QUALITATIVE RESEARCH: METHOD IN THE MADNESS?

A Working Paper

by L le Roux, University of Stellenbosch Business School

2005

ACKNOWLEDGEMENT

It has been said that business schools are often too focused on scientific research and do not afford sufficient attention to unquantifiable business issues. The model for this scientific emphasis is predicated on the faulty assumption that business practice is a discipline, like chemistry, when, in fact, it is a profession.

While scientific research requires considerable quantitative skills, it generally tends to call for less insight into complex human and social behaviour – which constitutes the actual problems faced by managers and demands sound decision-making. Strategic decisions, especially, are likely to go awry when based mainly on quantitative considerations.

The necessity to strike a balance between the quantitative and qualitative approaches to business research is fully appreciated by the University of Stellenbosch Business School and we wish to thank Lee le Roux for her stimulating Working Paper on the nature and role of qualitative research. We extend our best wishes to Lee in her endeavour to develop the theme of this paper into a doctoral dissertation.

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ABSTRACT

"If men define situations as real they are real in their consequences."

W.I. Thomas Dictum

Abstract: *This Working Paper is an attempt to provide a broad-strokes overview of qualitative research (QR): what it is, its purpose, the methods and techniques it uses, its units of analysis and the handling of data, how validity and reliability are defined and the new frontiers brought about by the growth in IT, the Internet and the use of computers – the method in the madness. Rather than to get embroiled in the competing paradigms within qualitative research itself (amongst others modernism, postmodernism, critical theory and feminism), the purpose of the paper is to outline the most commonly held views of the elements of qualitative research and to provide guidelines for and about the use of qualitative research as is popularly practiced. Also, the paper will not involve itself in the quantitative-qualitative debate and no comparisons between the two methods and their underlying paradigms and methods are discussed.*

1. INTRODUCTION

Qualitative research (QR) has come into its own over the last few decades, and is now recognised as being able to make a significant contribution to the development of knowledge and providing an understanding of and insight into issues under study, whether they be, amongst others, in the marketing, business management, social and behavioural sciences. Although there are many sources that contain detailed descriptions of qualitative research and its methods (see, for example, Chappell, 2004; Denzin and Lincoln, 2005; Eisner, 1991; Hancock, 2002; Hesse-Biber and Leavy 2004; Patton, 1990; Strauss and Corbin, 1990), the purpose of this working paper is to provide a summary overview of the most commonly held views of the elements of QR as is popularly practiced. The intention is to extract the salient aspects of QR to provide overview guidelines for the application, practice and understanding of qualitative research.

As such, the paper will not only outline what is QR and its purpose, but it will also describe the design of QR studies, its methods, the handling of qualitative data and the aspects of validity and reliability in QR. The comparison of QR to quantitative research and its methods, the discourse between qualitative and quantitative research and the debates within QR itself fall outside the scope of this paper and will therefore not be addressed.

2. WHAT IS QUALITATIVE RESEARCH

This section will provide an outline of the "building blocks" of QR – what it is, the paradigm and philosophical base in which it is rooted and ethical issues of importance. It sets the context within which QR is conducted by describing the underlying perspectives and view of the world upon which QR practice rests.

2.1   Description and the Features of Qualitative Research

At its simplest level, qualitative research (QR) is concerned with levels of meaning and developing explanations of social phenomena.

It seeks to understand and provide information on the behaviour, attitudes, perceptions, habits, feelings, opinions, understanding, interpretations, values, experiences and beliefs of people as they themselves live it in a specific, real-life context. It questions the "why", "what", "how" and "in what way" of social phenomena in order to help us understand the world and why things are the way they are (Hancock, 2002:2).

Generally, qualitative research can be defined as "the attempt to obtain an in-depth understanding of the meanings and definitions of human situations" (Woods and Trexler, 2001:72).

The underlying belief of QR is that meaning is situated in context and a particular perspective. Many people have different meanings and contexts that provide different perspectives on phenomena and lived experiences, no one which is more valid than any other (Chappell, 2004). The world and explanations of the social phenomena in it cannot be pinned down to objective meanings and realities; therefore all variables are to be taken into account when trying to understand how people make sense of their life-world. This necessarily produces subjective meaning, based on interpretations of phenomena within the contexts they occur.

Several writers have defined what they believe to be the outstanding features of QR. (See, for example: Lincoln & Guba, 1985; Patton, 1990; Eisner, 1991; Hoepfl, 1997; Hancock, 2002; Chappell, 2004.) The list that follows provides a synthesis of these authors' descriptions of QR:

- QR is concerned with subjective data, relating to the opinions, attitudes, experiences and perceptions of people, as they understand it within the context of their life-world. It therefore "has an interpretive character, aimed at discovering the meaning events have for the individuals who experience them, and the interpretations of those meanings by the researcher" (Hoepfl, 1997:3).
- QR describes social phenomena as they occur naturally, i.e. it uses the natural setting as the source of data. No attempt is made to manipulate the situation under study (as would be, for example, the case in experimental quantitative research).
- QR has an exploratory and descriptive focus, incorporating expressive language and "the presence of the voice" of participants (Eisner, 1991:36).
- The researcher acts as the "human instrument" of data collection, which occurs through direct encounters with individuals. The researcher applies an informed interpretation to the meaning of individual responses when analysing the data.
- QR has an emergent design and data analysis starts early and is an ongoing process.
- QR uses inductive data analysis, whereby data are used to develop concepts and theories that help us understand the social world.
- QR uses purposive sampling, seeking information from specific and pre-defined groups or sub-groups in a population, for example, users of a specific brand of toothpaste.
- Validity and reliability in QR are judged using special criteria (which will be discussed in section 7).
- Understanding of a situation is gained through a holistic perspective and not the ability to define a set of variables.

These features are not "absolute characteristics of qualitative enquiry, but rather strategic ideals that provide a direction and framework for developing specific designs and concrete data collection tactics" (Patton, 1990:59). The characteristics should be seen to be interconnected and mutually reinforcing.

2.2   Interpretivism

Qualitative research is rooted in the interpretivist paradigm, which holds the following views:

- Human beings are not mechanistic and they have multiple realities, which need to be understood in context.
- The social world cannot be described without investigating how people use language, symbols and meaning to construct social practice.
- No social explanation is complete unless it adequately describes the role of meaning in human actions.

Interpretivists assume that knowledge and meaning are acts of interpretation, hence there is no objective knowledge which is independent of thinking, reasoning human beings.

Interpretivists argue that if we want to understand people's actions, we first have to understand those actions in the way that they themselves do. Also, the interpretivist paradigm denies that there is an objective reality independent of the frame of reference of the observer; reality is mind-dependent and influenced by the process of observation.

Interpretivism does not therefore concern itself with the search for broadly applicable laws and rules, but rather seeks to produce descriptive analyses that emphasise deep, interpretive understandings of social phenomena.

The interpretivist paradigm thus generally leads to the use of qualitative research methods that enable the researcher to gain a descriptive understanding of the values, motivations and experiences of the participants in a study.

This approach to knowledge is also referred to as constructivism, which has the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context (Golafshani, 2003).

QR: Its Ontology

Ontology refers to a view of the world and how the nature of reality is seen -what is.

From an interpretivist view, in which QR is positioned, reality is seen to be subjective and consisting of multiple realities as constructed through human interaction and the giving of meaning to situations and experiences by individuals. Therefore, in summary, the ontology of QR holds that:

- Social reality is the product of processes by which social actors negotiate the meanings of and for actions and situations.
- Human experience is a process of interpretation rather than sensory reception and apprehension of the external, material world.

- The social world has to be grasped as a skilled accomplishment of active participants.

(Source: http://uk.geocities.com/balihar_sangera/carcinterpretivitismslides.html.)

QR: Its Epistemology

Epistemology refers to how knowledge and the nature of knowledge are viewed – how we know.

In interpretivism, and qualitative research, knowledge is seen to be intentionally constituted through a person's lived experiences. Events are understood through mental processes of interpretation, which are influenced by and interact with social contexts. Therefore, in summary, the epistemology of QR holds that:

- Knowledge is derived from everyday concepts and meanings within context.
- The researcher enters this everyday world in order to grasp the socially constructed meanings, and then reconstructs these meanings in a social scientific language.

(Source: http://uk.geocities.com/balihar_sangera/carcinterpretivitismslides.html.)

2.3 Phenomenology as Philosophical Base for QR

Generally, phenomenology is viewed as the philosophical base for QR. The definition of phenomenology is "… the study of 'phenomena': appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience" (Stanford Encyclopedia of Philosophy, online at http://plato.stanford.edu/entries/phenomenology).

(See Berger & Luckman, 1966; Knorr-Cetina, 1981; Lincoln & Guba, 1985; Flinders & Mills, 1993; Denzin & Lincoln, 1994; Gephart, 1999; Hancock, 2002; Hesse-Biber and Leavy, 2004 for additional views and debate on the base-philosophy and competing paradigms in QR).

To illustrate the relevance of phenomenology as the philosophical base for QR, a number of key features are discussed below.

Basically, phenomenology studies the various types of experience ranging from perception, thought, memory, imagination, emotion, desire, volition, embodied action and social activity. All of these involve an intentionality, which means that they are directed towards things in the world. Phenomenology addresses the meaning of all of this in our experience, notably, the significance of objects, events, the self and others as they arise, present themselves and are experienced in our life-world.

Phenomenology concerns itself with the structures of conscious experience as experienced from the first-person point-of-view, including relevant conditions of experience. The central structure of an experience is its intentionality, the way it is directed through its content or meaning toward a certain object in the world (Moran, 2000).

Phenomenology in the classical sense, uses three approaches:

- Describing an experience as we find it.
- Interpreting an experience by relating it to relevant features of context.
- Analysing the form of experience.

These approaches are equally applicable in QR, as are the eleven specific "groups" of experiences which form the field of study of phenomenology. These are:

- Temporal awareness (within a specific stream of consciousness).
- Spatial awareness (specifically perception).
- Attention (distinguishing focal and marginal or "horizontal" awareness).
- Awareness of one's own experience (self-consciousness).
- Self-awareness (awareness of one's self/own being).
- The self in different roles (e.g. thinking, acting, etc.).
- Embodied action (what one does).
- Purpose or intention in action (more or less explicit).
- Awareness of other persons (in empathy, intersubjectivity, collectivity).
- Linguistic activity (involving meaning, communication, understanding others).
- Social interaction (including collective action).
- Everyday activity in one's surrounding life-world.

(Source: http://plato.stanford.edu/entries/phenomenology.)

As with QR, the focus of traditional phenomenology is on subjective, practical and social conditions of experience as defined and described by the people who live it.

2.4 Ethics in QR

Christians (in Denzin and Lincoln, 2005:144 -145) outlines four broad ethical guidelines for conducting an inductive qualitative investigation.

a) Informed consent: This guideline refers to the view that research participants have the right to be informed about the nature and consequences of studies in which they are involved. This has the following conditions:
   - Participants must agree voluntarily to participate.
   - Their agreement must be based on full and open information.

b) Deception: In emphasising informed consent, the code of ethics in QR uniformly opposes deception.

c) Privacy and confidentiality: This guideline relates to the insistence of ethical codes to provide safeguards to protect people's identities and those of research locations. Confidentiality must be assured as safeguard against unwanted exposure, and data should be made public only behind a shield of anonymity.

d) Accuracy: Data must be internally and externally valid. Fabrications, fraudulent materials, omissions and contrivances are viewed as both non-scientific and unethical.

For a full review on ethics in QR, refer to Christians (in Denzin and Lincoln), 2005:139 – 164.

2.5   Summary and Plan of Paper

Qualitative research is concerned with levels of meaning and developing explanations of social phenomena. It is rooted in the interpretivist paradigm, which aims to understand and describe the multiple realities held by human beings within the context of their being.

The purpose, methods and techniques, and the way in which data is handled in QR relate directly to this view of the world and a discussion of this follows. In addition, the interpretivist paradigm prescribes a specific view on and approach to the issues of reliability and validity and these will also be outlined. The overview of the purpose, methods and techniques, data handling and reliability and validity that follow are discussed from the perspective of views that are commonly held, and discourse and argument within QR itself is not included in this working paper.

3.   THE PURPOSE OF QUALITATIVE RESEARCH

3.1   Purpose

Flowing from sections 1.1, 1.2 and 1.3, the purpose of QR can be defined as being to understand and interpret daily occurrences and social structures and actions, and the meaning people give to phenomena in their life-worlds. QR describes meanings and aims to understand participants' definitions and interpretations of situations and actions – in essence, its purpose is to examine and understand how subjective realities are produced. It describes these multiple realities and aims to develop a deep understanding of everyday life. The purpose is to make sense of the meaning making of others.

3.2   When to Use QR

A number of writers (see, for example: Strauss & Corbin, 1990, Hoepfl, 1997, Hesse-Biber and Leavy, 2004) have identified the rationales for undertaking a qualitative study:

Firstly, and most importantly, the nature of the research question will be a key determinant in choosing a qualitative study. When one seeks to research the "how" or "what" or "why" or "in what way", a qualitative study is appropriate.

Secondly, QR is appropriate because the topic needs to be explored, that is, variables cannot be easily identified, or theories are not available to explain the phenomenon, or little is yet known about the phenomenon, and theories need to be developed.

Thirdly, QR is to be used when new perspectives are required on things about which much is already known.

Fourth, choose a qualitative study because there is a need to present a detailed and close-up view of the topic, providing in-depth information.

Fifth, a qualitative approach is appropriate in order to study individuals in their natural setting, that is, when the study requires an insight into phenomena as they occur naturally, in a specific setting and context.

Sixth, use a qualitative study if you want your readers to better understand than they otherwise might, by "telling the story" from a participant's point of view, rather than as an "expert" who passes judgement and analyses of what it is thought participants mean.

Seventh, employ a qualitative study because the descriptive and inductive analysis of data will yield a fuller and better understanding of the phenomenon or participants under study.

This is by no means an exhaustive list of all the instances when a qualitative study may be called for, however, it provides guidelines of some of the key indicators.

The guidelines above have a number of implications for the researcher. Qualitative researchers must be willing to do the following:

- Commit to extensive time in field.
- Engage in complex, time-consuming, detailed data analyses.
- Write persuasively and in detail to substantiate and show multiple perspectives.
- Get involved in a form of research that does not have firm guidelines and specific procedures and is evolving constantly.
- Understand and subscribe to the different notions of reliability and validity that apply in qualitative research, i.e., resist the temptation, amongst others, to extrapolate and generalise findings.
- Be truly interested in the view of participants, and to report "all voices", particularly also the "outliers" and "voice in the wilderness".

3.3   Disadvantage of QR

The disadvantages of QR centre on a number of areas.

a) Time demands: QR places a considerable demand on both participants' and the researcher's time. Interviews can be time-consuming and lengthy; data analyses are intensive and laborious since there needs to be a continual movement between the data and emerging themes to adapt and/or verify the analytical framework being used; and there may be long passages of time between the first and last instances of data collection.

b) Time delays: The freshness of data is sometimes questionable owing for example to the time delays between data collection and data analysis.

c) Interpretation: The accuracy of the interpretation of the researcher, with his/her own biases, may be a disadvantage, especially if these biases and orientations have not been clearly defined and reported.

d) The way we listen: "Selective hearing" may cause selective reporting – especially when researchers "listen for reaction", i.e., to identify "mistakes" or when he/she disagrees; or when researchers "listen for enlistment", i.e., to highlight only comments that support the researcher's view (Chappell, 2004).

e) Extrapolation: It is often tempting to extrapolate the findings of a qualitative study, since the views or opinions (results) seem all pervasive. However, QR results seek to be transferable, rather than generalisable. (See section 7 on Reliability and Validity).

f) Objectivity: QR, by definition, is not value-free, therefore results are subjective. In the world of conventional (read quantitative) research, subjectivity is seen to be both unreliable and invalid. However, in QR the "objectivity" of the researcher lies in the way he/she reports on the discovery and interpretation of what is observed, and by establishing a plausible connection between what was observed and the conclusions drawn.

3.4   Summary

The purpose of QR is to understand how subjective realities are produced and it is therefore used when the "how", "what", "why" or "in what way" of human experience and perceptions need to be understood. QR is appropriate when a topic needs exploration, or deeper and detailed insight is required, or when the "story needs to be told" from the point of view of individuals in their natural environment. This has implications for the design of the study, and a description of the QR design process follows.

4.   THE QR DESIGN PROCESS

4.1   The Process

Since QR places a premium on the strengths of the researcher rather than on standardisation of methodology and process, there is a "paucity of methodological prescriptions for qualitative research" (Eisner, 1991:169). Lincoln & Guba (1985) provide a fairly detailed outline for the design of a qualitative inquiry. Their steps are outlined below, augmented by the writing of Hancock (2002) and Hesse-Biber and Leavy (2004).

a) Determine a focus for the study which delineates the boundary. However, typically in a qualitative study, boundaries are altered as the study evolves.

b) Define the objectives of the research and ensure that these fit into the paradigm of qualitative inquiry.

c) Define the sample, i.e., where and from whom the data will be collected. Provide a thorough explanation and justification of why specific participants are included as the sample and select appropriate recruiting techniques.

d) Plan the successive phases of the inquiry, for example, the first phase may be completely open-ended, with successive phases focusing on specific themes.

e) Consider what additional instrumentation (beyond the researcher as human instrument) may be employed, for example, audio- and videotapes, photographs, artefacts, etc.

f) Plan data collection and recording modes. This includes methods to be used, e.g. focus groups or depth interviews; the questions to be incorporated in the interviewing schedule; how data will be captured (audio,

video tapes); how faithfully and in what detail data will be reproduced; and the use of other methods, e.g. triangulation, to augment and confirm the data (See section 4 on Methods).

g) Determine which data analysis procedures will be used. (See section 6 for Handling Data in QR for detail).

h) Plan the logistics of data collection, including scheduling and budgeting.

i) Determine the techniques that will be used to define trustworthiness (See section 7.4).

In practice, some of these steps may combine, for example, decisions regarding instrumentation to be used and data collection techniques. An important element of QR is its inductive and evolutionary nature, which means that even though certain decisions may have been made in the project design phase, these can be (and often are) altered once the investigation is in progress.

4.2 Summary

The QR design process follows the steps of determining the focus and objectives for the study, defining the sample, methods and data collection, analysis and trustworthiness procedures to be used. What follows is an outline of the methods in QR and their respective strengths and weaknesses.

5. QUALITATIVE METHODS

Qualitative research is no longer shunned as being inferior, and has, especially in the last decade, come into its own, particularly in terms of wider acceptance in academic communities (Jones, 2004).

A wide range of qualitative methods are available to carry out an investigation in a particular field of interest – once the investigation has been identified as being qualitative in nature. The essence of qualitative work is its concern with issues such as meaning, truth (as seen by participants in the study), purpose and the significance of things.

The major approaches to collecting qualitative data include interviewing (group and individual) and field research (observation and case studies). These seem to be the most widely used, however, there is a further selection of qualitative methods which, although used less often, also have a place in the arsenal of the qualitative researcher. In addition, developments in information technology over the last decade or so, have opened up new avenues for qualitative researchers to exploit and apply when relevant.

An outline follows of these methods, how they are commonly applied and some of the disadvantages to take cognisance of.

4.1 "Best Known/Popularly Used"

The best-known and most popularly used qualitative methods are focus groups and individual in-depth interviews. These approaches are intentionally less structured than survey or experimental approaches, providing a more flexible approach to data collection.

4.1.1   Focus Groups

Focus groups are defined as "a research technique that collects data through group interaction on a topic determined by the researcher" (Morgan in Hesse-Biber and Leavy, 2004:263). There are three important elements contained in this definition:

- Focus groups are a research method devoted to data collection.
- The interaction and narrative in the group discussion is the data source.
- The researcher has an active role in creating the group discussion for data collection purposes, i.e., the researcher's interest directs the discussion.

a)   When to use focus groups

There are a number of indications that point to focus groups as an appropriate method for a qualitative study. These include:

- To explore ideas, motivations and a range of opinions from a particular group of people.
- When it is possible to identify a number of individuals who share a common factor (e.g. brand usage, a specific life experience such as death of a spouse), and it is desirable to collect the views of several people within the sub-group simultaneously, especially when ...
- Group interaction has the potential for greater insights to be developed.
- When survey results obtained previously require a deeper understanding or further insights.
- When the topic under study has not been investigated before.

b)   Characteristics of a focus group

Typically, focus groups have the following characteristics:

- It consists of 6 – 10 participants. However, it is also possible to conduct "workshop" focus groups with 15 and more participants, or "mini-groups" with 3 – 4 participants.
- Several groups per project are conducted. The number of groups needs to be sufficient to provide adequate breadth and depth of information to understand the topic matter. The sufficient number of groups may be 3 – 4 groups, however, some studies may require 8 – 10 groups.
- Group members have something in common, i.e., they share a characteristic which is important to the topic of investigation.
- Groups are conducted at a neutral venue – often in facilities specifically provided for focus group research.
- The researcher (or a qualified moderator) guides the discussion to explore the opinions of the participants regarding the topic of the study. For this purpose, an open-ended discussion guide is often compiled.
- Sessions are often recorded, via audio or video or both and participants need to provide their permission for this to happen.

c)   Strengths

A number of writers (Hesse-Biber and Leavy, 2004; Hancock, 2002; Chappell, 2004; Labuschagne, 2003) have outlined the strengths of focus groups. The list below provides a synthesis of their writings.

- Focus groups can provide data fast, in a cost-efficient manner.
- Groups are particularly suited to open-ended, exploratory research, where the researcher needs to investigate the thoughts and feelings of participants, or wants to obtain insight into sources of complex behaviour and motivations.
- Focus group discussions provide a summary where the results obtained are more than the sum of individual inputs.
- The extent of agreement or disagreement with generally held views can be queried in and explained through focus groups.
- The researcher can ask why people have different ideas, rather than aggregate answers and speculate about why they differ.

d)   Weaknesses

Following from the strengths, the writers mentioned above also list the weaknesses of focus groups.

- The analysis of the results of focus groups is difficult and often cumbersome.
- There is the possibility of researcher bias, which may distort the results.
- Since the results obtained from focus groups often have a "ring of truth", there is the temptation to generalise results.
- Group members may influence each other to distort a true reflection of their own feelings and attitudes.
- The force of strong personalities in a group may be disruptive and counter-productive if not handled by the moderator.
- Group discussions require to be moderated by an experienced, trained moderator who is skilled in group facilitation, listening, observation and an on-going interpretation and analysis of what is going on.
- The behaviour of the moderator and how he/she handles the group may have consequences on the outcome.
- Some topics are not suitable for focus groups (for example, the sexual behaviour of promiscuous teenagers), since participants are unlikely to be truthful.

4.1.2   Depth Interviews

Interviewing is described as conversation with a purpose. It is used when individual in-depth reactions to the topic under study are required. Also, individual in-depth interviews are used when the participants are unlikely to attend, or do not have the time to participate in focus groups (e.g. managing directors of companies, doctors, other specialists like scientists).

The individual in-depth interview may be unstructured or semi-structured (Hancock, 2002).

a)   Unstructured depth interview

This is also known as the depth interview. Characteristics include:

- Very little or no structure to the discussion.
- It aims to discuss and explore a limited number of topics in a greater degree of detail.
- The questions asked are based on the previous responses of the interviewee.

- Although it is an informal discussion, open and receptive to the interviewee's responses, rigorous preparation is required.

An important aspect of the unstructured depth interview is that it is completely unstructured. The researcher wants to find out about the topic, but has no preconceived plan or expectation as to how he/she will deal with the topic.

b) Semi-structured depth interview

The semi-structured depth interview is also known as the focused interview. This means that the researcher has a topic of investigation, comprising of various themes, but allowance is also made for detail around these themes. Open-ended questions on the topic and its themes are asked and the interviewer uses prompts and cues to "further the question". In addition, the interviewer uses probes to get the interviewee to elaborate on responses or the interviewer will follow a line of enquiry once the interviewee introduces a further topic or theme.

c) Weaknesses

Depth interviews have a number of specific weaknesses.

- They are generally more time-consuming and slower to complete than focus groups.
- Depth interviews are expensive.
- There is the temptation to quantify results.
- It requires a skilled interviewer, who is able to establish a rapport on a one-to-one basis with the interviewee, and who is able to interpret responses and investigate avenues of enquiry not anticipated in the planning phase.

4.1.3   Designing Focus Group (and Depth Interview)[1] Research

David Morgan (in Hesse-Biber and Leavy, 2004) provides a thorough overview of the relevant issues that need to be included in designing focus group and depth interview research. Overall, these issues relate to decisions that apply to the research project as a whole (project level design issues) and those that apply to conducting a particular group (group-level design issues).

Project level issues specify the kinds of data that should be produced, while group-level decisions determine how the groups (or interviews) are to be conducted in order to produce such data (Morgan in Hesse-Biber and Leavy, 2004:274).

a) Project level design issues

- Standardisation: refers to the extent to which identical questions and procedures will be used in every group. The advantage of a high degree of standardisation is that it provides a high level of comparability of results across groups and interviews. However, a disadvantage is that it is not truly exploratory, as one has to live by the standardised design, whether it relates to the specific questions asked, degree of moderator/interviewer control and the format of semi- and unstructured questions.

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[1] Although Morgan highlights these issues for focus group design only, the principles are equally applicable to depth interviews. For the purpose of this working paper, read that the questions, issues and decisions relate similarly to depth interview study design.

- Sampling: refers to the "segmentation" strategies that input to the conscious and specific composition of the group or the selection of individual interviewees. Often, the segmentation required is obvious, e.g. user experience of a brand dictates that users of that brand need to be interviewed. The advantage of such purposive sampling is that it may facilitate discussion, since participants are talking amongst people who are "similar" in the segmentation selection aspect. However, the disadvantage is that it may greatly increase the number of groups, e.g. patients who "used" a particular hospital – the study should include those who "used" the maternity ward, outpatients, heart unit, general ward, etc.
- Number of groups/interviews: refers to "when is it enough?" A general rule-of-thumb is 4 – 6 focus groups and 6 – 10 depth interviews. The justification for when it is "enough" is when saturation of data is achieved, i.e., when nothing new emerges from the discussions or interviews. The number of segments (or sub-groups) in the population will correspondingly increase the number of groups (or interviews) required – as per the hospital example above.

a.   Group/interview level design issues
- Level of moderator/interviewer involvement: refers to the degree of control the moderator or interviewer exerts on the flow of the discussion or interview. A high degree of control implies a more structured and pre-defined approach, whereby specific questions must (and will) be asked during the course of the session. A low degree of control implies that the process is largely unstructured and the avenues explored in the group or interview is largely determined by topics and themes brought up by participants.
- Group size: refers to the number of participants per group. Although the general rule-of-thumb is to have 6 – 10 participants per group, smaller groups of 3 – 4 participants may be better when highly emotional subjects are investigated. When neutral topics are investigated, one may decide to conduct "workshop groups" consisting of 10 – 20 participants.
- Reconvened groups/interviews: refers to the same group of participants, who are brought together on a number of times. This may be necessary when opinions are sought before and after an intervention of sorts. For example: in an initial session consumer attitudes to pasta as a family meal is investigated. Participants are then given a pasta product to take home and use. The group is reconvened whereby attitudes to the tested product are investigated.

b.   Data quality concerns
There are a number of factors relating to the decisions to be made about data quality in the design of a focus group or depth interview study. These are:

- How and where to locate and recruit enough of and the "correct" participants.
- How to select and define an appropriate sample.
- Choosing relevant questions to cover amply what is known about the topic under study and allowing for unidentified-by-the-researcher themes and other relevant issues to be explored.
- The use of experienced and qualified moderators.
- The use of an effective analysis strategy.
- What are the reporting standards that readers of the report should be informed about, such as what is the overall context of the research; the degree of standardisation of questions and processes; group sizes, numbers, composition and justification; basis of the sampling strategy; sources for locating participants; recruitment procedures; the degree of moderator control; ethical issues and data analysis procedures.

4.1.4 Observation and Field Studies

Observation and field studies are used to examine social processes in a specific situation, over a period of time and/or at a particular point in time. They usually involve the researcher living among the people in the study for a specified period of time. Typically, these methods are used when the researcher does not know a lot about the subject matter and uses an inductive approach to the development of his/her knowledge of the subject matter. Observations are made, general patterns among these observations are noted and tentative conclusions about the patterns of these relationships are drawn.

4.1.5 Case Studies

Case studies are preferred when questions on "how" or "why" are asked, the researcher does not have control over the phenomenon under study and when the focus is on a contemporary phenomenon in a real-life-context. It allows the researcher to obtain a holistic and meaningful understanding of real-life events. It includes direct observation of the events being studied and interviews people involved in the event. It can include both qualitative and quantitative methods for data gathering. In QR, the "case study concentrates on experiential knowledge of the case and close attention is paid to the influence of its social, political and other contexts. It requires optimising understanding of the case by meticulous attention to its activities through issues such as issue choice, triangulation, experiential knowledge, contexts and activities" (Stake in Denzin and Lincoln, 2005:444).

Yin (2003) defines a case study as "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" (p. 13).

A case may be an object or entity, an event, an activity or a process.
In an intrinsic case study the researcher is interested in understanding the particulars of a specific case. In an instrumental case study the researcher is interested in understanding something more general than the particular case. In a collective case study the researcher is interested in comparing multiple cases in a single research study. For a detailed discussion on qualitative case studies, refer to Stake (in Denzin and Lincoln), 2005:443 – 466.

Since the case study is generally seen to be a research strategy rather than a method, further descriptions thereof fall outside the scope of this paper. For a full description of how to design case studies, refer to Yin, 2003.

4.2 "Lesser Known/Used Less Often"

There are a number of qualitative methods, which, although not necessarily popularly used, also fall within the ambit of qualitative research. These are outlined below.

4.2.1 Delphi

The Delphi method makes use of a panel of experts, selected on the areas of expertise required. The notion is that well-informed individuals using their experience and insight are well equipped to predict the future or offer insight into a particular phenomenon. Responses are gathered through a series of questionnaires. Opinions are summarised after each questionnaire, again forwarded to the respondents for reaction until a "convergence"

answer is obtained, which is seen to be the "best" or "most likely" answer or solution to the study or problem at hand.

The Delphi method has the following advantages:

- Experts need not be geographically together and can be sourced worldwide.
- It does not require full agreement on the topic by all participants, since the majority opinion is represented.
- It is anonymous, thus issues of personality, ego and posturing are minimised.
- It allows for the study of topics whereby insightful analysis and input can only be provided by experts in that particular field.

4.2.2   Nominal Group Method

The nominal group method is a consensus-planning tool that helps prioritise issues. Participants are brought together for a discussion session led by a moderator. The topic is introduced and participants write down their responses. They then read out these responses, which are noted down on a flipchart. Second and third responses are then noted down, until all responses are captured. Once duplications are eliminated, each response is assigned a letter or number and participants rank up to 10 responses they feel to be most pertinent. These rankings are collected from all participants and then aggregated. The results can be used to stimulate further discussion, or provide input to structuring questions to be put to another group of participants (e.g. in focus groups or depth interviews).

4.2.3   Ethnography

Ethnography refers to the study of a real social group within a natural setting. People in this setting are engaged in ongoing, naturally occurring social action and interaction (Hancock, 2002). The researcher's aim is to describe the social action or interaction from the point of view of the people who live it. Through observation, note taking and the collection of artefacts, the researcher provides a "thick description" of the way things are.

Photography, for example, is ethnography with equipment.

Ethical considerations are of particular importance in ethnography, for example:

- Does the researcher disclose his/her identity as a researcher?
- If so, how to alleviate/avoid the influence of his/her presence?
- Is informed consent obtained from the group?
- If they know they are under observation, what influence will that have on participants' "natural" behaviour?

4.3   New Developments

With the advent and growth of the Internet and World Wide Web (www), the online world has provided qualitative researchers with additional methods that can be employed when appropriate, for example:

- The researcher may purposely include an online method in a multiple research design strategy.

- Online methods may be included as part of triangulation of results (Mann and Stewart, in Hesse-Biber and Leavy, 2004:369).

4.3.1   E-interviews and E-mail Studies

a) <u>The e-interview</u> is when the computer is the means of communication between the interviewer and interviewee (Bampton & Cowton, 2002). It is different from computer-assisted telephone interviewing in that questions and answers are relayed in real-time, and responses may extend over a series of, for example, e-mail-based questions. The e-interview may also make use of a questionnaire template, attached to an e-mail message sent to interviewees. However, lack of consistency in computer equipment and technology causes problems regarding the formatting of such templates, and currently simpler formats, such as e-mail studies (see below), are preferred.

The e-interview has the following advantages:

- The interviewee experiences no embarrassment about having to "face the interviewer", and it is therefore less intrusive than face-to-face interviews.
- No travel time or costs are incurred.
- Provided they have access to technology, even remote interviewees can be included in the investigation.
- Physical and time-zone differences are not problematic.
- Transcripts of the interview are a natural by-product of the technology.
- The online environment provides a degree of anonymity.

The e-interview has the following disadvantages:

- It cannot be determined and confirmed whether the interviewee is who he/she claims they are.
- Since non-verbal cues cannot be observed, they cannot form part of the interpretation. Although emoticons (e.g. ☺) may be used in online responses, they can only partly provide non-verbal input.
- The e-interview may extend over a number of e-mail sessions which may cause interviewee fatigue and also it makes it difficult to determine the end of the interview. This time lapse may afford the interviewee the opportunity to carefully construct a response, which is problematic when spontaneous reactions are called for. However, a carefully considered, well-articulated, reflective response is not necessarily less valid than a spontaneous one (Bampton & Cowton, 2002).

b) <u>E-mail studies</u> are surveys where open-ended or semi-structured questions are sent as part of the text of a conventional e-mail message. The interviewee uses "reply to message" to put his/her answers in the text. The advantage of this is that it requires no more facilities or technical expertise than those used for everyday e-mail communications (Mann and Stewart, in Hesse-Biber and Leavy, 2004).

There are some disadvantages attached to this method, mostly centred on the technology itself. Text-based (such as in e-mail) communication can look uninteresting and dry; often the simplest e-mail packages cannot support signs (e.g. £); and formatting (bold, underline, italics) may not be possible.

HTML-based surveys alleviate these problems, since they allow good layout to be formatted and one can control responses (e.g. accept only one response). However, there are problems with compatibility between systems

and owing to the wide range of computer operating systems and programmes in the market, this is not yet the ideal solution.

4.3.2   Online Focus Groups

Online focus groups have grown in popularity since the mid 90's (Silverman, 2005). They are mostly used for high-tech applications, e.g. the testing of software, but there has been a growing acceptance of the method in other disciplines, e.g. marketing and the pharmaceutical industry.

It has similar characteristics to focus groups per se, except that the participants are not physically in the same venue. Generally, participants are invited to a Web page or discussion forum set up specifically for the online group. The moderator would type the questions and the software used allows the moderator to "see" all the participants and he/she will know who is responding. Following the thread of the discussion may be difficult, since participants may type in parallel and the conversation flow can consequently become disjointed.

There are obvious disadvantages in that body language can not be seen and interpreted, however, the use of emoticons make up for this to some extent (Silverman, 2005). The biggest disadvantage of online groups is that it requires a high degree of computer literacy from participants, and therefore it is only suitable when the target participant group has the required computer skills.

A major benefit of online groups is that they transcend time and space, and geographically dispersed participants, also those in remote areas, can be recruited to participate. Online groups are also fairly inexpensive, but not as cheap as was promised when the method first started. Other benefits are:

- Participants and moderators do not have to travel to central venues.
- Since people are in their own environment, they seem more comfortable to really say what they think and interact with the other participants (Silverman, 2005).
- Participants feel secure because "escape" is easy: they just log off.
- The technology provides instant transcripts of the discussions.

4.3.3   Going Digital and Staying Qualitative

Qualitative research is changing as a result of the increasing deployment of information technologies. New avenues for research are available, e.g. the analysis of content threads in discussion forums, chat rooms and bulletin boards. Digital convergence (the digitising of different media forms) and other technological developments have an impact on what we can achieve with qualitative research as a process (Brown, 2002).

The central question is how we can digitise the process in ways that enhance, rather than threaten the idiographic nature of qualitative work. The answer lies in a solution that enables qualitative researchers to capture and to process all data in a range of high quality, digitised formats without altering the fundamental characteristics of QR, which include:

- Open-ended processes.
- Flexibility.

- Strong orientation to inductive reasoning, which is suited to explore the construction of human meanings in the context of participants' making.

Below follows a brief outline of some of the areas where digitisation can aid the qualitative process. It is largely based on the work by Brown (2002) and Hesse-Biber in Hesse-Biber and Leavy (2004).

a)   Capturing and storing digital data
Technology offers QR new ways to capture and store data.

- Multi-media databases: Data storage and retrieval should be seen as the first consideration for digitising the qualitative research process. Databases which allow the researcher to store data (transcripts, audio, video, photographs) provide ease of access to the data, and it allows for the inclusion of working documents and other analysis notes to be incorporated in appropriate places within the data.
- Digital research journal: The research journal is at the heart of QR – it records ideas, thoughts, observations and insights throughout the investigation. Digitising the journal allows for it to be hyperlinked to other data parts; it makes for easy archiving, access and retrieval of the information and can include video notes and photographic images.
- Collecting digital data: Digital convergence has extended the range of ways in which qualitative researchers can collect data, for example, the digital camcorder; collecting data via the WWW; and digitising transcripts.

However, it is important that QR data continue to be collected in the most   appropriate collection technique and then be digitised, rather than the digitisation of all data "just because we can".

b)   Analysing digital data
The analysis of qualitative data is the area where new technologies are most widely used. (See no. 6.5 on CAQDAS: Computer Assisted Qualitative Data Analysis Software.)

c)   Representing digital data
Digital data can be used to greatly enhance the way qualitative data is presented.

- Hypertext and multi-media representation: Presenting a qualitative report with edited snippets from the original data source can greatly enhance the data. It preserves the original stream of consciousness that was revealed by the participants; it represents the diversity of responses and has the potential to represent the complexity of the phenomenon under study in the way it is experienced by the people who live it.
- HTML and PDF for multi-media papers: Word documents can easily be converted to HTML, and PDF now supports hyper-linking and embedding a wide range of multi-media formats (e.g. movies, sound bytes, graphics). This can bring a richness and great degree of authenticity to qualitative reports.

However, ethical issues need to be considered when representing original data sources and, as yet, no clear guidelines exist.

Digitising qualitative work is still an under-explored means to represent the rich and multi-layered textures of social life. Digital tools are one of a number that may be appropriate for use, and should be used where and when it adds, rather than interfere with the qualitative process and outcomes.

4.4 Summary

Qualitative research methods by and large centre on focus groups, depth interviews, observation and field studies. A number of "lesser used" methods have also been outlined in this section. The advent and growth of the World Wide Web and Internet have opened new avenues for qualitative researchers, although the jury is still out on the widespread acceptance and use of this channel.

QR is concerned with the understanding of human reality as defined by the individuals in their life-world. Since people are not always able to rationally explain and describe their experiences and perceptions, QR employs a number of techniques to facilitate the access to the "hidden" thoughts and feelings. These techniques are outlined in the following section.

6. PROJECTIVE TECHNIQUES USED IN QR

6.1 Introduction

QR seeks for a rich, deep understanding of human behaviour and the social world. It needs to clarify self-evident beliefs and attitudes, but also needs to explore emotional aspects. Most participants in QR, especially in a situation which is seen as a "testing environment", are more comfortable expressing that which they see as being socially acceptable. In psychological terms, people often censor unconscious needs and motivations before allowing them to surface, in order to avoid the discomfort or self-judgement experienced when these feelings emerge (Livingston, 1998). In order to access these unvoiced thoughts and feelings, QR draws on the techniques developed for personality assessment and psychoanalytic treatment in clinical psychology (Donoghue, 2000). These projective techniques have been adapted for use in QR and are discussed below.

Projective techniques are structured-indirect ways of investigating the "whys" of situations. They are not used to measure, but to uncover feelings, beliefs, attitudes and motivation, which many people find difficult to articulate (Webb, 1992:125-126). Projective techniques help the researcher enter the private worlds of subjects to uncover their inner perspectives in a way they feel comfortable with (Donoghue, 2000:47).

6.2 The Techniques

Below is a brief description of some of the projective techniques used by qualitative researchers. Although many of the examples used relate to marketing, projective techniques are also used in other areas of management and social research.

a) Brand personification/imagery: In this technique participants are asked to describe a brand or product or service as a person.

> "If CitiGolf had to become a person, who would it be? Describe his/her clothes, where he lives, attitudes, favourite books and music, etc."

"You are in the cosmetic section of a store. You hear Revlon talking to you. What would it say, in what tone, what is its attitude, what points does it stress about itself, etc. How do you respond and why?"

b) Word association/sentence completion: Participants are asked to note the first three words they think of when a brand or experience is mentioned.

"What are the first three words you think of when I say ... buying a new car, or ... Standard Bank?"

For sentence completion, participants are asked to complete a sentence.

"The only thing that would get me to change my mind, is ..."

"I'd tell the managing director of this company to ..."

"I'd convince people to switch by saying ..."

c) Role-playing: Participants are asked to role-play, for example,

"MasterCard and Visa are talking to one another. What are they saying? Why? Where are they? Do you believe them? Why/not?"

d) Product transformation: In this technique participants are asked to imagine a product as a car, animal, ship, plant, book, building, movie or mythical creature. They then have to describe and explain in detail.

"If All Gold Tomato Sauce was a movie, which one would it be? Why? Describe what happens in the movie that makes it relevant? What role does All Gold play in the movie?"

e) Guided fantasy: This technique lets participants imagine a situation, and they are then asked to describe their feelings about and experience of it.

"Imagine youself going into a voting booth/station ..."

f) Time frames: In this technique participants are asked to recall a time when they had a positive or negative experience with a product or service, which is then explored in detail.

"Think of a time when you were happy with your bank. What happened, why was that?"

g) Gestalt: This technique can be used in a number of ways, whereby participants have to construct a story or picture from the stimulus.

"Imagine going into the Amstel Lager room. Who is there, how are they dressed, what furniture and colours do you see, how do you feel in the room ... etc.?"

"Imagine being Alice in Wonderland. When you step through the mirror, you are in the LiquiFruit world. Who is there, what do you see, what are they doing …?"

One may also have various "doors" in this world, each of which is marked with for example brand names, product categories, corporate names, strategy statements, etc. After each door is identified, participants are asked to step through and describe what they see, hear and how they feel.

h) Psycho-drawing: Participants are asked to draw a product, service or experience. They are instructed that the researcher is not looking for works of art, but rather simple graphic representations of what they see, feel and believe.

"Draw your experience when you first opened a bank account."

"Draw what you see in the world of Harley Davidson."

i) Family of brands: A range of brands (e.g. breakfast cereals) is identified. Participants are asked to describe the role of each of the brands as a member of that family, for example, who is the family pet, the domineering mother, the rich uncle … etc., and they have to explain why they say that.

j) Collage: Participants are supplied with a range of magazines and newspapers, pens, glue and scissors. They are asked to compile a visual image (from the material supplied) to construct their associations and visualisations of brands, services or experiences.

k) Sorting techniques: Participants are supplied with a range of brands and objects (e.g. books, figurines, kitchen equipment, brand names and logos from other product categories, toys, etc.) and asked to sort everything that belongs together in groups. They then explain why they have sorted the way they have.

Properly presented, projective techniques are experienced like a game. They recover the thoughts, images and fantasies associated with motivation and our emotional side in a manner which circumvents the censoring all people do to avoid anxiety and preserve self-esteem. It discovers the characteristic modes of perception in a person's life-world and uncovers underlying motivations, aspirations, values and attitudes.

The primary disadvantage of projective techniques is the complexity of the data and the corresponding skills required of the researcher (Donoghue, 2000:50). They are expensive to administer because highly skilled research staff is needed to apply and to interpret the results.

A major advantage of projective techniques is the amount, richness and accuracy of information collected (Donoghue, 2000:50) which would otherwise have been difficult, if not impossible to obtain. Since most of the techniques require no literacy or academic qualifications, they can be successfully used in any focus group or depth interview.

6   Summary

Projective techniques are a fundamental tool in QR, in that they provide a greater depth of understanding and insight into what people truly think and feel. They allow participants in a study to access that information which

they may consciously or unconsciously repress and allows the researcher with insights and understanding which would otherwise be difficult to obtain. Projective techniques require a great amount of skill to be applied and interpreted properly, however, they form an indispensable part of the toolbox of the qualitative researcher.

Since the methods and techniques in QR are largely unstructured and open-ended, the data obtained are vast and unstructured. The approach to and handling of data in QR is discussed in the following section.

7   HANDLING DATA AND ANALYSIS IN QR

One of the biggest problems of QR is data reduction. Faced with huge amounts of transcribed data, field notes, observations and documents, the researcher has to start making sense of the data. Qualitative data analysis is defined as "working with the data, organising it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (Bogdan & Biklen, 1982:145). This section provides an overview of how qualitative data may be handled and provides some guidelines for the analysis thereof.

7.1   Making Sense of the Data

Confronted with a pile of raw data, the qualitative researcher needs to devise logical, meaningful categories; examine them in a holistic fashion; and then decide how best to communicate this to others. It is however important to note that qualitative data analysis is dialectic, not linear – throughout the process of data collection, the researcher is interpreting the data, and confirming or discarding his/her interpretations in light of new and additional data obtained. It is useful to have some initial structure into which this ongoing process of data collection and interpretation may be placed to provide the researcher with a framework for interpretation and analysis.

One such framework is provided by Chenail's Qualitative Matrix (Cole, 1994), which is reflected in FIGURE 1.

"Central tendencies" describe how data chunk together into common themes or categories.

"Ranges" allow for differences within themes or categories to be captured and interpreted.

"Expected" refers to data that confirms the ideas of the authors in the study's literature review, or the researcher's assumptions.

"Unexpected" refers to data that departs from the ideas of the authors in the literature review or the researcher's assumptions.

FIGURE 1: Chenail's Qualitative Matrix
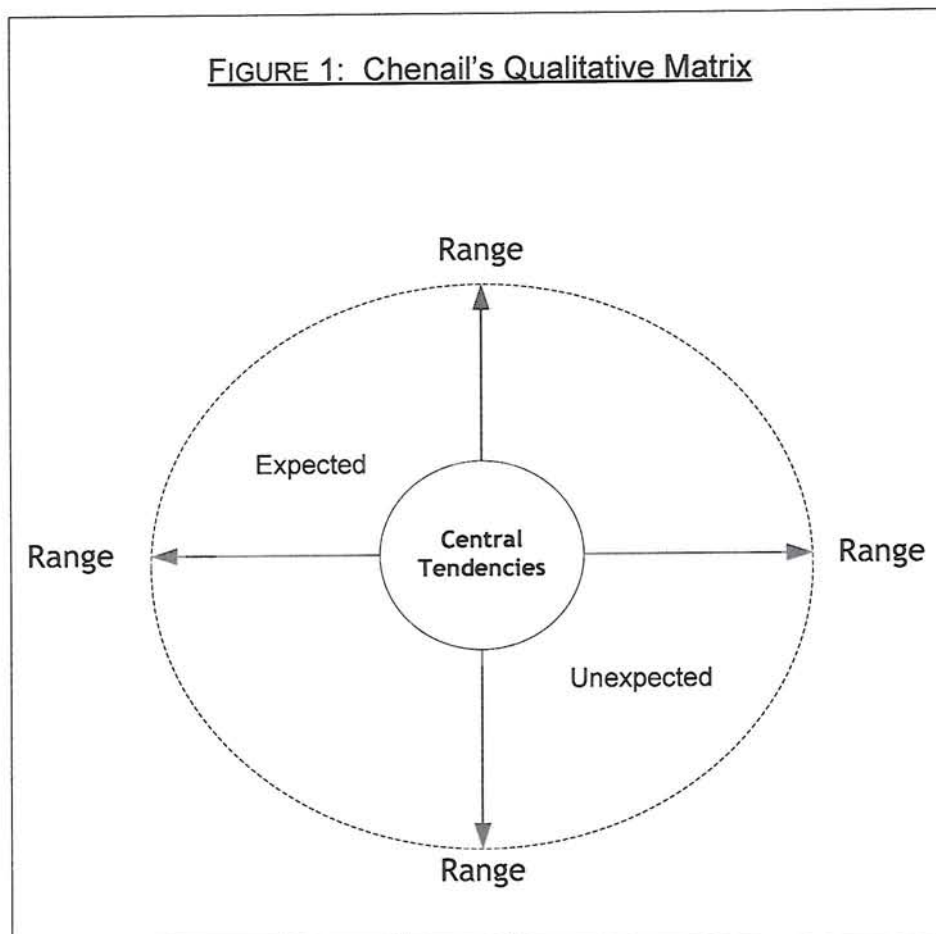
Using this as a preliminary framework, the qualitative researcher can start coding the data.

7.2   Coding

Coding is "the process of describing themes and ideas in chunks or segments of text in the data, and assigning labels to them" (Hesse-Biber and Leavy, 2004:411). Although it is a time consuming and labour intensive process, close, critical coding is fundamental to good qualitative research.

7.2.1   Coding Strategies

Although there are many coding strategies to follow, they largely fit into two broad strategies:

a) Deductive coding, which moves from abstract ideas to the empirical data through the testing of hypotheses. The process is briefly as follows:

- A pre-defined coding scheme is developed.
- Specific hypotheses are tested against this scheme.
- Patterns emerge, and the researcher develops meanings about and of them.

The researcher thus jumps back and forth between the roles of coder, analyser and interpreter (Hesse-Biber and Leavy, 2004:411).

b) <u>Inductive coding</u> moves from the empirical data details to a generalised theory or principles. This is a more open and holistic procedure with its goal being to gain insight and understanding. The analytic procedure is inductive in that the researcher immerses himself/herself in the raw data and text until themes, patterns, concepts and dimensions of concepts emerge.

The inductive method – whereby social theory is generated systematically from the data, that is, it "emerges" from the data through a process of rigorous and structured analysis – is also known as the grounded theory approach (Glaser & Strauss, 1967). Hesse-Biber and Leavy (2004) summarise this approach in the following way:

"A grounded approach to social research helps researchers read carefully through their data; it helps them uncover the major categories and concepts lodged deeply within their data; and it ultimately brings to light the properties of these categories and interrelationships" (p.414).

Grounded theory is a way of thinking about and conceptualising data. It is an approach to research and can be used in a range of different methods.

Strauss and Corbin (1990) refer to four important characteristics of grounded theory. These are:

<u>Fit:</u> Does the theory or explanation fit the data?
<u>Understanding:</u> Is it clear and readily understandable even to non-research types who may need to use the theory?
<u>Generality:</u> Does the scope of the theory and its conceptual level move somewhat beyond the immediate participants in the original research study?
<u>Control:</u> Would use of the theory result in some control over the phenomenon that is explained by the theory?

7.2.2   Process of Analysis

There is no one, right way to plan for or proceed with coding, because the procedures are neither scientific nor mechanistic. Qualitative analysis is seen as "intellectual craftsmanship" (Mills quoted in Hesse-Biber and Leavy, 2004:410), which requires a great deal of methodological knowledge and intellectual competence.

Hesse-Biber and Leavy (2004:412-415) suggests moving from open – to focused coding.

a) <u>Open coding</u> involves reading the transcripts and text of field notes line by line and coding by asking what is going-on, what are the people doing, what statements and actions are identified and deciding how the structure and context serve to support, maintain, impede or change the activities and statements.

During open coding, the researcher identifies and tentatively names the conceptual categories into which the data will be grouped. The goal is to create descriptive, multi-dimensional categories to form a preliminary analysis framework.

b) <u>Focused coding</u> involves the codes not being tied to the text, but beginning to rely on the researcher's insights for drawing out interpretations from the open codes. All the data in a category is compared with every other piece and then a clear working definition of each concept is formulated. These definitions are then given codes.

The next stage involves a re-examination of the categories to determine how they are linked, a complex process sometimes called axial coding (Strauss & Corbin, 1990). This involves understanding the "bigger picture", and includes consideration of causal events contributing to the topic of investigation; descriptive details of the phenomenon itself; and the ramifications thereof.

The coding schemes form the basis of a conceptual model of the phenomenon and this model is then translated into a story line and research report, which is a detailed and descriptive account that "closely approximates the reality it represents" (Strauss & Corbin, 1990:57).

7.3 Identifying Themes

Themes in QR are those abstract, fuzzy constructs identified before, during and after data collection. They come from the literature, the characteristics of the phenomena being studied, already-agreed-upon professional definitions, from common-sense constructs, and from researchers' values, theoretical orientation, and personal experience with the subject matter (Ryan & Bernard, 2005).

Coding is the process of identifying themes in the QR process (Hesse-Biber and Leavy, 2004), but how to get started? Several writers (Chenail, 1995; Denzin in Hesse-Biber and Leavy, 2004; Northcutt & McCoy, 2004; Ryan and Bernard, 2005) have suggested frameworks for identifying themes. Their work is synthesised below.

7.2.3 Analysis of Words

This is a fast and efficient technique based on the premise that if you want to know what people are talking about you should look at the words they use.

a) <u>Word repetition</u>: Words that occur a lot are seen to be salient in the minds of participants; therefore word repetition is one way to start identifying themes. Informal word repetition is the analysis whereby the researcher simply notes which words are used a lot. Formal word repetition involves generating a list of frequently and less frequently used words, and identifying the unique words used in the specific context of the phenomenon under study.

b) <u>Indigenous categories</u>: These are local terms and phrases that sound unfamiliar, but are part of the terminology used by the people in the context of the phenomenon under study, for example, drug addicts' use of the phrase "I need to shoot up". Indigenous categories refer to the specialised phrases used to describe the experience and expertise of the "in-group" in their context.

c) <u>Key words in context</u>: If you want to understand a concept through the eyes of the people, see how it is used. In other words, identify the key words and phrases used and analyse the context (i.e. where and how) it is used.

7.2.4   Larger Blocks of Text

This method of identifying themes relate to looking at lengthy pieces of text.

a)   Compare and contrast: Once themes are identified, the researcher analyses whether they are similar or in contrast to one another. It involves asking what the theme is about and how is it different to or the same as previous ones.

b)   Social and management science queries: Are used to understand how the textual data illuminate questions which are of importance in the social and management sciences, for example, searching the data of the investigation for evidence of, for example, managerial incompetence, methods of organisational control, methods by which status is obtained in organisations, social conflict, etc.

c)   Searching for missing information: Involves a conscious search for themes missing from the text, since much can be learned from what is not mentioned. This is the most difficult technique, as absences of themes (e.g. the political agenda of a party not covered in political speeches) may mean that all participants in the study share the same assumptions, i.e., "everyone knows" (Ryan & Bernard, 2005), but they may not necessarily be self-evident to the researcher.

7.2.5   Intentional Analysis of Linguistic Features

a)   Metaphors and analogies: Look at the thoughts, behaviours and experiences represented by the metaphors and analogies, for example, how reasoning is applied to interpersonal problems.

This technique is based on the premise that people often represent their thoughts and experiences with analogies.

b)   Transitions: This is where linguistic features such as turn-taking and interruptions are analysed.

c)   Connectors: This approach looks at words and phrases that indicate relationships amongst things, and may be causal in nature. For example, conditional relationships use connectors such as if ... then, rather than, instead of; causal relationships are indicated by because, since, as a result; and time-orientated relationships by connectors such as after, before, then, next.

7.2.6   Physical Manipulation of Texts

These are also more tactile approaches for theme discovery that are used by qualitative researchers.

a)   Unmarked text: Involves going through the text and analysing those paragraphs or sentences which have not yet been coded, or associated with a particular theme.

b)   Pawing: Involves marking up text with different coloured pens and using symbols to indicate further refinement of themes. This is usually the starting point for many qualitative researchers and it is still used extensively in QR.

c)   Cutting and sorting: Involves the "cutting and pasting" of themes that belong together. This can be done with tag-and-sort software, but it is still mostly done manually by sorting and grouping cards on which the text has been pasted.

The framework is by no means exhaustive and qualitative researchers continue to apply methodological creativity in managing and analysing the data.

7.4   Analytic Induction

Analytic induction is the basis from which Glaser & Strauss developed their grounded theory approach (Jones, 2004:105). The emphasis is on the whole, even though elements and the relationships between elements are analysed. The process occurs throughout the action of doing research, with the goal of most accurately representing the reality of the situation. Analytical induction tests as well as generates theory and all data available are used to test hypotheses. It provides a further tool for qualitative researchers in the analysis of data.

Jones (2004:106) summarises the six steps of analytical induction.

Step 1:   A phenomenon is defined in a tentative manner.

Step 2:   A hypothesis is developed about it.

Step 3:   A single instance is considered to determine if the hypothesis is confirmed.

Step 4:   If it is not confirmed, either the phenomenon is re-defined or the hypothesis revised to include the instance examined.

Step 5:   Additional cases are examined and, if the new hypothesis is repeatedly confirmed, some degree of certainty about the hypothesis results.

Step 6:   Each negative case requires that the hypothesis be reformulated until there are no exceptions.

7.5   CAQDAS (Computer Assisted Qualitative Data Analysis Software)

As was seen in the previous section, data handling and analysis in QR is hard to do and it can be a messy business. Until recently, the emphasis was on understanding, intuition and a thorough knowledge of the data. However, advancements in computer software for qualitative data analysis (CAQDAS) are now offering qualitative researchers alternatives. A wide range of software is available that supports a variety of analytic styles in qualitative work. These centre on data management (to aid in more effective handling of data) and analytic procedures (whereby features and relationships in data are revealed).

Hesse-Biber and Leavy (2004), Hancock (2002), Gibbs et al (2002) and Brown (2002) list the areas where CAQDAS can aid the qualitative researcher. These are summarised below.

7.5.1   Generic Software (or Data Management)

This includes general software packages, which are not necessarily developed with QR in mind, and include the following:

a) Word processors: To type and sort notes and transcripts and to arrange organising schema for the data.

b) <u>Text retrievers</u>: These packages search textual data for particular words and phrases to find the "strings" that identify themes and categories.

c) <u>Data storage and management</u>: Large database systems allowing for the retrieval of semi-structured information, which was entered as "records" or "fields". The data is annotated and can include photographs, diagrams, video and links to Web pages. The annotated data are generally indexed automatically and the researcher can add his/her own identification material such as date and context.

7.5.2 Qualitative Research Specific Software (including analytic procedures)

This refers to CAQDAS packages specifically and comprises the following:

a) <u>Code and retrieve</u>: Once codes are assigned to the text, these packages make for easy recovery of categories. Boolean operators such as AND, OR, NOT, NEAR can be used to refine searches and test out emerging theory.

b) <u>Code-based theory building programmes</u>: Such programmes allow for the analysis of systematic relationships among the data, codes and code categories. Some packages are rule-based, which means that they allow for the testing of hypotheses in data. Also, some packages facilitate the visual representation of the data through, for example, graphs and diagrams.

c) <u>Conceptual network building and textual mapping</u>: These programmes allow one to draw links between code categories and thus do theoretical modelling. For example: NUD*IST uses a hierarchical system which takes a "top down" approach, dividing and sub-dividing major concepts into their constituent elements; AtlasTi allows diagrammatic representation of relationships between concepts and lets theory be built "upwards" from the data itself (i.e., inductive); NVivo offers advanced modelling facilities including geographical representation (Hancock, 2002:30).

Software packages are tools that can aid the researcher, but they do not replace the human element. A package cannot "do" the analysis because it lacks the capacity to think, reflect, analyse and interpret.

There is still much scepticism about the use of CAQDAS in QR and this mostly centres on the following:

- It skews the distinction between qualitative and quantitative research, because there is the temptation to quantify results.
- It separates the researcher from the deep engagement with the data, which is a hallmark of good qualitative research.
- Confidentiality of participants in a study is compromised through the inclusion of, for example, video clips in the data.
- The development of some software is influenced by grounded theory, which may push the analysis in a particular direction.
- Computers are digital and by their nature quantitative, therefore various shades of meaning may be lost if the researcher only depends on the analysis offered by the software.

The use of software in QR does offer the following benefits:

- It provides reliable access to data.
- Searches of text or coding are maintained sensitive to the context in which the data appeared.
- It allows for rigorous testing of a hunch and the pursuit of patterns.
- It shows just what did emerge and from where in the project history.

In essence therefore, when using CAQDAS in QR, researchers should let the computer do the mechanical, while he/she does the conceptual and interpretive aspects of analysis.

7.6 Summary

Making sense of the data is one of the biggest problems facing the qualitative researcher. This section outlined one framework to approach the data and it offered various coding strategies that may be followed when looking for themes in the data. The use of computer software in the coding of data was discussed and it was suggested that software is useful in the mechanical aspects of data reduction, whilst the analysis and interpretation is best done by the qualitative researcher him/herself.

Faced with the themes, analysis and findings of the data, the researcher also needs to demonstrate that the reliability and validity thereof. These aspects are discussed in the following section.

8 RELIABILITY AND VALIDITY IN QR

Reliability and validity are important issues in all research, including QR. However, since reliability and validity are rooted in the positivist (quantitative) perspective, they should be re-defined for their use in an interpretivist (qualitative) approach (Golafshani, 2003:597). Demonstrating that qualitative data analysis is reliable and valid and that it was conducted in a rigorous manner, is especially important given a common criticism that qualitative results are anecdotal (Hancock, 2002:22).

Strauss & Corbin (1990) suggest that the "usual canons of 'good science' ... require redefinition in order to fit the realities of qualitative research" (p.250).

So just how is reliability and validity defined in QR?

8.1 Reliability

Reliability in QR relates to being able to demonstrate that the methods used are reproducible and consistent (Hancock, 2002). This is done by:

- Describing the approach to, and procedures for, data analysis.
- Justifying why this approach is appropriate in the context of the study.
- Clearly documenting the process of generating the themes, concepts, categories of concepts and theories emerging from the data audit trail.
- Referring to external evidence, including other qualitative and quantitative work to test conclusions from the analysis as being appropriate.

Lincoln & Guba (1985:300) use "dependability" as a term more appropriate to describe "reliability" in QR. To ensure reliability, examination of trustworthiness is crucial.

Tactics for increasing the reliability in QR include:

Training of interviewers by standardising, for example, the interview strategy to obtain more consistency.

Multiple researchers used to observe, take notes and interpret the data.

Check coding whereby two or more people code the same data, comparisons and adaptations are made.

Variety in data collection including different times, places and sources.

Respondent validation whereby quotes and interpretations are sent back to the participants of the investigation to check for accuracy. Problems with respondent validation, however, include that it may generate new data, the participants may be disinclined or uncommitted for further responses, and when reading verbatim quotes, participants feel they appeared inarticulate and therefore "tidy up" the quotes (Aguinaldo, 2004).

Triangulation, which is gathering and analysing data from more than one source to gain a fuller perspective. Evidence that the researcher has used triangulation in this way and has effectively drawn the analysis of different forms of data together demonstrates rigour, rather than simply the use of different sources.

8.2   Validity

Validity in QR refers to the extent in which an account seems to fairly and accurately represents the data collected (Hancock, 2002). Validity therefore is the plausibility of the relationship between data and concepts, and implies that the collective agreement of the intended audiences indicate that interpretations of the data are not only compelling, but convincing. This is determined by:

- The consistency of findings as interpreted by various researchers (i.e., inter-rater reliability).
- An adequate and systematic use of original data in the presentation of the analysis, so that readers of the research can be convinced that the interpretations relate to the data.

Golafshani (2003) proposes that validity in QR is "more appropriately described in terms of rigour, quality and trustworthiness" (p.602).

Tactics for increasing the validity (Cooper, 2001; Mays & Pope, 2000) of QR include:

Replication which is to obtain additional information from "new" (i.e., not previously involved) participants.

Informal feedback involves allowing participants to inspect the findings.

Predicting future events based on the research and then, in time, giving it to participants to see the accuracy of the predictions.

Using published literature to determine if results reflect previous findings which may substantiate those of the current study.

Triangulation (as for reliability, see above) and triangulating the data by data source, method, researcher, data type and levels of data analysis.

When triangulating it is important to explain why this was done and how each data type or source or method informed the other.

Clear exposition of methods of data collection and analysis, i.e. to provide a clear account of how it was done.

Reflexivity indicates a sensitivity to the ways in which the researcher and research process have shaped the data collected, including the role of prior assumptions and experience of the researcher.

Attention to negative cases is discussing elements that seem to or contradict the emerging explanation of the phenomenon under study.

8.3   A Checklist for Rigour in QR

It has been stated that reliability and validity in QR is determined by a "rigorous manner", both in the collection and analysis of data. The following is offered as a tool, rather than a deterministic, infallible set of rules (Source: Establishing validity and rigour in qualitative research, online at
http://www.swc-cfc.gc.za/pubs/revisiting/revisiting_7_e.html.)

a) Background to the research
A clear description of the purpose of the research; the position of the researcher and relevant reference to the research topic in existing literature.

b) Method of data collection
A clear description of the type of interviewing guide; how it was developed; the methods of note taking and recording; and impressions after each interview.

c) Method of data analysis
A clear description of how transcripts were prepared (verbatim/annotated), and the procedures for navigating through the data (e.g. coding schemes, modifications).

d) Presentation of the results
A rationale for how the data is presented, i.e., descriptive or theory-building; how sub-themes were selected; how quotes relate to the results, i.e., consistent or atypical; how constructs are different or the same in the data compared to the literature; and how to differentiate between participant responses and the researcher's interpretation.

e) Credibility of links between data and analysis

A description of all themes and issues; using multiple coding and coders; double-checking of interpretations and with whom.

f) Plausibility and credibility

Listing existing literature as a point of reference and trying another, similar case.

g) Transferability of findings

Did the study succeed in "saturating" the data categories and what type of generalisation (empirical or theoretical) was applied?

8.4 Essential Criteria for Quality in QR

Various writers (Golafshani, 2003; Hancock, 2002; Cooper, 2001; Mays & Pope, 2000) have listed the criteria for quality in QR.

Worth or relevance: Was this piece of work worth doing at all? Has it contributed usefully to knowledge?

Clarity of research question: If not at the outset of the study, by the end of the research process was the research question clear? Was the researcher able to set aside his or her research preconceptions?

Appropriateness of the design to the question: Would a different method have been more appropriate? For example, if a causal hypothesis was being tested, was a qualitative approach really appropriate?

Context: Is the context or setting adequately described so that the reader could relate the findings to other settings?

Sampling: Did the sample include the full range of possible causes or settings so that conceptual rather than statistical generalisations could be made (that is, more convenience sampling)? If appropriate, were efforts made to obtain data that might contradict or modify the analysis by extending the sample (for example, to a different type of area)?

Data collection and analysis: Were the data collection and analysis procedures systematic? Was an "audit trail" provided so that someone else could repeat each stage, including the analysis? How well did the analysis succeed in incorporating all the observations? To what extent did the analysis develop concepts and categories capable of explaining key processes or participants' accounts or observations? Was it possible to follow the iteration between data and the explanations for the data (theory)? Did the researcher search for disconfirming cases?

Reflexivity of the account: Did the researcher self-consciously assess the likely impact of the methods used on the data obtained? Were sufficient data included in the reports of the study to provide sufficient evidence for readers to assess whether analytical criteria had been met?

Credibility: Was the account believable?

Confirmability: Can the findings be confirmed through other similar investigations? Is the current investigation backed up by the literature?

Consistency: Is the research process steps verified through the raw data, data reduction products and process notes?

Applicability or transferability: Are the findings borne out by the literature, or other similar investigations?

Trustworthiness: Are the results defensible?

Rigour: A judgement on all the above – was it done rigorously?

8.5   Summary

Reliability and validity are constructs rooted in the positivist (quantitative) paradigm and therefore the definitions thereof need redefinition to fit into the views held in the interpretivist paradigm. As such, reliability in QR is more appropriately described as dependability, i.e. being able to demonstrate that the methods used (for both data collection and analysis) are reproducible and consistent. Validity is more appropriately described in terms of rigour, quality and trustworthiness, i.e. the extent to which an account seems to fairly and accurately represent the data collected. A checklist for rigour in QR was provided as well as essential criteria for quality in QR.

9   SUMMARY

TABLE 1 provides an overview summary of this working paper and may be viewed as a broad-strokes summary of qualitative research, what it is and what it is used for, its methods and techniques, the handling of qualitative data and the issues of reliability and validity in QR.

TABLE 1
OVERVIEW OF QR

ELEMENT	DESCRIPTOR
Ontology (The nature of reality)	Multiple realities exist, constructed through human interaction in a specific context.
Epistemology (The nature of knowledge)	Knowledge about the world is intentionally constructed through a person's lived experience.
Key Focus/Ideas	Search for patterns of meaning, examines full context; it is expansionist, holistic and complex.
Objective Or Purpose	Describe meanings; understand participants' definition of a particular situation; examine how realities are produced.
Process Of The Research	Inductive, ongoing, dialectical, interpretive, descriptive, context-bound.
Units Of Analysis	Emerging design to identify patterns, themes and meaning; focus on process and outcomes/product of the research.
Validity	Defensible knowledge claims, dependability, transferability, credibility.

Reliability	Confirmability, coherence, instrumental utility/usefulness.
Axiological (Role of values)	Value-laden and value-bound.
Rhetorical (Language of research)	Descriptive, personal voice, open-ended, narrative, interpretive.
Relationships (Researcher with participants)	Researcher is human research instrument, interaction, dialogical, multi-vocality, negotiated interpretations.
Theory And Nature Of Truth	Truth as intentional fulfilment, i.e., interpretations match the lived experience, working hypotheses, idiographic (understanding specific events), focus on differences.
Sampling	Purposive, representative of pre-defined group.
Paradigm	Inductive form of logic, context-bound to help explain phenomena, attempt to extract meaning.

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