-29). However, depending on the depth and range of the extant literature, the initial focus of the case study may be quite focused or broad and open-ended. Therefore and because the case study strategy is ideally suited to exploration of issues in depth and following leads into new areas of new constructions of theory, the theoretical framework at the beginning may not be the same one that survives to the end (HARTLEY, 2004, p.328). Besides, theory development does not only facilitate the

data collection phase of the ensuing case study, the appropriately developed theory also is the level at which the generalization of the case study results will occur. This role of theory has been characterized by YIN (2003a) as "analytic generalization" and has been contrasted with a different way of generalizing results, known as "statistical generalization" (pp.31-32, cf. also above, Section 3.1, and also HARTLEY, 2004, p.331). [20]

Last but not least, a major issue in designing case study research is the maximization of conditions related to design quality, i.e. the criteria for judging the quality of research designs. The four conditions or tests are (cf. e.g. YIN, 2003a, pp.19, 33-39):

- Construct validity;
- internal validity;
- external validity;
- reliability. [21]

A detailed explanation of these concepts can be found in numerous textbooks on social science methods (e.g. ATTESLANDER, 2003; BRYMAN, 2004; CRESWELL, 2003; DIEKMANN, 2003) and would go beyond the scope of this paper. However, these issues will be addressed again in Section 4.2.3 in relation to quality criteria for qualitative content analysis. [22]

3.3 Conducting case studies

This section will give a short overview of the main steps in undertaking case studies, drawing mainly from YIN (2003a)'s seminal work on case study research. [23]

3.3.1 Collecting evidence

According to YIN (2003a) there are six possible sources of evidence for case studies: documents, archival records, interviews, direct observation, participant-observation, and physical artifacts (pp.83, 85-96). Indeed, the case study's unique strength is "its ability to deal with a full variety of evidence—documents, artifacts, interviews, and observations" (YIN, 2003a, p.8). Case studies do not imply the use of a particular type of evidence and they can be done using either qualitative or quantitative evidence (or both) (EISENHARDT, 1989, pp.534-535; YIN, 1981, p.58; see also above, Section 3.1). Nevertheless, while quantitative data often appears in case studies, qualitative data usually predominates (PATTON & APPELBAUM, 2003, p.60). [24]

YIN (2003a, pp.83, 97-105) contends that the benefits from these six sources can be maximized if three principles are followed:

- Use of multiple sources of evidence;
- creation of a case study database;
- maintaining a chain of evidence. [25]

Finally, YIN (2003a, pp.78-80) recommends conducting a pilot case study as a final preparation for data collection. This will help to refine the data collection plans with respect to both the content of the data and the procedures to be followed. [26]

GILLHAM (2000) also sees the use of multiple sources of evidence as a "key characteristics of case study research" (p.2) because "[a]ll evidence is of some use to the case study researcher: nothing is turned away" (p.20). As another fundamental characteristics he puts forth that "you do not start out with *a priori* theoretical notions" (ibid., original emphasis). [27]

3.3.2 Analyzing case study evidence

According to HARTLEY (1994, 2004) data collection and analysis are "developed together in an iterative process," which can be a strength as it allows for theory development which is

grounded in empirical evidence (p.220; p.329). Besides, a careful description of the data and the development of categories in which to place behaviors or process have proven to be important steps in the process of analyzing the data. The data may then be organized around certain topics, key themes or central questions, and finally the data need to be examined to see how far they fit or fail to fit the expected categories (ibid.). [28]

YIN (2003a) maintains that data analysis consists of "examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a study" (p.109). In general, "data analysis means a search for patterns in data" (NEUMAN, 1997, p.426). NEUMAN (1997, pp.426ff) states that once a pattern is identified, it is interpreted in terms of a social theory or the setting in which it occurred and that the qualitative researcher moves from the description of a historical event or social setting to a more general interpretation of its meaning. In fact, "the ultimate goal of the case study is to uncover patterns, determine meanings, construct conclusions and build theory" (PATTON & APPELBAUM, 2003, p.67). According to YIN (2003a, pp.111-115) there are three general analytic strategies for analyzing case study evidence:

- Relying on theoretical propositions;
- thinking about rival explanations;
- developing a case description. [29]

He contends that any of these strategies can be used in practicing five specific techniques for analyzing case studies: pattern matching, explanation building, time-series analysis, logic models, and cross-case synthesis (YIN, 2003a, pp.109, 116-137). [30]

Finally, checking the findings with the case study participants can be a valuable part of the analysis and can enhance validity (HARTLEY, 2004, p.330). Besides, the analyzing of data is enhanced by reference to the existing literature and using this to raise questions about whether the researcher's findings are consistent with or different from extant research (ibid.). [31]

3.3.3 Reporting case studies

In a final step—or a final series of steps—the results and findings of a case study need to be brought to closure. This step is called reporting, with numerous forms of reports being available, and the typical case study report being a lengthy narrative (YIN, 1981, p.64, 2003a, p.141). STAKE (2000, p.436) notes that a "case study is both a process of inquiry about the case and the product of that inquiry," namely the report. [32]

4. Content Analysis

This section provides a brief introduction to qualitative content analysis as a (text) analysis method for qualitative social research. The presentation will focus on qualitative content analysis as it was developed by Philipp MAYRING in Germany (see Section 4.2.2), with other approaches being touched only marginally (see Section 4.2.2.3). At the end of this section, quality criteria and validation issues relevant for qualitative content analysis will be highlighted (see Section 4.2.3). [33]

4.1 Classical content analysis

According to TITSCHER et al. (2000), content analysis is "the longest established method of text analysis among the set of empirical methods of social investigation" (p.55). However, there does not seem to exist a homogenous understanding of this method at present, but originally the term "referred only to those methods that concentrate on directly and clearly quantifiable aspects of text content, and as a rule on absolute and relative frequencies of words per text or surface unit" (TITSCHER et al., 2000, p.55). Later, the concept was extended to include all those procedures which operate with categories, but which seek at least to quantify these categories by means of a frequency survey of classifications (ibid.).

[34]

According to BABBIE (2001), content analysis can be defined as "the study of recorded human communications" (p.304). It is "essentially a coding operation," with coding being "the process of transforming raw data into a standardized form" (BABBIE, 2001, p.309). In fact, RYAN and BERNARD (2000) see content analysis as one of the "major coding traditions" (p.780). They contend that "coding forces the researcher to make judgments about the meanings of contiguous blocks" and that coding is "the heart and soul" of (whole) text analysis (ibid.). According to them, classical content analysis "comprises techniques for reducing texts to a unit-by-variable matrix and analyzing that matrix quantitatively to test hypotheses" and the researcher can produce a matrix by applying a set of codes to a set of qualitative data (e.g. written texts etc), with the assumption being that the codes of interest have already been discovered and described beforehand (RYAN & BERNARD, 2000, p.785). More will be said on the topic of coding in Sections 4.2.2.3 and 4.2.3. [35]

The development of content analysis is fundamentally connected to the development of mass media and international politics and content analysis has gained significance in the first half of the twentieth century with the dramatic expansion of mass communication (MAYRING, 2002, p.114; TITSCHER et al., 2000, p.55). In fact, the theoretical basis of the first moves towards analyses of contents was Harold D. LASSWELL's model of mass communication, and later on also the news transmission model of SHANNON and WEAVER (TITSCHER et al., 2000, pp.56-57). But even before that, different approaches to analysis and comparison of texts in hermeneutic contexts (e.g. Bible interpretations), early newspaper analysis, graphological procedures and even Freudian dream analysis can be seen as early precursors of content analysis (MAYRING, 2000a, [6]). According to GILLHAM (2000), the "essence of content analysis is identifying *substantive* statements—statements that really say something" (p.71, original emphasis). BERELSON (1971) defined content analysis like this: "Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (p.18). [36]

Obviously, classical content analysis is essentially a quantitative method with the core and central tool being its system of categories (cf. also Section 4.2.2.3). The simplest type of evaluation consequently consists of counting the numbers of occurrences per category (assuming there is a relationship between frequency of content and meaning). Besides, different indices which correlate two separate measurements and contingencies, more complex procedures can also be used for analysis (TITSCHER et al., 2000, pp.57-61). [37]

4.2 Qualitative content analysis

According to TITSCHER et al. (2000, p.62), in the 1950s a controversy about research strategies in content analysis was setting off. BERELSON's book "Content analysis in communication research" (first published 1952) was the first compendium of the methods and goals of quantitative content analysis which had been developed up to that time, and which concentrated on assessment on the basis of frequency analyses (BERELSON, 1971). KRACAUER's 1952 article "The challenge of qualitative content analysis" can be seen as a critical reaction to BERELSON's book (KRACAUER, 1952). He contended that the quantitative orientation neglected the particular quality of texts and that it was important to reconstruct contexts. According to him, it is not by counting and measuring that "patterns" or "wholes" in texts can be demonstrated but by showing the different possibilities of interpretation of "multiple connotations" (GLÄSER & LAUDEL, 2004, p.192; KRACAUER, 1952, pp.637f.; cf. also TITSCHER et al., 2000, p.62). MAYRING (2000a, [6]) even speaks of "a superficial analysis without respecting latent contents and contexts, working with simplifying and distorting quantification." These critiques finally led to the development of qualitative approaches to content analysis (e.g. ALTHEIDE, 1996; MOSTYN, 1985; RITSERT, 1972; RUST, 1980; WITTKOWSKI, 1994). [38]

RITSERT (1972, pp.19-31), for instance, criticized that especially the following four aspects are not taken into account appropriately by quantitative content analysis:

- The context of text components;
- latent structures of sense;
- distinctive individual cases;
- things that do not appear in the text. [39]

MAYRING's qualitative content analysis tries to overcome these shortcomings of classical quantitative content analysis by applying a systematic, theory-guided approach to text analysis using a category system (cf. e.g. MAYRING, 2002, p.114; see also below Sections 4.2.2.2 and 4.2.2.3). In fact, qualitative content analysis claims to synthesize two contradictory methodological principles: openness and theory-guided investigation (GLÄSER & LAUDEL, 1999, p.3). [40]

BRYMAN (2004) states that qualitative content analysis is "probably the most prevalent approach to the qualitative analysis of documents" and that it "comprises a searching-out of underlying themes in the materials being analyzed" (p.392). Being a little bit more specific he defines qualitative content analysis in the following way:

> "An approach to documents that emphasizes the role of the investigator in the construction of the meaning of and in texts. There is an emphasis on allowing categories to emerge out of data and on recognizing the significance for understanding the meaning of the context in which an item being analyzed (and the categories derived from it) appeared" (BRYMAN, 2004, p.542). [41]

However, this seems to be rather the description of a general approach to analyzing documents qualitatively. In contrast to this, MAYRING's qualitative content analysis is not only an approach to analyzing documents but also a sophisticated and concretely described method at the same time. [42]

4.2.1 Excursus: qualitative research

Before presenting MAYRING's qualitative content analysis, a short overview of the basic assumptions and definitions of qualitative research will be given. [43]

"Qualitative research is many things to many people" (DENZIN & LINCOLN, 2000, p.8). This statement of DENZIN and LINCOLN (2000) in their handbook of qualitative research already shows the breadth of the term qualitative research and the multitude of its methods, but also the vagueness of this concept. In fact, as it cuts across disciplines, fields and subject matters, a "complex, interconnected family of terms, concepts and assumptions surround the term *qualitative research*" (DENZIN & LINCOLN, 2000, p.2, original emphasis). Thus, a clear and concise definition of qualitative research can hardly be found. [44]

The "word *qualitative* implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency" (DENZIN & LINCOLN, 2000, p.8, original emphasis). CASSELL and SYMON (1994, p.1) judge qualitative methods to be very appropriate to research questions focusing on organizational processes, outcomes, and trying to understand both individual and group experiences of work. According to them, organizational dynamics and change are major areas of interest in organizational research, and only qualitative methods are sensitive enough to allow the detailed analysis of change, while quantitative methods are only able to "assess that a change has occurred over time but cannot say how (what processes were involved) or why (in terms of circumstances and stakeholders)" (CASSELL & SYMON, 1994, p.5). [45]

Generally, it can be said that qualitative techniques emerge form phenomenological and interpretive paradigms, with the emphasis being on constructivist approaches where there is no clear-cut objectivity or reality (CASSELL & SYMON, 1994, p.2). This has important implications on what is perceived to be the nature of knowledge, with the qualitative paradigm negating the existence of objectively true knowledge and proposing an interpretive approach to social knowledge, which recognizes that "meaning emerges through interaction

and is not standardized from place to place or person to person" (RUBIN & RUBIN, 1995, p.31). [46]

According to CASSELL and SYMON (1994, p.4), qualitative research is "less likely to impose restrictive a priori classifications on the collection of data," and thus research is "less driven by very specific hypotheses and categorical frameworks and more concerned with emergent themes and idiographic descriptions." This is also why, according to the qualitative research paradigm, it is only in the course of doing field research that one can find out which (research) questions can reasonably be asked and it is only at the end that the researcher will know which questions can be answered by a study (LUEGER, 2000, p.51). Therefore, qualitative methods are often used when the field of research is yet not well understood or unknown and aim at generating new hypotheses and theories, while quantitative methods are frequently used for testing hypotheses and evaluating theories (cf. e.g. ATTESLANDER, 2003, pp.83-85; GLÄSER & LAUDEL, 1999, p.2; KELLE, 1994, pp.41-52; MAYRING, 2003, pp.20-23). [47]

Based on this background it should not be too difficult to grasp DENZIN and LINCOLN's (2000) generic definition of qualitative research:

> "Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them" (p.3). [48]

4.2.2 Philipp MAYRING's approach

This section offers a short introduction to the main points of MAYRING's qualitative content analysis. Its development (Section 4.2.2.1), basic ideas (Section 4.2.2.2), procedures (Section 4.2.2.3) and quality criteria (Section 4.2.3) will be presented subsequently. [49]

4.2.2.1 Development

MAYRING's concept of qualitative content analysis was developed in the 1980s in a longitudinal study about psycho-social consequences of unemployment, when about 600 open-ended interviews yielded more than 20,000 pages of transcripts, which had to be analyzed in a qualitatively oriented way (cf. MAYRING, 2000a, [1]). Since then MAYRING's works seem to have become standard literature on qualitative content analysis and some regularly appear in new editions (e.g. MAYRING, 2002 [first published 1990], 2003 [first published 1983]). The main idea in the development of MAYRING's approach is "to preserve the advantages of quantitative content analysis as developed within communication science and to transfer and further develop them to qualitative-interpretative steps of analysis" (MAYRING, 2000a, [2]). [50]

According to TITSCHER et al. (2000), MAYRING's qualitative content analysis "has achieved popularity" (p.62), while at the same time it has become difficult to separate it from other methods of text analysis, particularly those oriented towards ethnographic methods or grounded theory (p.55). [51]

4.2.2.2 Basic ideas

The object of (qualitative) content analysis can basically be any kind of recorded communication, i.e. transcripts of interviews/discourses, protocols of observation, video tapes, written documents in general etc. However, not only the manifest content of the material is analyzed, but also so-called latent content as well as formal aspects of the material (MAYRING, 2000b, pp.468-469, 2000a, [4]). Given this background, MAYRING (2000a) offers the following definition of qualitative content analysis: "an approach of empirical, methodological [sic!] controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash

quantification" ([5]). [52]

Obviously, the strength of qualitative content analysis is that it is strictly controlled methodologically and that the material is analyzed step-by-step. Central to it is a category system which is developed right on the material employing a theory-guided procedure. By using this category system, the aspects, which are to be filtered from the material, are defined (MAYRING, 2002, p.114). TITSCHER et al. (2000) put it like this:

> "The core and central tool of any content analysis is its system of categories: every unit of analysis must be coded, that is to say, allocated to one or more categories. Categories are understood as the more or less operational definitions of variables." (p.58)[6] [53]

Above, we said that qualitative content analysis aims to preserve the advantages of quantitative content analysis but at the same time apply a more qualitative text interpretation (see Section 4.2.2.1). MAYRING (2003, pp.42-46) emphasizes the following central points:

- Fitting the material into a model of communication: It should be determined on what part of the communication inferences shall be made, to aspects of the communicator (his experiences, opinions, feelings), to the situation of the text production, to the socio-cultural background, to the text itself or to the effect of the message.
- Systematic, rule-based analysis: The material is to be analyzed step by step, following rules of procedure, devising the material into content analytical units.
- Categories in the center of analysis: The aspects of text interpretation, following the research questions, are put into categories, which were carefully founded and revised within the process of analysis (feedback loops).
- Subject-reference instead of technique: instead of merely being a set of techniques for text analysis, the connection to the concrete subject of analysis is a very important point for qualitative content analysis. This implies that the procedures of content analysis cannot be fixed but have to be adapted depending on the subject and its context.
- Verification of the specific instruments through pilot studies: Due to the subject-reference, fully standardized methods are abstained from. That is why the procedures need to be tested in a pilot study. Inter-subjective verifiability is a case in point here.
- Theory-guided analysis: Technical fuzziness of qualitatively oriented research needs to be balanced by theoretical stringency. This means that the state-of-the-field of the respective research subject as well as subjects closely related are required to be taken into account and integrated into the analysis.
- Inclusion of quantitative steps of analysis: Quantitative analyses are especially important when trying to generalize results. As a matter of fact, this notion of *triangulation* to argue in favor of an integration of qualitative and quantitative methods is not limited to content analysis but has been raised by many researchers (cf. e.g. DIEKMANN, 2003, p.18; KELLE, 2001, [6]; MAYRING, 2001; cf. also Section 5.1).
- Quality criteria of reliability and validity (see also Section 4.2.3): The procedure has the pretension to be inter-subjectively comprehensible, to compare the results with other studies in the sense of triangulation and to carry out checks for reliability. [54]

This rule-based approach of qualitative content analysis is supposed to guarantee that the whole empirical basis is systematically dealt with and that the analysis is reproducible to a certain extent (GLÄSER & LAUDEL, 1999, pp.2-5). As a matter of fact, it is this kind of systematics what distinguishes content analysis from more interpretive, hermeneutic processing of text material (MAYRING, 2002, p.114). [55]

4.2.2.3 Method and procedures

The seven components of content analysis listed above (see Section 4.2.2.2) form the basis for a qualitatively oriented procedure of text interpretation (MAYRING, 2000a, [8]).

Consequently, MAYRING has developed a sequential model of qualitative content analysis and puts forward three distinct analytical procedures which may be carried out either independently or in combination, depending on the particular research question (MAYRING, 2002, p.115, 2003, pp.42-99; TITSCHER et al., 2000, pp.62-64):

a. *Summary*: attempts to reduce the material in such a way as to preserve the essential content and by abstraction to create a manageable corpus which still reflects the original material. For this the text is paraphrased, generalized or abstracted and reduced.

b. *Explication*: involves explaining, clarifying and annotating the material. As a first step a lexico-grammatical definition is attempted, then the material for explication is determined, and this is followed by a narrow context analysis, and a broad context analysis. Finally an "explicatory paraphrase" is made of the particular portion of text and the explication is examined with reference to the total context.

c. *Structuring*: corresponds more or less to the procedures used in classical content analysis and is also viewed as the most crucial technique of content analysis, the goal of which is to filter out a particular structure from the material. Here the text can be structured according to content, form and scaling. The first stage is the determination of the units of analysis, after which the dimensions of the structuring are established on some theoretical basis and the features of the system of categories are fixed. Subsequently definitions are formulated and key examples, with rules for coding in separate categories, are agreed upon. In the course of a first appraisal of the material the data locations are marked, and in a second scrutiny these are processed and extracted. If necessary the system of categories is re-examined and revised, which necessitates a reappraisal of the material. As a final stage the results are processed. [56]

Obviously, the central part of the process—structuring—is derived from classical content analysis, because here, too, units of coding and evaluation are set up and arranged in a schema of categories (TITSCHER et al., 2000, p.64). However, the basic difference between classical content analysis and structuring within qualitative content analysis is the development and use of the coding agenda[7]. In contrast to this, GLÄSER and LAUDEL (2004)—who have modified MAYRING's approach after experiencing problems when putting the method to practice—contend that the core and central part of the process is what they call "extraction" (p.194). However, "extraction" seems to be closely related to MAYRING's structuring since it literally means the extraction of the relevant information from the text by the means of using a category system. Thus, the material is reduced and a new basis of information separate from the original text comes into existence (ibid.). The main difference to MAYRING's approach lies in the handling of the category system. GLÄSER and LAUDEL (1999; 2004) criticize that the closed, ex ante determined category system is only adapted to the empirical material in a first process cycle with only part of the texts—a procedure they disqualify as methodologically arguable and technically too elaborate (p.5; p.193). Therefore they argue in favor of a theory-based category system, which is more open and can be changed during extraction when relevant information turns up but does not fit into the category system. Both the dimensions of existing categories can be modified and new categories can be designed. Since the category system can now be adjusted at any point of the analysis, the trial cycle becomes redundant (GLÄSER & LAUDEL, 1999, p.10, 2004, p.195). However, it is important to mention that GLÄSER and LAUDEL (1999) might have misunderstood MAYRING's qualitative content analysis as having to follow all procedures described by him. It is actually a package of techniques from which the analyst can chose and then adapts to his research question[8]. [57]

Figure 1 shows the basic proceeding of qualitative content analysis from the initial theory to the final analysis and interpretation.

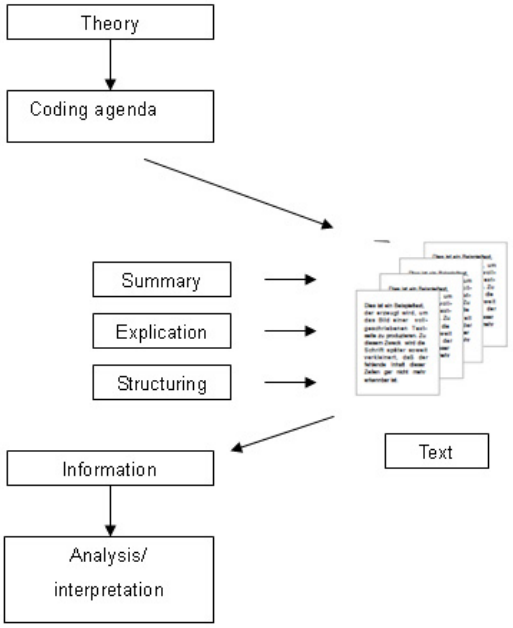

Figure 1: Basic proceeding of qualitative content analysis (Source: Author based on GLÄSER & LAUDEL, 1999, p.4) [58]

Going into greater detail, this process of MAYRING's qualitative content analysis can also be divided into nine different stages (MAYRING, 2003, pp.42-99; TITSCHER et al., 2000, p.64):

- Determination of the material;
- analysis of the situation in which the text originated;
- the formal characterization of the material;
- determination of the direction of the analysis;
- theoretically informed differentiation of questions to be answered;
- selection of the analytical techniques (summary, explication, structuring);
- definition of the unit of analysis;
- analysis of the material (summary, explication, structuring);
- interpretation [59]

Among the procedures of qualitative content analysis MAYRING (2000a, [8]) hallmarks the following two approaches as central to developing a category system and finding the appropriate text components as a result: inductive category development and deductive category application. [60]

Inductive category development

Quantitative content analysis does not provide satisfactory answers to the question where the categories are derived from, and how the system of categories is developed. But within the framework of qualitative approaches it is essential to develop the aspects of interpretation—the categories—as closely as possible to the material, and to formulate them in terms of the material. As a result, procedures of inductive category development were compiled (MAYRING, 2000a, [9], [10]). The steps of inductive category development are displayed in Figure 2.

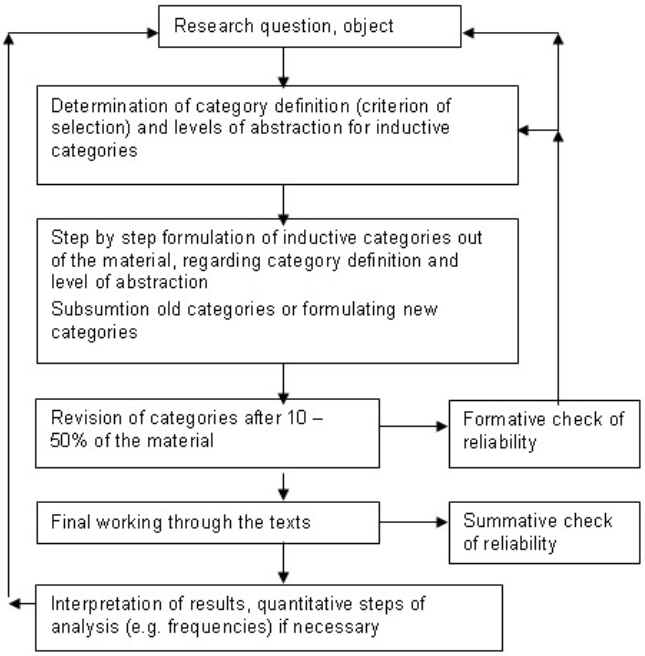

Figure 2: "Step model of inductive category development" (Source: MAYRING, 2000a, [11]) [61]

The main idea of the procedure is to formulate a criterion of definition, derived from the theoretical background and the research question, which determines the aspects of the textual material taken into account. Following this criterion the material is worked through and categories are deduced tentatively and step by step. Within a feedback loop the categories are revised, eventually reduced to main categories and checked in respect to their reliability (MAYRING, 2000a, [12]). [62]

Inductive category development belongs to the procedure of *summary* (MAYRING, 2003, pp.74-76). Or, put the other way round: the technique of content analytical summary can be used furthermore for an inductive category development (MAYRING, 2002, p.115). [63]

Deductive category application

Deductive category application works with previously formulated, theoretically derived aspects of analysis, which are brought into connection with the text. The qualitative step of analysis consists of a methodologically controlled assignment of the category to a passage of text (MAYRING, 2000a, [13]). Figure 3 shows the steps of deductive category application.

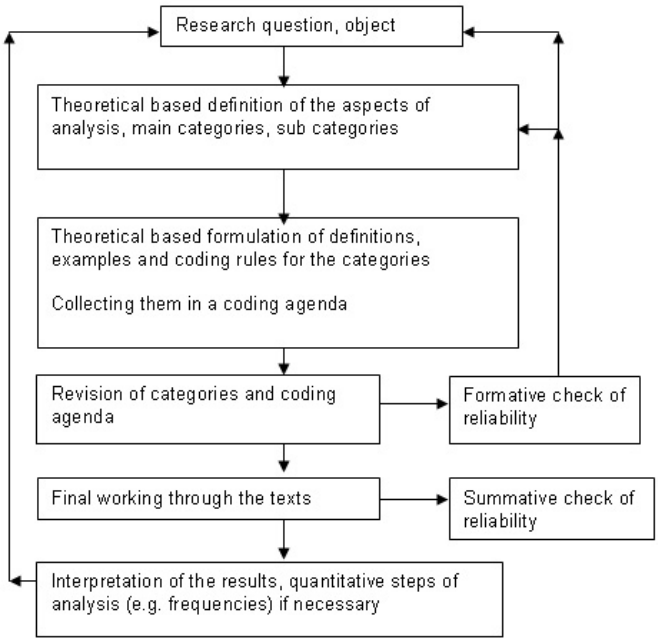

Figure 3: "Step model of deductive category application" (Source: MAYRING, 2000a, [14]) [64]

According to MAYRING (2000a, [15]; 2001, [15]) the main idea here is to give explicit definitions, examples and coding rules for each deductive category, determining exactly under what circumstances a text passage can be coded with a category. Finally, those category definitions are put together within a coding agenda. [65]

4.2.3 Quality criteria and validation issues

Any kind of social research asserts its claims to fulfill certain quality criteria for measuring and collecting data. It is widely accepted that measurement or the methods of measurement should be as objective, reliable and valid as possible (cf. e.g. DIEKMANN, 2003, p.216). In fact, the research strategy that is regularly pursued in content analysis is governed by these traditional criteria of validity and reliability, where the latter is a precondition for the former (but not vice versa) (TITSCHER et al., 2000, p.65). Since arguments concerning the content are judged to be more important than methodical issues in qualitative analysis, validity takes priority over reliability (MAYRING, 2003, p.45). However, according to MAYRING (2003, p.109), concerning content analyses that have been conducted up to now, there is a dearth in statements about the reliability and validity of the results achieved. Two specific problems of content analysis that are often discussed in this context are problems of inference and problems of reliability (TITSCHER et al., 2000, p.65):

a. *Problems of inference* relate to the possibility of drawing conclusions, on the one hand, about the whole text on the basis of the text sample and, on the other hand, about the underlying (theoretical) constructs such as motives, attitudes, norms, etc., on the basis of the text. As a result, inference in content analysis confines itself only to specific features of external and internal validity.

b. *Problems of reliability*: here, particular attention is paid to the trustworthiness of the coding. The so-called inter-coder reliability shows to what extent different coders agree in the coding of the same text and intra-coder reliability explains how stable the coding of one coder is. [66]

Because of the problems of reliability, the coding of texts is usually assigned to multiple coders so that the researcher can see whether the constructs being investigated are shared and whether multiple coders can reliably apply the same codes (MAYRING, 2003, p.110; RYAN & BERNARD, 2000, p.785). Apart from inter-coder reliability, in his seminal work on qualitative content analysis, MAYRING (2003, pp.111-115) discusses the following specific quality criteria for content analysis according to KRIPPENDORF (2004, pp.214-216, 318-

338):

1. Validity
    a. Material-oriented
        i. Semantic validity
        ii. Sampling validity
    b. Result-oriented
        i. Correlative validity
        ii. Predictive validity
    c. Process-oriented
        i. Construct validity
2. Reliability
    a. Stability
    b. Reproducibility
    c. Accuracy

Semantic validity relates to the meaning reconstruction of the material, and is expressed in the appropriateness of the category definitions, the key examples and the rules for coders. *Sampling validity* refers to the usual criteria for precise sampling and *correlative validity* refers to the correlation with some external criterion (e.g. the results of other methods like test, experiment or observation). *Predictive validity* can only be used as a quality criterion if predictions can reasonably be made from the material (in this case verification is usually easy and significant). *Construct validity* relates, for instance, to previous success with similar constructs, established models and theories, and representative interpretations. *Stability* refers to whether the same results are obtained in a renewed application of the analytical tool to the same text and *reproducibility* is the extent to which the analysis achieves the same results under different circumstances, for instance with different coders. It can be measured through inter-coder reliability for which a range of measures and indices have been developed. Finally, *accuracy* assumes stability and reproducibility and denotes the extent to which the analysis meets a particular functional standard (KRIPPENDORFF, 2004, pp.214-216, 318-338; MAYRING, 2003, pp.111-115; cf. also TITSCHER et al., 2000, pp.65-66). [67]

MAYRING (2003) additionally notes another quality criterion that has gained in significance recently: *communicative validation* (p.112). The main idea behind this concept is to discursively achieve mutual consent and accordance about the results of the analysis between the researchers and the researched. [68]

Last but not least, a further criterion is generalizability, which refers to "the degree to which the findings are applicable to other populations or samples" (RYAN & BERNARD, 2000, p.786). Thus, it draws on the degree to which the original data were representative of a larger population (ibid). [69]

KRIPPENDORFF (2004) identifies the following four sources of error that may lead to a lack of reliability (pp.211ff, cf. also MAYRING, 2003, p.115; TITSCHER et al., 2000, p.66):

a. *Features of the units of evaluation*: It will be examined whether the problem locations, where there is some disagreement about coding, differ systematically from the material.

b. *Properties of individual categories*: The question is whether instances of disagreement are particularly common with particular categories.

c. *Differentiation of categories*: It will be checked whether the distinctions between categories are too fine.

d. *Properties of the coders*: If the lack of reliability cannot be attributed to a), b), or c), then the problem is usually with the coders and may perhaps be solved by more careful selection, more thorough training, shorter operation periods, etc. [70]

Finally, MAYRING (2003, p.115) proclaims the need for a content analytical theory of errors in order to establish a systematic compilation of quality criteria. The further development of new quality criteria calls for an analysis of where and what kind of other errors can be made

or occur in (conducting) content analysis (ibid). [71]

5. The Use of Qualitative Content Analysis in Case Study Research

> "[E]mpirical research advances only when it is accompanied by theory and logical inquiry and not when treated as a mechanistic or data collection endeavor" (YIN, 2003a, p.xv).

This section explores and discusses the possibilities of applying qualitative content analysis as a (text) interpretation method in case study research and thus tries to find an answer to the research question initially posed (see Section 2.1). [72]

5.1 Mixed methods and triangulation

The rising popularity of mixed methods approaches and the use of triangulation have already been mentioned briefly in the introduction of this paper. Having its origin in navigation, military strategy and (geodetic) surveying, the term triangulation in social research is used in a less literal sense to describe the use of multiple methods and measures of an empirical phenomenon (cf. e.g. BRANNEN, 1992; JICK, 1979; KELLE, 2001; TASHAKKORI & TEDDLIE, 1998; WOLFRAM COX & HASSARD, 2005 for an overview and review)[9]. According to WOLFRAM COX and HASSARD (2005), the implicit assumption in much of the social science literature on triangulation "is of developing a more effective method for the capturing and fixing of social phenomena in order to realize a more accurate analysis and explanation." (p.111) Just like multiple viewpoints allow for greater accuracy in geometry, (organizational) researchers "can improve the accuracy of their judgments by collecting different kinds of data bearing on the same phenomenon" (JICK, 1979, p.602). Data accumulated by different methods but bearing on the same issue are part of what is called the "*multi-method* approach": "Different methods have different strengths and weaknesses. If they *converge* (agree) then we can be reasonably confident that we are getting the true picture" (GILLHAM, 2000, p.13, original emphasis). In fact, the "effectiveness of triangulation rests on the premise that the weaknesses in each single method will be compensated by the counter-balancing strengths of another" (JICK, 1979, p.604). Therefore, triangulation "can potentially generate what anthropologists call "holistic work" or "thick description" (JICK, 1979, p.609). [73]

In the case of using qualitative content analysis in case study research, triangulation takes actually place on two different levels. On the first and more obvious level, data is triangulated by integrating different material and evidence (see Section 5.2.4)—often also collected by using various methods—as well as by integrating quantitative and qualitative steps of analysis (see Section 5.2.5). On second level, triangulation takes place by applying a method of analysis (qualitative content analysis) that has not been particularly developed for this purpose to a different research design (case study research). [74]

5.2 Case study research and qualitative content analysis

As was already shown in Section 3.1 the case study will provide a multi-dimensional perspective that may be used to create a shared view of the situation being studied (REMENYI et al., 2002, p.5). Therefore, case studies offer the "opportunity for a holistic view of a process" (PATTON & APPELBAUM, 2003, p.63). Besides, we also saw that case study research has a major function in generating hypotheses and build theory. EISENHARDT (1989) states that "[a]nalyzing data is the heart of building theory from case studies, but it is both the most difficult and the least codified part of the process" (p.539). In fact, a theory or theoretical framework first emerges through the inductive approach of studying an empirical case or object, not through a deductive process. "The key point is that before a theory can be validated, it must be constructed" (PATTON & APPELBAUM, 2003, p.65). As the author tried to demonstrate in Section 4.2.2, Philipp MAYRING's qualitative content analysis could be such an inductive approach and offers a range of rule-based procedures for a systematic analysis of data material. Hence, qualitative content analysis might be an appropriate analysis and interpretation method for case study research. As a matter of fact, its quantitative counterpart—classical content analysis—is repeatedly mentioned as a method

of analyzing data in the context of conducting case study research (cf. e.g. YIN, 2003a, p.110). REMENYI et al. (2002) state that techniques such as content analysis may be used "to transform what is essentially qualitative evidence into some sort of quantitative evidence" (pp.5-6). Even though they concede that this is "not a particularly satisfactory approach," they claim that "it is not infrequently used" (REMENYI et al., 2002, p.6). [75]

In Section 4.2 we stated that MAYRING's qualitative content analysis tries to overcome these shortcomings of classical quantitative content analysis by applying a systematic, theory-guided approach to text analysis using a category system. Besides it preserves the advantages of quantitative content analysis but at the same time apply a more qualitative text interpretation. Therefore, it can be argued that qualitative content analysis could prove to be a useful tool for analyzing data material in case study research. In fact, the contribution of using qualitative content analysis in case study research will be demonstrated on the basis of the following points: [76]

5.2.1 Openness and ability to deal with complexity

One of the strengths of qualitative content analysis is the way it tries to synthesize openness —as claimed by the qualitative research paradigm—and theory-guided investigation—usually demanded by the hypothetical-deductive paradigm. In fact, despite this openness, qualitative content analysis is strictly controlled methodologically and the material is analyzed in a step-by-step process (see Section 4.2.2). It is this combination that fosters its strong ability to deal with complexity. Qualitative content analysis takes a holistic and comprehensive approach towards analyzing data material and thus achieves to (almost) completely grasp and cover the complexity of the social situations examined and social data material derived from them. At the same time, qualitative content analysis uses a rule-based and methodologically controlled approach in order to deal with the complexity and gradually reduce it. The procedures of summary, explication and structuring step-by-step reduce complexity and filter out the main points of analysis in an iterative process. Therefore, qualitative content analysis perfectly fits the credo of case study research: helping to understand complex social phenomena (see also Section 3.1). [77]

5.2.2 Theory-guided analysis

We just mentioned theory-guided analysis as one of the special strengths of qualitative content analysis (see above, Section 5.2.1). The important point here is the same as with case study research: "The central idea is that researchers constantly compare theory and data—iterating toward a theory which closely fits the data" (EISENHARDT, 1989, p.541). Besides, an essential feature of theory building is comparison of the emergent concepts, theory or hypotheses with the extant literature because tying the emergent theory to existing literature enhances the internal validity, generalizability, and theoretical level of theory building from case study research (EISENHARDT, 1989, pp.544-545). That is why GLÄSER and LAUDEL (1999, abstract) state that qualitative content analysis could be "an interesting form of data analysis for projects that aim to start from theory and contribute to it." [78]

Theory-guided analysis also offers the chance to compare and complement the primary data collected within the research project with secondary data. In fact, experts in social research recommend to conduct interpretations of results on two levels: interpretation of the results of one's own survey and comparative interpretation of results and conclusions of existing theories and research results (cf. e.g. ATTESLANDER, 2003, pp.329, 355; MAYRING, 2003, pp.109-115). This analysis of complementing secondary data can help to ensure the quality of content analysis, especially validity (MAYRING, 2003, p.109). [79]

5.2.3 Integration of context

One of the key features of qualitative content analysis in contrast to classical quantitative content analysis is that the context is also central to the interpretation and analysis of the material. In fact, it is not only the manifest content of the material that is important but also the latent content as well as formal aspects need to be taken into consideration (cf. also

Section 4.2.2.2). This is again in order to achieve a holistic and comprehensive analysis of complex social phenomena. As we have seen in Section 3.1, "the key feature of the case study approach is not method or data but the emphasis on understanding processes as they occur in their context" (HARTLEY, 1994, p.227, 2004, p.332). Therefore, research questions about "how" and "why" rather than "what" or "how much" are best suited to the case study strategy (ibid.). [80]

5.2.4 Integration of different material/evidence

As shown above (Section 4.2.2.2), the object of qualitative content analysis can basically be any kind of recorded communication, i.e. transcripts of interviews/discourses, protocols of observation, video tapes, written documents in general etc. This means that in a comprehensive study which aims at analyzing different kinds of data material, the same method can be applied to different types of evidence—a major advantage not only from a pragmatic point of view, but also as far as quality criteria are concerned. Of course, case study research usually corresponds to such a comprehensive study. According to YIN (2003a) a major strength of case study data collection is the opportunity to use many different sources of evidence because the use of multiple sources of evidence in case studies allows an investigator to address a broader range of historical, attitudinal, and behavioral issues (YIN, 2003a, pp.97-98). In fact, GILLHAM (2000) states that case study "is a *main* method," within which different sub-methods are used: interviews, observations, document and record analysis, work samples etc (p.13, original emphasis). [81]

Furthermore, qualitative or expert interviews are a very common field of application for qualitative content analysis (cf. e.g. GLÄSER & LAUDEL, 1999, p.5, 2004, p.44; MAYRING, 2003, p.46). According to YIN (2003a) one of the most important sources of case study information is the interview: "most commonly, case study interviews are of an *open-ended nature*, in which you can ask key respondents about the facts of a matter as well as their opinions about events" (YIN, 2003a, p.90, original emphasis). Therefore, qualitative content analysis offers a rule-based, theory-guided method for analyzing interview transcripts, just in the way it is required by the principles of case study research. [82]

Finally, MAYRING (2000a, [28]) contends that qualitative content analysis can be combined with other qualitative procedures. This is certainly a great advantage when dealing with various, heterogeneous types of data material. However, he fails to go into greater detail concerning this matter. [83]

5.2.5 Integration of quantitative steps of analysis

As was discussed above (Sections 4.2.2 and 5.2) qualitative content analysis preserves the advantages of classical quantitative content analysis, and thus also includes quantitative steps of analysis. These are especially important when trying to generalize results. According to GILLHAM (2000), "[c]ase study research does not equate qualitative (descriptive, interpretative) methods and data only. They are predominant, but quantitative data and its analysis can add to the overall picture" (p.80). According to JICK (1979), "[q]ualitative data and analysis function as the glue that cements the interpretation of multimethod results" (p.609). Moreover, the combination of qualitative and quantitative analyses has also been addressed in the field of case study research (see above, Sections 3.1 and 3.2). As has already been mentioned, many experts in the field of socio-scientific research suggest using and combining several methods—so-called triangulation or cross-examination—in order to obtain more valid results (see Sections 1. and 5.1). Especially the combination of qualitative methods and quantitative methods seems to be appropriate in order to gain deeper insight and a more general view of the object of research (cf. e.g. DIEKMANN 2003, p.18). In fact, triangulation by integrating different material/evidence as well as quantitative and qualitative steps of analysis, helps researchers to be more confident of their results and can also lead to a synthesis or integration of theories (cf. e.g. JICK, 1979 pp.608-609). [84]

5.3 Limitations of qualitative content analysis

According to TITSCHER et al. (2000) content analysis will always be used if communicative content is of greatest importance, if operational schemata of categories can be formulated in advance or if the analysis is concerned only with the lexicon of a text (p.66). The procedures of qualitative content analysis seem less appropriate, if the research question is highly open-ended, explorative, variable and working with categories would be a restriction, or if a more holistic, not step-by-step ongoing of analysis is planned (MAYRING, 2000b, p.474, 2000a, [27]). In fact, MAYRING (2002) recommends his qualitative content analysis in the case of theory-guided text analysis but rather not in the case of merely explorative-interpretive interpretation of the material (p.121). [85]

Furthermore, due to the fact that qualitative content analysis first extracts the relevant parts of the (text) material and then analyzes them (cf. also Section 4.2.2), it can only be used if the text itself is not the subject of examination (cf. e.g. GLÄSER & LAUDEL, 1999, p.5, 2004, p.200). [86]

Last but not least, when using qualitative content analysis in case study research, one should be aware of the fact that "[r]eplicating a mixed-methods package […] is a nearly impossible task" (JICK, 1979, p.609). [87]

6. Outlook

This paper tried to explore and discuss the possibilities of using qualitative content analysis in case study research. It highlighted the strengths of qualitative content analysis as a method that achieves to respect the credos of openness and theory-guided analysis at the same time. In fact, with its rule-based logic and methodologically controlled step-by-step procedures of analysis it manages to combine the advantages of classical quantitative content analysis with a qualitatively oriented approach taking also context and other important points into consideration. Therefore, qualitative content analysis can be viewed as a comprehensive approach to data analysis, which seems to be especially suitable for case study research. It can certainly contribute to adding and enhancing rigor, validity and reliability of case study research. [88]

Nevertheless, qualitative content analysis is still a young discipline and further development and improvement might be advisable and appropriate as some of the amendments, critiques and limitations of MAYRING's approach show (see above Sections 4.2.3, 5.3 and also GLÄSER & LAUDEL, 1999, 2004). Besides, papers and essays in English are crucial to help qualitative content analysis gain attention and dissemination internationally as well. Last but not least, empirical testing and experience will be indispensable to ensure methodological and practical advances of this method. Therefore, the author strongly recommends all researchers who are conducting case studies to use and apply qualitative content analysis in their research endeavors. [89]

Acknowledgments

The author would like to thank Angelika SCHMIDT and Jürgen MÜHLBACHER for their kind support and advice. All mistakes are solely mine.

Notes

1) I am indebted to an anonymous reviewer for pointing this fact out to me. <back>

2) In their recent work on expert interviews and qualitative content analysis, GLÄSER and LAUDEL (2004) state that they (still) do not know of any international proposals for qualitative content analysis (p.192) having stated that MAYRING's approach is "the only one so far" in 1999 (GLÄSER & LAUDEL, 1999, Abstract). In their bibliometric survey on the prominence of methods of text analysis, TITSCHER et al. (2000) affirm that the explicit sources for qualitative content analysis are from German-speaking countries only (p.217). <back>

3) I am indebted to an anonymous reviewer for pointing out the question whether the basic methodological assumptions of the two approaches (qualitative content analysis and case study research) fit together. I indirectly argue in Section 5.2 (especially the initial part as well Sections 5.2.1 and 5.2.2) that they do. <back>

4) The issue of single- and multiple-case studies will not be discussed in this paper. <back>

5) In contrast to GILLHAM (2000) who sees case study as "a *main* method" (p.13, original emphasis, cf. also Section 5.1). Interestingly, YIN (2003b) in his companion book to his case study textbook (YIN, 2003a) speaks of the "case study method"

(pp.4ff) in contrast to his usual reference to case studies as a research strategy (cf. also Section 3.1). <back>

6) I am indebted to an anonymous reviewer who—very correctly—pointed the following out to me: "This statement is formulated too strict: Not all units of analysis (depends on the sort of unit and the concrete technique) must be coded; and inductive categories are not operationalizations of variables; but it is true, that the interpretative but rule guided process of assigning categories to text portions is crucial for qualitative content analysis." <back>

7) I am indebted to an anonymous reviewer for pointing this fact out to me. <back>

8) I am indebted to an anonymous reviewer for pointing this fact out to me. Examples for this can be found from MAYRING and GLÄSER-ZIKUDA (2005) as well as from http://psydok.sulb.uni-saarland.de/portal/klagenfurt/. <back>

9) Different types of triangulation as well as other issues concerning this subject go beyond the scope of this paper and thus are not discussed here. <back>

References

Altheide, David L. (1996). *Qualitative media analysis. Qualitative research methods Vol. 38.* Thousand Oaks: Sage.

Atteslander, Peter (2003). *Methoden der empirischen Sozialforschung* (10th ed.). Berlin: Walter de Gruyter.

Babbie, Earl (2001). *The practice of social research* (9th ed.). Belmont: Wadsworth.

Berelson, Bernard Reuben (1971). *Content analysis in communication research*. New York: Hafner.

Brannen, Julia (1992). Combining qualitative and quantitative approaches: an overview. In Julia Brannen (Ed.), *Mixing methods: qualitative and quantitative research* (pp.3-37). Brookfield: Avebury.

Bryman, Alan (1992). Quantitative and qualitative research: further reflections on their integration. In Julia Brannen (Ed.), *Mixing methods: qualitative and quantitative research* (pp.57-78). Brookfield: Avebury.

Bryman, Alan (2004). *Social research methods* (2nd ed.). New York: Oxford University Press.

Cassell, Catherine, & Symon, Gillian (1994). Qualitative research in work contexts. In Catherine Cassell & Gillian Symon (Eds.), *Qualitative methods in organizational research, a practical guide* (pp.1-13). London: Sage.

Creswell, John W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks: Sage.

Denzin, Norman K., & Lincoln, Yvonna S. (2000). Introduction: The discipline and practice of qualitative research. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp.1-28). Thousand Oaks: Sage.

Diekmann, Andreas (2003). *Empirische Sozialforschung: Grundlagen, Methoden, Anwendungen* (10th ed.). Hamburg: Rowohlt.

Eisenhardt, Kathleen M. (1989). Building theories from case study research. *Academy of Management Review*, *14*(4), 532-550.

Gillham, Bill (2000). *Case study research methods*. London: Continuum.

Gläser, Jochen, & Laudel, Grit (1999). *Theoriegeleitete Textanalyse? Das Potential einer variablenorientierten qualitativen Inhaltsanalyse*. Berlin: Wissensschaftszentrum Berlin für Sozialforschung GmbH.

Gläser, Jochen, & Laudel, Grit (2004). *Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen*. Wiesbaden: VS Verlag für Sozialwissenschafen.

Gomm, Roger, Hammersley, Martyn, & Foster, Peter (Eds.) (2000). *Case study method, key issues, key texts*. London: Sage.

Hamel, Jacques (1993). *Case study methods*. Thousand Oaks: Sage.

Hammersley, Martyn (1992). Deconstructing the qualitative-quantitative divide. In Julia Brannen (Ed.), *Mixing methods: qualitative and quantitative research* (pp.39-55). Brookfield: Avebury.

Hartley, Jean (1994). Case studies in organizational research. In Catherine Cassell & Gillian Symon (Eds.), *Qualitative methods in organizational research, a practical guide* (pp.208-229). London: Sage.

Hartley, Jean (2004). Case study research. In Catherine Cassell & Gillian Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp.323-333). London: Sage.

Jick, Todd D (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, *24*(December), 602-611.

Kelle, Udo (1994). *Empirisch begründete Theoriebildung, Zur Logik und Methodologie interpretativer Sozialforschung*. Weinheim: Deutscher Studien Verlag.

Kelle, Udo (2001, February). Sociological Explanations between Micro and Macro and the Integration of Qualitative and Quantitative Methods [43 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [On-line Journal], *2*(1), Art. 5. Available at: http://www.qualitative-research.net/fqs-texte/1-01/1-01kelle-e.htm [Date of access: January 21, 2004].

Kracauer, Siegfried (1952). The challenge of qualitative content analysis. *Public Opinion Quarterly*, *16*(4), 631-642.

Krippendorff, Klaus (2004). *Content analysis: An introduction to its methodology* (2nd ed.). Thousand Oaks: Sage.

Lueger, Manfred (2000). *Grundlagen qualitativer Feldforschung: Methodologie, Organisierung, Materialanalyse*. Vienna: WUV.

Mayring, Philipp (2000a, June). Qualitative content analysis [28 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [On-line Journal], *1*(2), Art. 20. Available at: http://www.qualitative-research.net/fqs-texte/2-00/2-00mayring-e.htm [Date of access: October 5, 2004].

Mayring, Philipp (2000b). Qualitative Inhaltsanalyse. In Uwe Flick, Ernst von Kardorff & Ines Steinke (Eds.), *Qualitative*

Forschung, Ein Handbuch (pp.468-475). Reinbeck bei Hamburg: Rowohlt.

Mayring, Philipp (2001, February). Kombination und Integration qualitativer und quantitativer Analyse [31 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [On-line Journal], *2*(1), Art. 6. Available at: http://www.qualitative-research.net/fqs-texte/1-01/1-01mayring-d.htm [Date of access: Ocotber 5, 2004].

Mayring, Philipp (2002). *Einführung in die qualitative Sozialforschung, Eine Anleitung zu qualitativem Denken* (5th ed.). Weinheim: Beltz.

Mayring, Philipp (2003). *Qualitative Inhaltsanalyse, Grundlagen und Techniken* (8th ed.). Weinheim: Beltz, UTB.

Mayring, Philipp, & Gläser-Zikuda, Michaela (Eds.) (2005). *Die Praxis der Qualitativen Inhaltsanalyse*. Weinheim: Beltz, UTB.

Mostyn, Barbara (1985). The content analysis of qualitative research data: A dynamic approach. In Michael Brenner, Jennifer Brown & David Canter (Eds.), *The research interview, uses and approaches* (pp.115-145). London: Academic Press.

Neuman, W. Lawrence (1997). *Social research methods, qualitative and quantitative approaches* (3rd ed.). Boston: Allyn and Bacon.

Patton, Eric, & Appelbaum, Steven H. (2003). The case for case studies in management research. *Management Research News*, *26*(5), 60-71.

Remenyi, Dan, Money, Arthur, Price, David, & Bannister, Frank (2002). The creation of knowledge through case study research. *Irish Journal of Management*, *23*(2), 1-17.

Ritsert, Jürgen (1972). *Inhaltsanalyse und Ideologiekritik. Ein Versuch über kritische Sozialforschung*. Frankfurt a.M.: Athenäum Fischer Taschenbuch Verlag.

Rubin, Herbert J., & Rubin, Irene S. (1995). *Qualitative Interviewing, The Art Of Hearing Data*. Thousand Oaks: Sage.

Rust, Holger (1980). *Struktur und Bedeutung. Studien zur qualitativen Inhaltsanalyse*. Berlin: Spieß.

Ryan, Gery W., & Bernard, H. Russell (2000). Data management and analysis methods. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (pp.769-802). Thousand Oaks: Sage.

Stake, Robert E. (1995). *The Art of case study research*. Thousand Oaks: Sage.

Stake, Robert E. (2000). Case studies. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (pp.435-453). Thousand Oaks: Sage.

Tashakkori, Abbas, & Teddlie, Charles (1998). *Mixed methodology: Combining qualitative and quantitative approaches* (Vol. 46). Thousand Oaks: Sage.

Titscher, Stefan, Meyer, Michael, Wodak, Ruth, & Vetter, Eva (2000). *Methods of text and discourse analysis* (Bryan Jenner, Trans.). London: Sage.

Wittkowski, Joachim (1994). *Das Interview in der Psychologie. Interviewtechnik und Codierung von Interviewmaterial*. Opladen: Westdeutscher Verlag.

Wolfram Cox, Julie, & Hassard, John (2005). Triangulation in organizational research: A re-presentation. *Organization*, *12*(1), 109-133.

Yin, Robert K. (1981). The case study crisis: Some answers. *Administrative Science Quarterly*, *26*(1), 58-65.

Yin, Robert K. (2003a). *Case study research, design and methods* (3rd ed., vol. 5). Thousand Oaks: Sage.

Yin, Robert K. (2003b). *Applications of case study research* (2nd ed., vol. 34). Thousand Oaks: Sage.

Author

Florian KOHLBACHER, Associate Research Partner, Department of Change Management & Management Development, Vienna University of Economics and Business Administration.

Research Interests: Knowledge Management, International Business, International Marketing, Consumer Behavior, Qualitative Research Methods, Case Study Research

Contact:

Florian Kohlbacher

Vienna University of Economics and Business Administration
(Wirtschaftsuniversität Wien)
Department of Change Management & Management Development
Augasse 2-6
A-1090 Vienna, Austria

E-mail: florian.kohlbacher@wu-wien.ac.at

Citation

Kohlbacher, Florian (2005). The Use of Qualitative Content Analysis in Case Study Research [89 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *7*(1), Art. 21, http://nbn-resolving.de/urn:nbn:de:0114-fqs0601211.