Dear readers.

We are pleased that our book "Qualitative Methodology for International Public Health" still is read and used as course literature. However, we are aware that the last few decades have changed the qualitative research landscape and that new methodological approaches have been introduced in public health research. Our Open Code computer program also has become somewhat outdated and in need of revision. Since it is a demanding task to produce a new edition of the book, we have decided to make a pdf version of the book available free of charge. We want you to download the book from our website and not share the pdf file in any other way.

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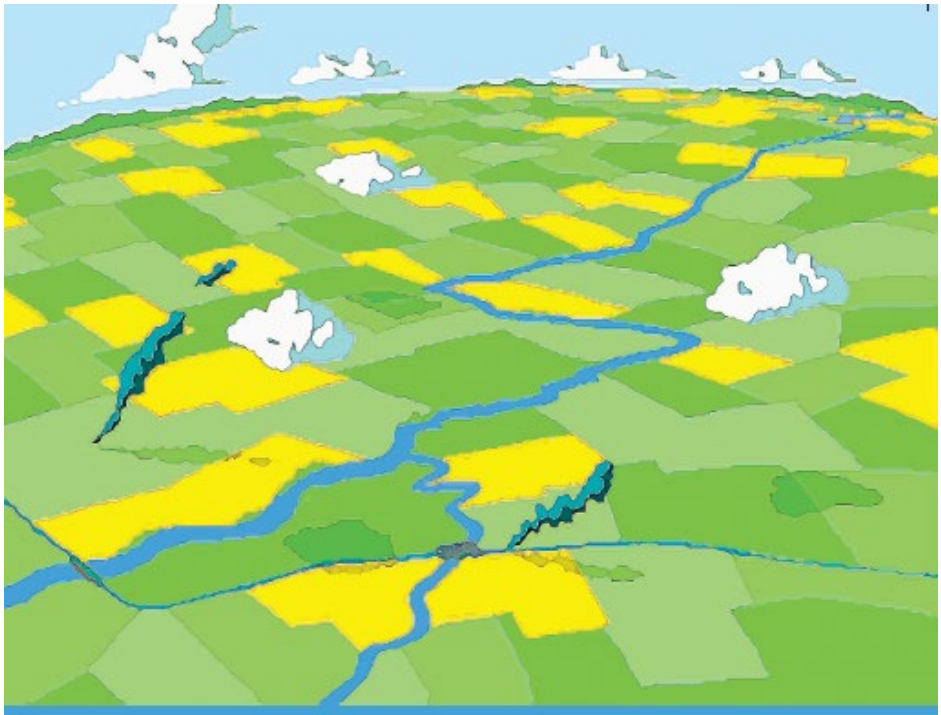
The authors, June 2024



Qualitative Methodology for International Public Health

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UMEÅ UNIVERSITY

Qualitative Methodology
for
International Public Health

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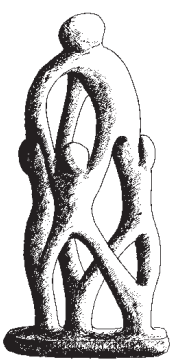
PREFACE

This book is about doing qualitative research. More specifically, it is about designing, carrying out and reporting qualitative research in the arena of interna- tional public health. The authors have backgrounds in nursing, social work, medical sociology, anthropology, epidemiology and international public health. In our own research in Sweden as well as in low-income countries, we have often combined qualitative and quantitative methodology and enjoy working within either tradition depending on research question. In the early 1990's Lars Dahlgren, Anna Winkvist and Maria Emmelin developed and taught courses in qualitative methodology for public health at Umeå University. Today Lars Dahlgren is Professor Emeritus in Medical Sociology, Anna Winkvist is Professor of Nutrition at Gothenburg University and Maria Emmelin is Professor of Global Health at Lund University. Klas-Göran Sahlén, Senior Lecturer at Umeå University, has joined the author group, and specifically taken responsibility for developing and describing the use of the OpenCode programme. We are very happy that Ulla Hällgren Graneheim, Senior Professor of Nursing at Umeå University and University West accepted to join the group, after we decided to add Qualitative Content Analysis as an important alternative methodology in public health training and research.

Many colleagues have shared their experiences, allowed us to use data from collaborative projects, provided constructive criticism and suggestions, and encouraged us to finish writing this revised version of the book. Anders Emmelin has done substantial language revision. Lena Mustonen has provided excellent layout of the book. We would also like to acknowledge Maria Lindhgren for the illustrations.

We acknowledge that Epidemiology and Global Health at Umeå University has made it financially possible to finalise the book.

The authors



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1. Introduction

THE ROLE OF QUALITATIVE METHODOLOGY IN PUBLIC HEALTH

Traditional public health research is about diseases and their causes and on the behaviour of individuals in relation to disease causation. Because of its association with medicine, public health relied mainly on quantitative research methodologies. Public health research has broadened its scope to studies of how people themselves experience diseases and how economic, social and environmental factors can influence health, requiring more qualitative approaches. Today, there is therefore a need for public health researchers to be familiar with a variety of theoretical and methodological approaches from which to choose, depending on the research questions asked. It is however, important that researchers with different backgrounds learn to communicate in a ways where no one approach or attitude dominates.

Medically trained researchers have sometimes claimed qualitative methodology to be too imprecise and too subjective to be scientifically trusted. In contrast, qualitative researchers have emphasised the divergences between the two methodologies and described them as exclusive or polar implying unrealistic premises of how good research should be objective, value-free and based on statistical hypothesis-testing. This dichotomy is unfortunate for several reasons. Most importantly, the dichotomy prevents the possibilities to see the methodologies as complementary and being parts of what can be labelled an empirical approach to science (Johnson and Onwuegbuzie, (2004). To some extent the choice of methodology for the individual researcher is a matter of his/her preferences, but more important is that the choice of research question is linked to the choice of methodology. A combination of methodologies is most often the best way of approaching research questions.

While qualitative approaches discover, categorise, define and interpret differences and similarities between phenomena and experiences, quantitative approaches help us to analyse them as

quantities manifested in the population. There is also a reciprocal interaction between the two methodologies. Qualitative research can aid large surveys in how to understand phenomena and their linguistic expression in a local population and to operationally turn the understanding into "variables". Qualitative in-depth studies can deepen the understanding of results from a preceding quantitative analysis. Today there is also a development towards integrating quantitative and qualitative methodologies into the same study, ie mixed-methods studies (Creswell 2012, Östlund 2011).

This book deals with qualitative methodology and methods in public health research. We attempt to contribute to public health research by presenting a comprehensive guide to the landscape of qualitative methodology. Research design data collection methods and alternative approaches to interpretation as well as modes of presentation will be described. In this revised version we focus on two alternative approaches of interpreting data; Grounded Theory and Qualitative Content Analysis. Grounded Theory was the only approach in earlier versions of the book and Qualitative Content Analysis has been added since we regard both methodologies to be suitable for addressing public health problems. The relevance of Grounded Theory is evident in Antony Bryant's and Kathy Charmaz's comprehensive handbook of Grounded Theory (2007). It was a contribution to the expanding field of qualitative methodology. According to them, Grounded Theory became the dominant qualitative methodology already in the late 1980s both as a method guiding the research process and as a more distinct qualitative approach aimed at generating theories from data. In public health, Grounded Theory has become increasingly popular since the late 1990's. It is also evident that Qualitative Content Analysis, as described by Graneheim and Lundman and Lindgren and Graneheim (2004, 2017), has delivered valuable contributions and become an important methodology for describing and interpreting data within the field of public health.

Already in the 1940's the sociologist Robert Merton (1949) claimed that research most often is best done if the level of ambition contains a realistic integration of empirical research and theory. We think that there is a need in public health research both to stay close to the informants and to develop theories based on their lived experiences. Grounded Theory gives us tools aiming at constructing theory based

on experiences while Qualitative Content Analysis offers tools for either staying close to data at a concrete manifest level or moving towards an interpretative latent level of understanding.

APPLICATIONS OF QUALITATIVE RESEARCH IN PUBLIC HEALTH

In this section, we briefly summarise some research projects from our own experience of qualitative research in public health. Most of them represent research projects that have incorporated both qualitative and quantitative approaches in joint efforts. The dominance of each approach has varied, but the complementary aspect has always proved to be useful. Throughout this book it is mainly these projects that we use to illustrate the different stages in the research process. They include a range of multidisciplinary projects focusing on global public health issues. The projects used as examples of Qualitative

Content Analysis are however not included here, but summarized within the text.

Perceptions of health among women in Punjab, Pakistan

In the early 1990s in Pakistan we studied the effects of repeated, closely spaced childbearing on women's nutritional status using a quantitative research design. Questions that warranted a qualitative research design revolved around how these women perceived their health and health needs. At that time, as in most low-income countries, no information existed on the health of Pakistani women seen from their own perspective. The strong preference for sons in South Asian cultures has been described repeatedly, raising questions concerning if the "overall health cost" for child bearing mothers' would differ depending on the sex of the child. This raised the relevant question whether the birth of a son would carry with it an increase in status and access to resources for the family.

To answer these questions a qualitative research project was initiated. In-depth interviews were carried out among a sub-sample of the women who had been included in the nutrition study; one group of women living in an urban impoverished area in Lahore and another group living in a rural village 40 km outside of the city. We found that women's definitions of what it means to be healthy differed from those of the medical professionals. Women with basically no education and from the poorest strata of our sample described health in terms of physical capacity to work hard and efficiently. Women with a few years of education and with slightly better socio-economic status viewed health as mental health, to be able to cope with hardships and stress in the everyday life. Finally, the better-off women equated health with social values, i.e., to keep oneself, one's family and house clean and tidy. Many health aspects having to do with bearing daughters or of not being able to reproduce at all were put forward. These results are further described in Winkvist and Akhtar (1997) and Winkvist and Akhtar (2000).

This study is described more extensively in later chapters in order to illustrate typical designs of qualitative research projects as well as issues of trustworthiness

The Rönnskär project, Sweden

The Rönnskär project started in the early 1980s, in response to concerns among the workers over health effects of the working environment. It started as a longitudinal study following the workers at Rönnskärsverken, a copper smelting plant in northern Sweden from its first opening in 1929. The overall aim was to describe and analyse the associations between different factors in the physical work environment of the plant and the various causes of death of former employees. The project also aimed at generating suggestions for how to improve the health situation. From its inception, the project was mainly quantitative, but at the end of 1987, a qualitative study component was introduced. The purpose of this study was to elucidate and understand why the workers had not raised more protests against their working conditions, despite increasingly apparent health hazards. The research questions were twofold: 1) why had there been only a few refusals among workers to perform hazardous tasks? And, 2) how has workplace culture defined "the good Rönnskär worker" over the decades of the history of the plant? The results from this qualitative study are presented in Dahlgren and Sandström (1993).

This project is mainly used in this book to illustrate interpretation of qualitative data.

The Kagera AIDS Research Project, Tanzania

The Kagera AIDS Research Project (KARP) started in 1987. The study area was the Kagera Region situated in north-western Tanzania on the western shore of Lake Victoria. The project addressed the spread of HIV/AIDS and had already from its beginning a pronounced interdisciplinary profile with contributions from microbiology/immunology, medicine, epidemiology sociology and linguistics. Largely because of this, the use of research methodology was also been characterised by "multi-method" approaches. The role of quantitative methodology has primarily been to study the magnitude and spread of the HIV-infection but also to identify risk factors and their associations with people's behaviour. The baseline study from 1987 showed an HIV-prevalence among adults ranging from 0.4% to 10% in rural areas and 24.2% in the urban area of Bukoba, making clear the seriousness of the situation. Further studies of this population were conducted in order to obtain better understanding of the epidemiological and socio-anthropological

dynamics of the epidemic in the region. Later studies showed a decline in HIV-infection especially among the younger age groups. Thus, the focus changed and became more directed towards understanding the factors relating to this decline.

The role of qualitative methodology in the first phases of this project was to discover connections between the social context surrounding risk behaviour and the behaviour itself. The central research questions were related to 1) people's perceptions and experiences of HIV/AIDS and its consequences as well as the risk behaviour associated with disease, 2) norm systems regulating sexual behaviour, and 3) the role of language in understanding and coping with the disease. However, based on the observed decline in HIV-infection, qualitative studies also came to focus on such changes in norms, attitudes and behaviour on group and community levels that could help in understanding the mechanisms involved in the decline. Results from some of these studies are presented in Kwesigabo et al (1998), Mutembei et al (2002) and Lugalla et al (2004).

The Kagera AIDS Research Project is used to discuss data collection methods and the role of field notes. Sexual behaviour is a sensitive topic and experience from this project is also used to problematize ethical considerations in qualitative research.

Tuberculosis in Vietnam

In 1994 a research project on risk factors for tuberculosis and its possible prevention was launched in Vietnam a gender perspective was applied throughout the entire research process. In Vietnam, a low-income country with about 80 million inhabitants, tuberculosis is the single largest cause of death among adults. Even though national tuberculosis programmes have been in place since the 1950s, the country currently faces problems of increasing prevalence of tuberculosis in general as well as of multi-drug resistance of the infection.

At the beginning of the project our research questions were; 1) do women and men develop similar symptoms of tuberculosis and do they develop them equally often? 2) Are women and men with tuberculosis diagnosed at similar rates? 3) What health-seeking patterns do women and men with tuberculosis exhibit? 4) How do women and men experience living with tuberculosis in their society?

The research project, carried out in four geographically diverse areas in Vietnam consisted of quantitative epidemiological studies of the spread of tuberculosis, which could provide answers to the first two questions. To answer the latter two questions, it also included qualitative studies on beliefs, attitudes and practices regarding tuberculosis.

The starting point of the project was a qualitative study on the perceived stigma of tuberculosis that used focus group discussions and in-depth interviews with staff and patients at a health care centre. Knowledge from this study was used to design an epidemiological study of newly diagnosed cases as well as further focus group discussions with men and women, with and without tuberculosis respectively. The quantitative study and the focus group study were carried out simultaneously. Important ideas arising from both studies were later followed up with in-depth interviews. The results from this research are described in Johansson et al (1999), Johansson et al (2000) and Long et al (1999).

The tuberculosis study is used in this book to illustrate design issues and the use of a gender perspective as a theoretical framework.

Domestic violence in Léon, Nicaragua

In 1995, a study on domestic violence was initiated in one of the major cities of Nicaragua Léon. At that time, little was known in Nicaragua about the extent of the problem. No national data on domestic violence existed, even though a wide network of women's organisations that helped battered women existed.

Severe and ongoing violence against women has been reported in almost every culture where it has been studied. Between 20% and 60% of women in most countries are believed to have experienced physical violence from an intimate partner. A wide range of adverse health outcomes has been associated with domestic violence and therefore, domestic violence has also become a concern in public health.

Initial research questions within the project were: 1) how many women are affected by physical violence inflicted by an intimate partner? 2) What kinds of violence are most common? 3) Where do violent acts take place? 4) What are the health consequences of the violence? 5) What are women's responses to the violence? 6) What

help would women like to receive? 7) What can be done to prevent domestic violence in the Nicaraguan society? To answer these questions, a sample of women in Léon was selected to address the quantitative aspects of the number of affected women, risk factors and mental as well as physical health consequences of domestic violence.

However, several questions remained unanswered. For example: 1) how do women make sense of violent episodes as well as of violent relationships? 2) What is it that makes some women eventually leave violent husbands? To help us gain a deeper understanding of these issues, narratives of women's experiences of living in violent relationships were collected among a few of the battered women identified in the survey. Finally, our research team organised focus group discussions to capture the opinions of Nicaraguans on domestic violence. The Nicaraguan project on domestic violence is further described in Ellsberg et al (2000) and Ellsberg et al (2001).

In this book, the domestic violence project are mainly used to illustrate a research design including action research and to highlight ethical issues.

Malaria control programme: the case of Jepara District, Indonesia

On Java Island in Indonesia, the Jepara District in the north has long been an area with endemic malaria. The Indonesian malaria control programme adheres to the global malaria control strategy promoted by WHO and includes the provision of early case detection and prompt treatment of cases. However, efforts to improve early detection and case management require an understanding of people's health and health-seeking behaviour. Our research project, launched in 1996, aimed at examining the user-provider meeting in early case detection and case management of malaria in Jepara District. Important research questions were: 1) what does the general trend of malaria look like? 2) How does the community perceive malaria as a disease? 3) What made sick people seek treatment? 4) How could the interaction between malaria workers and sick people be improved? 5) Is compliance with malaria treatment sufficient?

The overall project was conceived of as a case study that consisted of several research components. These components included quantitative analyses of existing data on malaria cases and treatment

history from the health care centres over the last ten years. It also included a rapid assessment procedures (RAP) study on perceptions of malaria and of the malaria control programme among users and providers. Finally, the epidemiological study focused on the treatment process of all malaria cases in the area during a one-year period. All three components were carried out simultaneously. Main findings are described in Utarini et al (2003).

The malaria RAP procedures are more fully described and discussed in the chapter on data collection methods.

The Västerbotten rehabilitation project, Sweden

The project "Co-operation between actors in the rehabilitation process" started in 1995. It was performed in the Northern Swedish region Västerbotten and focused on employees with long term experience of being on sick leave. We used a combination of quantitative and qualitative methodologies. Initially 1,500 persons who had received sickness benefits for more than six months were invited to participate in a survey addressing patterns of sick leave. The qualitative part included four different sub-studies focusing on different actors in the rehabilitation process. The first focussed on officers of the local social insurance offices in Västerbotten. Thematised research interviews were performed and interpreted. Two other qualitative studies addressed the role of employers and physicians. The last, and perhaps most important study, aimed at capturing the experiences and feelings of persons on long-term sick leave. Ten interviewers interviewed a total of 75 persons, and most of the interviewers also participated in the interpretation of the material. The results showed that co-operation between professionals and persons on long-term sick leave could be improved.

Especially interesting is the fact that professional from the local social insurance offices participated in the data collection and interpretation the empirical and practical understanding they had acquired from their work in social insurance was a valuable complement to the researchers' skills and theoretical understanding. With the help of a brief in-house training and extensive supervision, these practitioners succeeded in contributing substantially to the analysis and also to the writing of the reports. Results are published by Edlund and Dahlgren (2002).

This example is used in this book to illustrate what happens when discoveries generated in the interpretation process and already existing social science theories meet.

The primary weight maintenance project, Sweden

The primary weight maintenance project (PWM-project) was initiated in the early 2000's in the Västerbotten County, Sweden. The aim was to find an alternative public health approach for obesity prevention.

A major risk factor for cardiovascular diseases is obesity and interventions have resulted in little or no long-term weight loss. Therefore, developing a public health intervention to maintain weight was the focus of this project.

In-depth interviews were performed in one of the qualitative sub-studies. The research questions focused on attitudes and behaviors related to physical activity, food habits, weight and weight maintenance. All informants in the study had earlier participated twice in the Västerbotten Intervention Program (VIP). The research team thereby had access to two earlier measured weights for each informant. A purposive sample of weight maintainers, i.e. those that had maintained their weight ± 3% between their first and second measurement, were invited for interviews.

A Grounded Theory approach was used to analyse the interviews. Based on informants' stories, a model illustrating the main findings was constructed. This results showed great variety in attitudes, strategies and behaviors important for weight and can be used within primary health care to enhance the understanding of how people differ in their relation to food and physical activity. Findings from this study are reported in Lindvall et al (2013).

The primary weight maintenance project and examples of codes and categories developed during the analysis are used to illustrate the application of the computer software, OpenCode.

2. The epistemology of qualitative research

WHAT IS QUALITATIVE RESEARCH?

Researchers who carry out activities within a spectrum from Qualitative Content Analysis of a text or a Grounded Theory approach to participant observations call themselves qualitative researchers. What, then, do we mean when we talk about qualitative research or qualitative methodology?

No universally accepted definition of qualitative research exists. Such research is often defined by what it is *not* - that is by contrasting it with quantitative research. Some researchers have attempted to define it. Creswell (2012) offers the following definition: "Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting".

To start with, qualitative researchers share a common perspective on the world. This perspective includes a proposition or working hypothesis concerning reality (*the ontological assumption*); we claim that *realities* are subjective multiple and socially constructed. Hence, your experience depends on who you are. As researchers, we then prefer to pursue a holistic approach in our research in order to interpret all separate parts within the overall context.

This overall perspective also includes a view of how knowledge is generated (*the epistemological assumption*) and, in consequence of the relationship between researcher and informants. The epistemiological assumption states that researcher and informant are interactive and inseparable in the resulting knowledge. It is not possible for the researcher to stand aside from the informants because both influence each other.

Moreover, the overall perspective includes a view of the role of values in the process (*the axiological assumption*); research is value-bound. The pre-understanding expectations, and biases of the researchers must be openly stated and discussed.

Finally, this overall perspective influences the process of research (*the methodological assumption*); qualitative research is mainly inductive time- and context-bound and follows an emerging design for a detailed discussion of these assumptions, see for instance Lincoln and Guba (1985). Beyond this shared perspective, different qualitative researchers may be guided by different ideological stances such as postmodernism action research or feminism. These will influence the entire research process from selection of research questions to interpretation and presentation of data.

Qualitative research aims to chart the perspectives of the informants, whereas quantitative research takes as a point of departure the ideas of the researchers. Qualitative research is seen as an act of *interpretation* the four assumptions described above are essential for these interpretations and the methodology cannot, therefore, be separated from its world perspective. Commonly, qualitative researcher's address a smaller number of informants than quantitative researchers do, but try to gain an in-depth understanding the processing of qualitative data is systematic yet flexible. In contrast to quantitative research, the qualitative analysis does not entail summarising information as numbers and applying statistical methods of inference. The aim of qualitative analysis is to conceptualise the meaning of phenomena and human actions.

What kinds of research tradition or strategy do we include under the umbrella of qualitative research? Multiple views exist because different qualitative research traditions have grown out of different disciplines, sociology, public health, social work, anthropology, nursing, education, linguistics, and psychology. Creswell (2012), in his book "Qualitative inquiry and research design choosing among five traditions", makes valuable comparisons between the traditions of biography phenomenology Grounded Theory ethnography and case study. Additional traditions that can be included, apart from qualitative content analysis, are hermeneutics narratives and discourse analysis. As the field of qualitative methodology continues to expand, more perspectives will most likely emerge.

These qualitative research traditions differ in their research focus, where one may aim at describing and interpreting experiences within a cultural subgroup whereas another may aim at developing a theory grounded in data. The traditions differ with respect to whether emphasis is on theory as driving data collection or on theory as emerging from the data. Furthermore, some traditions rely on lengthy interviews with few people whereas other traditions use methods adapted for larger groups of people. Finally, differences exist with respect to how data are processed and the way that results are presented, even though the general assumptions described above apply to them all.

In the next section we describe the theoretical foundations and some methodological perspectives of qualitative methodologies in general, relating them specifically to Grounded theory and Qualitative Content Analysis.

American pragmatism and symbolic interactionism

Probably the most influential scientific roots of qualitative research and especially Grounded Theory are associated with American pragmatism as well as with symbolic interactionism (Milliken, 2012). These are philosophical and theoretical perspectives developed within the Chicago School in the US during the 1930's 40's and 50's. Here we find researcher such as Anselm Strauss, one of the founders of Grounded Theory and other American sociologists, such as Erving Goffman and Howard Becker who all belonged to the third generation theorists of this school. They combined their heritance from older colleagues like George Herbert Mead, 1934 (symbolic interactionism) to develop a new and more critical social psychology as well as new ethnographic methods to study the growing social problems in the American society What Chicago School influences are present in the Grounded Theory approach? Let us focus on three aspects: the social construction of reality the ability to generalise, and the practical applicability of the findings.

① *The social construction of reality.* Perhaps most striking is the view in Grounded Theory that science as well as everyday human activities generates social constructions of reality. This premise is forcefully elaborated in Peter Berger's and Thomas Luckmann's book: "The Social Construction of Reality" (1967), which was published the same year as "The Discovery of Grounded Theory" (Glaser and Strauss,

1967). Berger & Luckmann demonstrate that people in interplay create society and that our perception of society is a social construction. Even when we talk about science and theories this holds true, consequently scientific *truth* is never absolutely objective or incontestable; truth is relative. It is constructed in the research process and different opinions are open for discussion or negotiation. The premise given to us by Berger & Luckmann describes the dialectic between what is objective and subjective. Society is an objective reality but also subjectively perceived and created. These ontological and epistemological points of departure are crucial. They prescribe that many truths exist side by side and that knowledge is not given once and for all.

The ambition of Grounded Theory to construct new theories is deeply rooted in symbolic interactionism. Strauss meant that just as new theories have the possibility to sometimes change the direction of history, symbolic interactionism implies that events of vital importance in peoples lives, i.e. "epiphanies can become "turning points" and rupture routines and lives as well as provoke radical re-definitions of the self (Strauss (1997). Or as Denzin had formulated it: "in moments of epiphany, people redefine themselves" (1992).

② *The ability to generalise.* The second aspect of Grounded Theory that traces back to the Chicago School is the symbolic interactionist view on the process of socialisation. Basic here are the concepts of interaction role-taking, and generalisation. The premises are that human beings are socially responsive, intentional, and capable of taking roles and to generalise from one situation to another. From a symbolic interactionist perspective, interaction precedes mind and self, which implies that we must be able to take the role of others before we can develop a self.

Perhaps the wellknown distinction in symbolic interactionism is the relation between two distinct parts of the self, *I* and *Me* (Mead, 1934; Blumer, 1969). *I* is the intentional, yet unpredictable part while *Me* is the reflecting one. When we act we act as *I* and when we receive feedback in the interaction process we reflect upon it in the capacity of *Me*. In this constantly ongoing process, personality and self-esteem undergo changes. Most important in the early stages of this socialisation process is the child's primary group, i.e. the mother and thereafter the father. With increasing age, secondary groups, such as

friends tend to become increasingly important. Successively strangers and anonymous connections will become relevant. All of these groups can in differing contexts be regarded as "significant others".

With the help of reflection we learn to construct what Mead (1934) labels "generalised others". This means that the ability to take on the role of the other creates a generalised *other*. Thus, we are able to relate ourselves to people and actors with whom we have never had a personal contact. We can predict in advance what reactions we will meet when choosing one way of behaviour rather than another. Consequently, a basic skill for all human beings is the capacity to generalise and to perceive abstract patterns in concrete events.

This premise has apparent implications for the qualitative research process. In an interview the interviewer should be able to put her-/himself in the informant's place, i.e. be capable of role-taking. He or she must be empathic and reflect on the feedback given. If the ambition goes beyond simply mirroring the intentions of the informant, the interviewer is also supposed to generalise from data immediately received in the interview to a broader and more abstract context, i.e. to theorise. In this sense, reflecting is nearly analogous to interpreting.

③ *The practical applicability of findings*. From American pragmatism Strauss picked up that findings, results as well as theoretical constructions, should be possible to put into practice; discoveries should be followed by utilisation. One premise within this paradigm is that theories should be changed or modified with changes in reality, which in turn implies that formal a priori theory constructions should be avoided.

In this perspective, theorizing and application stand in a dialectic relationship to each other. Theories suggest questions at issue, guide interpretation of data, and are of use when implementing measures that in turn offer possibilities to evaluate the consequences of theoretical guidance or evolving new theory.

The most important view inherited from American pragmatism (Bryant & Charmaz, 2007) is probably the position that research implies an oscillation between induction and deduction, a line of action known as abduction. The methodology of abduction can take

place from data collection to the construct of theoretical findings. The work is sometimes characterised by input even from unexpected sources in everyday life or from scientific findings with no obvious relevance for current research questions. In American pragmatism this view is labelled abductive inference. It is a kind of creativity that opens up for unexpected associations, but the method also recommends use of more systematic tools like memos written down during the whole research process. More about this concept will be presented later on in this book.

Phenomenology and hermeneutics

One of the seminal thinkers of the first generation of symbolic interactionists, William James, was labelled a phenomenologist. An internal debate within the Chicago School about the possibilities of integrating symbolic interactionism and phenomenology has been alive since then. Further, close ties exist between Grounded Theory and phenomenology as well as between Grounded Theory and hermeneutics. Likewise there are links in the Qualitative Content Analysis both to phenomenology (manifest content analysis) and to hermeneutics (latent content analysis). The well-known phenomenological statement by Edmund Husserl (2001): "To the things themselves", clearly indicates these links. The statement emphasises that knowledge about human beings and their relations should be grounded in reality Hermeneutics and phenomenology both deal with the problem of understanding.

As an illustration, one can use an interview with one of the most prominent downhill skiers 1980-90, Ingemar Stenmark from Sweden. After winning a world cup competition, Stenmark was asked to describe his race in a way that would make it come alive for ordinary people. Stenmark, known to be both modest and taciturn, waited long before answering. Finally, he said "there is no use trying to explain to people who don't understand". This statement of Stenmark's brings to the fore a basic property of hermeneutics and phenomenology, one that features also in Grounded Theory and Qualitative Content Analysis, namely the one of pre-understanding.

The issue of pre-understanding can be stated as follows: Is it ever possible to grasp complicated patterns of behaviour if you have not experienced the situation yourself? Or conversely; is it not only possible but rather essential to lack personal experience and be naive, if you want to really understand something with help of the intentions mediated to you by an informant? These questions are often discussed among people practicing qualitative research. From the beginning, the dominant standpoint in Grounded Theory as well as in Qualitative Content Analysis was that the researcher should try to be naive when facing his or her research problem to ensure that emerging concepts were grounded in data and not simply the result of preconceived ideas. It was for instance regarded as a problem if a nurse interviewed another nurse. Today this position has been moderated, and at least theoretical pre-understanding (from scientific literature) is often mentioned as an advantage. A smorgasbord of theoretical knowledge can be good to have at hand, but the researcher must at the same time be prepared to "kill her darlings" and leave out some of her favourite ideas that comes from her pre-understanding.

Within the field of phenomenology the problem of too much pre-understanding is discussed in terms of "bracketing" (Epoché) or suspension of judgement. What the researcher is supposed to do is to put prejudices or preconceived ideas within brackets (i.e. disregard them), at least during data collection and first steps of interpretation.

Hence, the phenomenological description of data is supposed to be unbiased; at least the researcher should be aware of his or her pre-understanding and account for it. In contrast, hermeneutic interpretation rests heavily on pre-understanding. In the so-called hermeneutic circle or spiral of interpretation, the researcher's understanding of the informant increases from solely grasping his or her intentions to a deeper understanding of the whole surrounding context. In this hermeneutic interpretation process, a pre-understanding of the context can be of great help. The working process and the use of pre-understanding within this hermeneutic spiral of increased understanding (Radnitsky, 1970) may look as follows:

① During the interview the pre-understanding helps the interviewer to identify follow-up questions. The pre-understanding can be based on practical experience from the environment surrounding the informant, but it can also consist of access to a broad range of theoretical perspectives of potential relevance. Sometimes this pre-understanding prevents openness and curiosity on the part of the interviewer, which of course would be a disadvantage. At other times it can block an informant's inclination to mediate information because the informant perceives the interviewer to already "know everything". These are the reasons for the recommendation in phenomenology to put the pre-understanding within brackets, at least to begin with.

② After having transformed a tape-recorded interview to text, the interpretation begins with a "grand tour through the material. The whole text is walked through. Later in the process, this will make it possible to relate the separate text parts to the whole material. Here the pre-understanding built up by experience is crucial. This pre-understanding will increase with each interview performed, leading to increasingly better interpretations.

③ In the later stages of interpretation the theoretical pre-understanding will be increasingly useful. During this stage, it is time to compare the emerging ideas and interpretations to the works of other researchers. When creating these "meetings", an extensive theoretical pre-understanding most often will be of great help.

In Figure 1 we summarise the main features of phenomenology and hermeneutics using a metaphor of a stairway. The stairway symbolises levels of ambition, but also relations between the actors involved in the research process. On the first step we find our informant and try to bring about a good meeting with him or her. Our ambition is to construct something together with our informant, namely new knowledge. The point of departure is the information, which potentially is possible to collect from the informant. Hence, the researcher must try to create an atmosphere in the interview situation favourable to achieving this.

Depending on whether the aim is to reach a phenomenological description or a hermeneutic interpretation the strategy of involving the informant in this joint venture differs. In the former case, much more of joint interpretation and, eventually validation take place. In the latter case, where the researcher wants to be more free and add more or less of extensive interpretation, the researcher and the informant must accept that the ultimate decisions regarding the analysis will be in the hands of the researcher. Sometimes it may even be considered problematic to involve the informant too deeply in such a collaboration. The second and third steps symbolise these issues. However, it is important to state that it is not "better" to reach the third step; it is just a matter of different research aims and strategies.

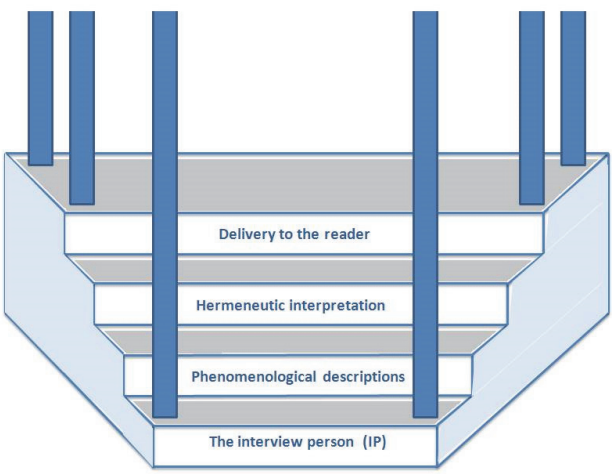


Figure 1. The hermeneutic stairway.

Thus, when choosing between phenomenological descriptions and hermeneutic interpretations, both Qualitative Content Analysis and Grounded Theory are quite open. Some researchers, most often in the field of anthropology, prefer to join the former tradition and give codes that are very detailed and close to the text in the process of open coding. For others, the step from interview transcription to categories and theories is short. We will return to this with examples in our presentation of techniques for coding and interpretation.

But the last step must not be forgotten. How do we bring the message to the reader? Brinkman and Kvale, 2013, emphasises that the final product should be in the mind of the researcher from the beginning of the research process. These issues are elaborated in the chapter on communicating your qualitative research.

Let us return to the research process. There are a several options for the researcher to carefully consider. Figure 2 illustrates these options.

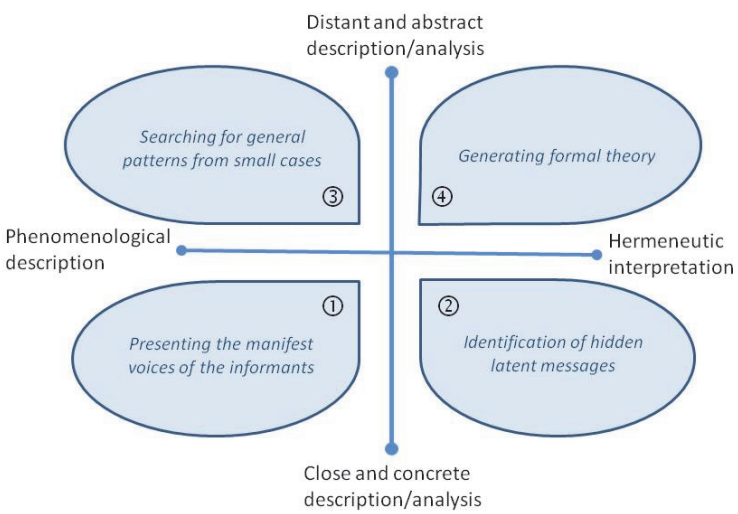


Figure 2. Important choices in the research process.

The first choice is between performing a phenomenological description or a hermeneutic interpretation. The decision can be placed anywhere on the horizontal line in the figure. The further to the right, the more the researcher adds his/her own or others'

interpretations to the material. The informant and his/her intentions are not regarded as "sacrosanct" but simply as a starting point for the analysis. The interpretation may for instance aim at discovering underlying and unconscious intentions or motives of the informant.

On the other hand, in a purely phenomenological description, the informant is given precedence. It is his/her words that will be provided to the readers of the report, in as undistorted form as possible.

The second choice is between a close and concrete description/analysis and a distant and abstract one. In this case the decision can be indicated on the vertical axis in the figure. The higher up, the more the researcher dares to generalise from the observed cases. This is especially pronounced among some grounded theorists. Even a single interview can generate discoveries on a very abstract level, but note that such discoveries simply are hypotheses not yet tested. At other times the researcher prefers to stay very close to the findings and presents the case in a very concrete mode close to the text. Interpretation and generalisation are left to the reader of the report.

In Figure 2, sector ① symbolises the researcher who prefers to highlight the voices of the informants, i.e. the manifest content of the original text. Most often, the product of such research will be in the form of a case report with extensive space for quotations. In sector ② we find the researcher with ambitions to add his/her own interpretations to the latent messages taken from interviews in this case, interpretations will be made even if the informant does not agree with them. In sector ③, which certainly is least covered by qualitative researchers, we may find anthropologists drawing far-reaching conclusions based on individual cases. Finally in sector ④ we will meet researchers trying to construct fruitful meetings with theories on high levels of abstraction or to generate new and very general theories.

Naturalistic inquiry

Akin to both Qualitative Content Analysis and Grounded Theory is the naturalistic inquiry[1]. This means that the point of departure is empirically grounded (i.e. grounded in data), whether the data collected are qualitative (most common) or quantitative. It is also

[1]Naturalistic refers to Lincoln & Guba (1985).

naturalistic in the sense that it "imitates" commonplace ways of receiving and structuring knowledge. In everyday life, we consciously or unconsciously create cognitive and emotive maps in order to orient ourselves in situations previously not familiar to us. We have to be able to generalise from single experiences to broader contexts, e.g. transform the concrete to the abstract. Sometimes of course we fail; the hypothesis turns out to be false, but most often we succeed. Our maps develop and become fit for use. As Anthony Giddens (1991) and other sociologists have observed, modern societies rest upon this ability of people to cope with more and more complex situations under increasing levels of uncertainty. They must be able to feel trust even when they do not have access to all relevant information.

The type of knowledge described above can be labelled "knowledge of the first order", which means common sense knowledge applied to the actual world. "Knowledge of the second order", which means scientific knowledge is acquired in a research process. This process imitates the "down-to-earth" process of acquiring common sense knowledge but it does so in a more systematic fashion. Knowledge of the second order relies very much on knowledge of the first order. What people perceive and assess can be regarded as hard facts, immediately useable or susceptible to refinement in the research process.

Grounded Theory

One of the most pronounced ambitions in the Grounded Theory approach is to discover something new, to generate new theories. The ultimate aim is to develop tools to understand new types of problem and to cope with new situations. In his book "The Grounded Theory perspective" Barney Glaser (2001) makes a sharp distinction between descriptive and conceptual qualitative methodology Grounded Theory belongs to the latter group and is essentially a conceptual method aimed at transcending the data. Because the methodology is not descriptive, the voices of the informants are less important in a Grounded Theory approach. Furthermore, Glaser states that all data have the potential to be interpreted using Grounded Theory – even quantitative data.

The Grounded Theory method was launched in the US at the end of the 1960s as a product of a joint venture between Anselm Strauss and

Barney Glaser. This advantageous meeting led to their ground-breaking book "The Discovery of Grounded Theory" (1967). While Glaser came from Columbia University with its emphasis on quantitative research (though including research of inductive character), Strauss came from the qualitative environment of the University of Chicago. They met in San Francisco at the University of California Medical Centre in a project studying "the process of dying". Their mix of experiences from totally different scientific environments must be judged as propitious. Even if their scientific backgrounds differed considerably, they shared the opinion that theories should be grounded in reality. Their view in that sense was naturalistic and they saw no problem using both quantitative and qualitative data when generating theory even if the qualitative approach came to dominate when applying Grounded Theory. From Columbia University Glaser brought insights mediated by famous American sociologists such as Robert Merton and Paul Lazarsfeld, while Strauss already in the 1960s was known as one of the leading representatives of symbolic interactionism.

Qualitative content analysis

Early versions of content analysis were exclusively quantitative (e.g. Berelson 1952, Krippendorff 2013) and dealt with: "the objective systematic and quantitative description of manifest content of communication" (Berelson 1952, p.18). Quantitative Content Analysis was initially used to analyse frequencies and proportions, based on classifying content in news features in media research. However, over time, it has developed to include qualitative inte rpretations of the content of texts (e.g. Burnard 1991, 1996, Graneheim & Lundman 2004, Schreier 2012, Graneheim et al 2017). Qualitative Content Analysis focuses on interpretation of both manifest and latent messages in various kinds of texts within a broad range of research, such as humanities, behavioural science, nursing, and public health. Still, its origin in a quantitative paradigm has consequences for the discussion about ontological, epistemological, and methodological issues.

The ontological and epistemological assumptions of Qualitative Content Analysis are sparsely discussed in literature, and have been considered to be unclear. On the other hand, it can be argued that the epistemological assumptions are open and rely more on the researchers' own standpoint, but with close links to both

phenomenological descriptions and hermeneutic interpretations. Content analysis includes interpretations varying in depth as well as in level of abstraction. However, it often starts on a manifest level, describing what is obvious and visible in the text (*phenomenological descriptions*), before moving into a more latent level of interpreting the underlying meaning (hermeneutic interpretation).

3. Designing qualitative research

THE QUALITATIVE RESEARCH CIRCLE

In this chapter we will demonstrate how the theoretical constructs behind qualitative research (as described in the previous chapter) translate into research design issues. As we have discussed earlier in the book, qualitative and quantitative research projects are carried out for quite different purposes. Qualitative research projects are undertaken to describe the context of phenomena and activities that we are interested in but also to discover new concepts, hypotheses and theories. Hence, in the latter sense, qualitative research is about *discovery* where an open mind to the unexpected as well as an awareness of the multiple, socially constructed realities are crucial. In contrast, quantitative research often focuses on *verification* of hypotheses that have been postulated before data collection has begun. We will come back to these issues later in this book when describing the different lines of reasoning that are referred to as *inductive/abductive* and *deductive* reasoning. The choice of these approaches in science has implications for the design of qualitative research projects and the most important ones are presented below.

Our presentation of qualitative research design issues closely follows the presentation of the naturalistic paradigm of Lincoln and Guba (1985). This chapter will cover some central concepts that have relevance for the design of qualitative research projects: natural setting, holism, the human research instrument, emergent design saturation and purposive sampling. We think most of these are common for qualitative approaches such a Grounded theory and Qualitative Content Analysis but will point out some differences between the approaches. At the end, three public health research projects will be described to illustrate design issues; two projects from Asia (Pakistan and Vietnam) and one from Latin America (Nicaragua). All three projects used a mixed team of researchers, with at least one insider (from the region) and one outsider (Swedish). Also, most teams were interdisciplinary.

Importance of context

The term *naturalistic* reveals that the natural setting is essential for qualitative research. The reason the natural setting is so central is that qualitative research aims at discovering the meaning that people themselves ascribe to events, activities or phenomena. Importantly, meaning does not exist in a vacuum but within a context. Thus, experiments carried out on people in a laboratory setting would not yield the same insights as observations of people in their natural environment.

Further, qualitative research is *holistic,* i.e. it assumes that the whole is more than the sum of individual parts. If you read a poem, the meaning of the whole poem goes far beyond the meaning of each word added together. In contrast, for certain quantitative research a *fragmented* view of reality might be sufficient, for example in a study of the association between blood levels of lipids and risk of cardiovascular disease, where other aspects of the human body such as bone density or renal function are less relevant. Because of the importance of context for the study of meaning among human beings, qualitative research must be holistic, taking a multitude of contextual factors into account.

As pointed out earlier, the ontological stand in qualitative research is that reality is socially constructed and therefore multiple, subjective realities exist. It is these subjective realities of our informants that we aim to discover in qualitative research. Hence, the meaning of a phenomenon that we may discover in a project is not regarded as an objective truth, true for all human beings. On the contrary, it is regarded as the subjective reality for those people included in the study, in that context.

Because the qualitative research is holistic and grounded in the context the research findings are not easily translated into the time- and context-free generalisations that we are used to from quantitative research. The issue of generalisability is thus complex, and will later be further addressed. Here it suffices to say that in qualitative research, results are often presented as time- and context-bound working hypotheses or emergent theories that are meaningful here and now. The results are therefore presented together with a thick description of the context to allow the reader to judge whether or not the results can be generalised to other settings familiar to that reader.

In short, the aim of qualitative research is to describe the subjective meaning that a group of people ascribe to certain activities or phenomena. This means that the research project must be designed so that the context is also in focus.

The human research instrument

When the aim of research is to grasp the subjective reality of others, it is of course impossible to start with well-defined *a priori* hypotheses, because these assume that the researcher already knows the reality of the others. To do good qualitative research thus means to start without *a priori* hypotheses and instead start with data (the inductive line of reasoning). Consequently, an open mind and an ability to flexibly adjust to the unknown are essential for the researcher. For this very reason the role of the researcher as the human research instrument is essential in qualitative research. As Lincoln and Guba (1985) point out, only the human/researcher can cope with the situation of changing demands and of being responsive, flexible, adaptive and a good listener. Hence, the researcher must be involved in every step of the research process from initiation of the process through data collection and analysis to report writing. This is in contrast to quantitative research, where the major decisions about study design are made before data collection begins. Consequently, the task of collecting quantitative data can be delegated to assistants with skills in data collection methods but without insights into the overall research process.

The epistemological stand of qualitative research is that knowledge is generated in interaction between people. Hence, knower and known, researcher and study participants are part of an interaction, they are interrelated and inseparable. The researcher will influence the study participants and vice versa. As in friendships, this interaction changes in character over the course of time. However, this continuing interaction between researcher and study participants is not seen as a problem or weakness within qualitative research. Rather, it is accepted as part of reality that has to be taken into account, explored, and learned from. The researcher must try to see how the interaction affects both parties and utilise this knowledge in the data collection as well as in the analysis. To do so, the researcher is expected to spend extended periods in the field exploring the context and getting close to people but also getting to know her/himself well enough to be aware of the effects on him/herself. Many qualitative researchers

keep reflexive journals, where they take notes of impressions and thoughts throughout the research process. These notes are utilised in the process of data collection as well as in the analysis.

The fact that the researcher is the human research instrument places high demands on the researcher personally. Not only is a limited set of professional skills necessary. The researcher must also make use of her or his personal as well as professional experiences in the research process. In addition to utilising her or his explicit experiences and knowledge the researcher should also make use of the *tacit* knowledge that all of us have. By tacit knowledge we mean the kind of unspoken, hidden, sub-conscious understanding we all make use of when we interpret activities and act within a given culture. Our language is simply insufficient when we try to describe our reality and therefore part of our knowledge remains unspoken. For example, in every culture there exists a shared understanding of how close we can stand to someone we are speaking with.

Gestures and other forms of non-verbal communication are therefore important in qualitative studies. Nevertheless, language in the form of words, terms, codes, concepts and so on is crucial, perhaps particularly when using Grounded Theory and Qualitative Content Analysis.

Emergent design

A consequence of the aim of qualitative research (to discover new phenomena within the subjective reality of the research participants) and the inductive/abductive line of reasoning necessary for this, is that the research design cannot be fully spelled out at the start of the project. Thus, a key feature of qualitative research is the *emergent design*. As Lincoln and Guba (1985) state, in quantitative research we may know what we do not know so that we can design studies to capture the unknown. In other words, based on existing knowledge and theories, we can state hypotheses for what may be in the black boxes that remain. Data are collected to verify whether hypothesised relationships actually do exist. In qualitative research we do not even know what we do not know! We are not even aware of what black boxes to look for. Instead, our aim must be to learn from every step of the research so that the process can become increasingly focused. Over time, a more focused study design emerges as a result of the increased understanding that the researcher gains through the research process. This is sometimes illustrated with a research circle or feedback loop, in contrast to the linear path of quantitative research (Figure 3). When doing Qualitative Content Analysis, the researcher usually collects all data before conducting the analysis. However, as the analysis proceeds, it may be obvious that variation in for example experiences, perceptions and opinions are thin, and therefore it can be necessary to continue the data collection.

A quantitative researcher may for example decide that the research problem is to verify whether past dietary intake has an effect on current breast cancer risk. A specific hypothesis is formulated (e.g., higher consumption of fruits is associated with lower risk of breast cancer) and data necessary to test this hypothesis are collected. Sometime after data collection is finished data analysis takes place. Of course a larger quantitative research project may consist of several components, where each component/sub-study yields insights that the next component builds on. Hence, overall there is a circle of identifying a problem, collecting data, analysing data, and collecting further data based on insights gained. Still, within each sub-study the study design always precedes data collection and data collection always precedes data analysis.

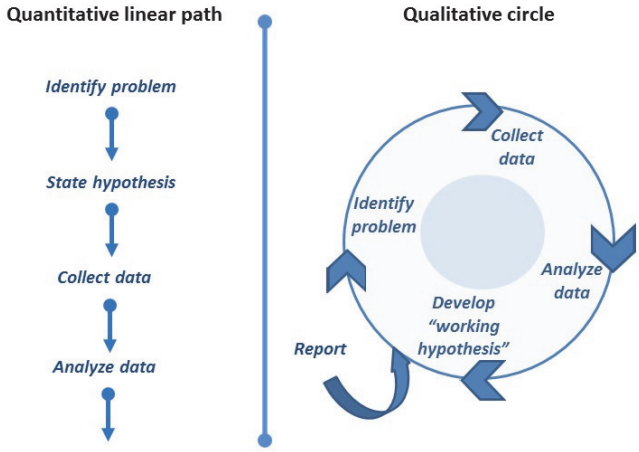


Figure 3. Research paths in quantitative and qualitative research.

A qualitative researcher initiates the research process based on a general description of a problem, which may have been identified jointly with the study participants or stake holders (e.g., how do women perceive their own health and health care options?). Some preliminary data are collected by the researcher her/himself (e.g., through broad observations, conversational interviews or focus group discussions with free listings). Data are analysed as they are collected and humble "working hypotheses", i.e., preliminary hypotheses, are generated. These are different from the quantitative hypotheses in that they are regarded as tentative and will be subjected to several revisions as the project progresses. Thereafter, it is possible to further define the problem, leading to more focused data collection activities. These may entail focused observations, in-depth interviews and focus group discussions. New data are further analysed, more refined "working hypotheses" are constructed and new insights into the problem are gained. The research circle continues. Even if only one method of data collection is applied (for instance in-depth interviews), the set of interviews will not be finished without several circles having taken place. Hence, not even within a sub-study the activities of study design, data collection, and data analysis are separated in time. Rather, data analysis takes place concurrent with

data collection, and study design emerges as further insights are gained through data collection and analysis. Of course, eventually, the qualitatively generated hypothesis may be tested using quantitative methodology.

It is important to note that the activities of data collection and analyses not only repeatedly follow each other; in the ideal situation they happen simultaneously. The processes of collecting data, reflecting on the research process and analysing new information most often melt into one joint activity in the everyday life of the qualitative researcher. Thus, what is learned from one observation or interview will influence not only the method of choice for the subsequent data collection activity but also the choice of the subject and the focus of the activity. Again, the importance of being the research instrument oneself and of using reflexive journals is obvious. Ample time should be allowed between each data collection activity (e.g., each in-depth interview) to allow for these preliminary analyses and reflections on the research process. A challenge for the qualitative researcher is therefore to ensure that data collection activities be allowed ample time, and not restricted to a limited time period.

The research circle is discontinued only when *saturation* or *redundancy* is reached. With this we mean the stage when one additional interview or observation does not add new information, when the results of the next data collection activity can almost be predicted. Of course, something new will always come up with each new data collection activity, but saturation refers to the point when substantial new information central to the emerging theory no longer emerges. Also, this is the stage when a pattern emerges that makes sense to the researchers and study participants; the emerging theory does not contain contradictory findings or too many loose ends. Not surprisingly, as with statistical analyses of quantitative data, it takes some experience to learn when enough is enough.

Sampling

In quantitative research we often use random sampling to select study subjects. This is sometimes also referred to as *probability sampling*, because everybody in the study population has an equal chance of being selected. Therefore, it allows us to express the likelihood (with p-values) that our results are the product of some biological or social processes as opposed to being produced simply by chance. This

demonstrates that our samples are statistically representative of their source population.

In qualitative research our sampling technique is instead called *purposive*. When we select a subject, we have a purpose for doing so. Again, the aim of our research is to understand from within, the subjective reality of our study participants. This will not be achieved through superficial knowledge about a large, representative sample of individuals. Rather, we want to reach people within the study area who can share their unique slice of reality, so that all slices together illustrate the range of variation within the study area. Purposive samples are thus considered theoretically representative of their source population, because they try to represent the range of variation among subjects in the study area. A small number of subjects may thus yield credible information. An analogy can be done with case studies in medicine. If we want to teach students what the effects of AIDS are on the human body, we would surely want to demonstrate a few severe AIDS patients, i.e., some men and some women, some of different ages, some with other diseases. Here, a random sample would add nothing beyond what the purposive selection of a few severe cases would do. On the other hand, if the question was "how common are these symptoms among AIDS patients?" a large random sample would be optimal. Thus, a purposive sample is optimal when the research question deals with how and why, and a random sampling is optimal when asking how many or how strongly several factors are associated.

Further, a purposive sampling technique is in line with the emergent design of qualitative research projects; of course also the sampling has to be responsive to what is being learned in the research process. Glaser (1978) uses the term *theoretical sampling*, rather than purposive sampling, defined as "the process of data collection for generating theory" whereby the analyst jointly collects, codes, and analyses his or her data and decides what data to collect next and where to find them, in order to develop the theory as it emerges. This process of data collection is *controlled* by the emerging theory. The criteria required when using Grounded Theory for theoretical sampling are two: purpose and relevance. The data chosen are supposed to inform the researcher about emerging categories of relevance for the research domain. Hence, in addition to what we summarised above about sampling in qualitative research (i.e., purposive sampling being

guided by a desire to select cases according to variation in certain characteristics), Glaser also emphasises the importance of feedback from emerging theories on the sampling scheme. In this way the process becomes truly abductive.

The research site may be selected through a process by which the largest area of relevance for the research question is first identified (Hudelson 1994). Thereafter, the variation within this area on important characteristics is evaluated and villages which represent the range of variation on some important characteristics are selected. A few of these villages end up being selected for the research project, depending on their willingness to participate as well as logistics.

A purposive sampling of individuals within the selected villages can be achieved through different techniques. *Snowball* or *chain sampling* means that the first selected subject is used as a resource for identifying the next subject. *Maximum variation sampling* is used when all subjects are chosen to be as different from each other as possible, the purpose being to evaluate whether patterns exist among different groups. *Extreme or deviant cases* can be purposefully selected to test emerging theories. *Homogeneous sampling* can be done within certain strata, e.g., among subgroups to be included in different focus group discussions. Finally, *convenience sampling* entails selecting those most readily available, and may be the weakest sampling scheme because of low credibility. Naturally, we should always be aware of the risk of enrolling the most talkative, willing and educated informants; this is a biased and narrow group that may provide a biased and narrow understanding.

Below, we provide three examples from our own research; The first example " Women's health in Pakistan" illustrates the qualitative research circle in general. The second example "Tuberculosis in Vietnam" the influence of a theoretical stand (gender theory) and the third one "Domestic violence in Nicaragua" illustrates the influence on design when performing action oriented research.

Three examples of different qualitative designs

Women's health in Pakistan

Our research on images of health among low-income women in Punjab, Pakistan, will illustrate the qualitative research cycle, with emphasis on the concurrent data collection and analysis. The research team consisted of two full-time researchers, both women but representing different research traditions. One from Sweden a nutritionist, was trained in anthropology and qualitative methodology and the other a Pakistani medical doctor with experience of public health work in the research area. Our pre-understanding of the general research questions came from local work experience and discussions with colleagues as well as from reviews of relevant literature.

Our sampling technique for selecting women in urban as well as rural areas can be described as *stratified purposive sampling* in that we wanted informants from specific strata: mothers of one to two or more than four children and among these two groups, mothers with predominantly daughters or sons. Women who were known to be cooperative as well as uncooperative and those who lived close to as well as far away from the health centres were selected. The main data collection activity consisted of in-depth interviewing. Each woman was interviewed twice, and several polite visits took place both before and after each interview to further build trust. In addition, health seeking behaviour was observed during visits in the field and focus group discussions were held at the end of the project with additional women in order to validate our findings.

The research which took place during an 18 month period, started with broad observations in the research areas as well as with several preliminary in-depth interviews. Thereafter, a suitable semi-structured interview guide for in-depth interviews was developed in the local language (Punjabi and Urdu). Immediately after each interview, the notes taken during the interview were expanded and transcribed. The first step in data analysis according to Grounded Theory was carried out by the two researchers together. No new interview was performed before the previous interview had been discussed and coded. Experiences from each interview were used to guide the subsequent interviews. Also, the selection of the next informant was based on the insights gained in the previous interview. Personal notes were taken continuously by the researchers.

After ten interviews had been performed, several days were devoted to more extensive analysis and summary of insights. The interview guide was further adjusted according to the insights gained. When 42 women had been interviewed, *saturation* was reached with respect to the first interview guide. Thereafter, a three month period was used for more extensive data analysis with the aid of computer programs. In addition, discussions

with colleagues and public seminars took place in order to increase our sensitivity to the research topic and to further validate our interpretations. The result of this intermittent analysis was the development of more refined "working hypotheses" which would be further evaluated in the next round of interviews.

A second interview guide was thereafter developed that built on these refined "working hypotheses". Again, each interview was discussed and coded immediately after completion. Thereafter, six months were spent performing a more thorough analysis.

Tuberculosis in Vietnam

From the start of the Vietnamese project, it was clear that the questions about tuberculosis (spread, treatment, compliance) related to both quantitative and qualitative methodology. It was also evident that differences between women and men would be of great importance. The reason for the latter is of course that tuberculosis is a disease of poverty and, in most cultures, carries a stigma. Due to the different social, cultural and economic positions that women and men have, the two sexes are likely affected differently by the disease. Hence, a gender perspective became crucial in the research

The research team was composed of Swedish and Vietnamese medical doctors and social scientists. To gain an initial understanding of the research problem, broad focus group discussions and in-depth interviews specifically about gender difference were organised in one district with staff and patients of both sexes. Insights gained were that tuberculosis was seen as a "dirty disease that access to treatment was difficult for financial as well as social reasons and that non-compliance with treatment was a considerable problem. All these aspects of the disease had different implications for men and women. Based on these findings, two sub-studies, one quantitative and one qualitative were planned and carried out simultaneously. The qualitative sub-study consisted of four focus group discussions in each province, with men and women, and patients and non-patients separately. The themes were access to treatment, compliance with treatment and living with the disease—all with a focus on why these issues may differ between men and women.

A major finding in the quantitative sub-study was that the time from first visit to a medical doctor to correct diagnosis (so-called doctor's delay) was significantly longer for women than for men.

Results from the focus group discussions also pointed to different interactions between staff and male and female patients. Hence, more focused in-depth interviews were designed and carried out with both male and female staff and patients in one province. The analysis this time focused on the importance of building trust and of having transparency when dealing with the

disease; both concepts differ for Vietnamese men and women because of their different situations in society. A theoretical model of the illness trajectory that highlighted the interactions among staff, patients and their families was developed.

Domestic violence in Nicaragua

The principal investigator of the research on domestic violence in Nicaragua entered the project with a background in grassroots campaigns and the women's movement. For her, it was crucial that the research project be done in collaboration with the stakeholders (the Nicaraguan network against domestic violence) so that use of information for action was guaranteed. Thus, the framework of action research guided the entire research process. The research team consisted of medical doctors and social scientists from Nicaragua and Sweden who worked jointly with a Nicaraguan advisory board that included members of the network. To initiate the process, we organised a national seminar on domestic violence in the capital of Nicaragua, Managua.

Participants at the seminar all agreed that hard numbers were needed, that could be used to convince Nicaraguan policy makers that the problem of domestic violence was serious. Hence, a quantitative survey was carried out to estimate prevalence, risk factors and physical as well as mental health consequences of domestic violence.

The results were published in international scientific reports as well as in brochures in Spanish that were distributed widely throughout the country. A national seminar was again organised jointly with the network, at which major findings were discussed.

At the end of the survey questionnaire, space was left for field workers to add their own observations and reflections as well as any longer stories told by the women. This information turned out to be highly useful in the interpretation of the quantitative information. Also, it helped identify three women who were selected for a qualitative substudy, using the narrative approach. Accordingly, the women were asked to tell their stories in chronological order, i.e., what happened early in their relationship, when the violence started, what their responses to the violence were, etc. The analyses of these stories focused on the sequence of events from initiation of violence to the termination of the relationship. The results were published in international scientific journals and they were also printed in a popular magazine read by many Nicaraguan women, together with photos of actors acting out the stories. This issue of the magazine was voted the most popular of the year by its readers. Many women appeared in shelters for battered women with this issue in their hands, saying that the same things had happened to them.

The same year, a bill suggesting a new law on domestic violence that would grant wider protection for battered women, was being drafted by Nicaraguan lawyers. Results from the survey were used when drafting the bill. Still, information on the opinions of Nicaraguans on the issue was lacking. To aid in the drafting of the bill, we organised 40 focus group discussions on perceptions of domestic violence with men, women, youth, lawyers, policemen, policewomen, doctors and women activists. For example, different verbal and physical acts were listed on cards and the groups were asked to rank these acts on a scale of no violence, light violence, moderate violence and severe violence. Thereafter, groups were asked to suggest suitable punishment for each ranked category Qualitative Content Analysis was used to organise the results according to emerging themes. The results were used by the network in its lobbying efforts for the law. Finally, a new law on domestic violence was passed unanimously by the Nicaraguan National Assembly in 1996.

COMBINING QUANTITATIVE AND QUALITATIVE RESEARCH

Can quantitative and qualitative methodologies be combined within one research study? This is sometimes referred to as methodology triangulation or multi-method research. There may be practical reasons why mixing quantitative and qualitative methodologies is problematic, such as funding constraints, lack of competence within the research group in both methodologies, or only one kind of information being requested. However, here we focus on theoretical reasons why mixing methods may be challenging. Different opinions exist and many articles have been produced that address this issue. Some that we have found especially useful are those by Rossman and Wilson (1985), Brannen (1992), Carey (1993), Ford-Gilboe et al (1995), Berman et al (1998) and Morgan (1998). We review their writings in the presentation below.

What are the theoretical issues at stake? Let us review important points about the qualitative research paradigm. As we have described so far, quantitative and qualitative research rely on different assumptions about reality (*ontological assumption)* as well as about the production of knowledge (*epistemological assumption*). We have noted how these assumptions led to very specific research design issues. For example, qualitative researchers benefit from applying an emergent design where they as the human instruments in the collection of data learn from every step of the research and adapt the research plan accordingly. They work with a smaller number of people, who have all been purposefully selected for their potential possibility to add to the emerging theories that are being developed. In contrast, quantitative researchers find it more constructive to start with well-defined hypotheses that are tested against data collected with standardised instruments. To increase internal and external validity quantitative researchers often work with large, randomly selected samples. Qualitative researchers collect data mainly through in-depth interviews, broad observations and focus group discussions. Quantitative researchers instead use questionnaires and standardised observations. Finally, qualitative researchers aim at generalising their discovered theory beyond their small sample through logical reasoning (*analytical generalisation*), whereas quantitative researchers working with survey results aim at generalising their descriptive information from their sample back to the parent population based on similarities in the demographics of both groups (*statistical*

generalisation). However, quantitative researchers working with more analytical designs (e.g., that allow for calculations of relative risks) likewise use logical reasoning when judging whether discovered associations may be true also beyond the source population.

At least three different views exist on whether qualitative and quantitative methodologies can be mixed or not. These are the purist perspective, the situationalist perspective and the pragmatist perspective. These will now be described in more detail.

Purist view

Researchers adhering to the purist view argue that there is a one-to-one correspondence between the theoretical paradigms that guide research design within each methodology, and the data collection methods. Therefore, the different methods are incompatible and mixing them will violate the paradigm assumptions, leading to less rigorous research. Consequently, purist researchers choose to work only within one methodology and to collect one kind of data (quantitative or qualitative).

Several scientists (e.g. Barbour 1999) further point out that qualitative traditions are so different in their assumptions that it may be difficult even to mix different qualitative traditions within one paradigm. Thus, the advice is to stay within one tradition!

Situationalist view

Situationalist researchers are similar to purist researchers in that they argue that each data collection method is tied to one methodology and one paradigm only. However, they appreciate both quantitative and qualitative methodologies and may work with both. Their main point is that the methodologies are appropriate for different purposes and can only be used to complement each other. Thus, within one research project different questions may be addressed with different methodologies. Of course each methodology should be used in its optimal way. Thus, sampling strategy and techniques for enhancing trustworthiness within each methodology must be observed in order to obtain high quality data.

It is important to note that situationalists are not suggesting any kind of synthesis between the two methodologies. In as much as data are

constituted by the methodology that generated them, they must be considered in close relation to the questions and theories that generated them. An integration of both kinds of data will not add up to some higher order of unity. Consequently, methodology triangulation in any true sense is hardly possible, because this assumes that data generated by different methodologies focus on the same research question and can be integrated. Instead, situationalists present qualitative and quantitative findings from their research projects separately, without integration, but with emphasis on their complementary relationship.

Morgan (1998) has constructed a model for combining qualitative and quantitative methodologies in the situationalist manner, that he labels "the Priority-Sequence Model". One dimension of the model is the principal methodology used and the other dimension is the sequence of using the two methodologies. Thus, four combinations are possible. These are illustrated below with four of our own research projects.

qual → **QUANT** (Principal method quantitative, Preliminary method qualitative). Within the framework of the "Västerbotten rehabilitation project in Sweden qualitative research interviews were performed with people on sick leave. Based on these qualitative research interviews a large quantitative survey was constructed and conducted.

QUANT → ***qual*** (Principal method quantitative, Follow-up method qualitative). In Tanzania a large epidemiological study of the prevalence and incidence of HIV/AIDS was initiated in 1987. Later, qualitative studies of risk behaviour were added so that mechanisms for social transmission and changes in prevalence and incidence could be better understood.

quant → **QUAL** (Principal method qualitative, Preliminary method quantitative). Within the Rönnskär smeltery in Sweden a small quantitative analysis of local newspapers' articles about the smeltery formed the basis for a large qualitative interview study. This study focused on attitudes among workers towards their work environment as well as on perceptions of their own roles as employees. This helped explain the silent acceptance among workers of the deteriorating work environment over several decades.

QUAL → *quant* (Principal method qualitative, Follow-up method quantitative). Focus group discussions and in-depth interviews were carried out with Vietnamese men and women in order to understand health seeking behaviour among tuberculosis patients. Results from this study, e.g., insights into differences between men and women with respect to stigmatisation, led to a quantitative study of health seeking patterns and responses to treatment among newly diagnosed tuberculosis patients.

In our research, the methodologies have sometimes carried equal weight. Also, often several follow-up studies are implemented simultaneously, meaning that both qualitative and quantitative studies can be follow-up studies to an initial pilot study.

Pragmatist view

Pragmatist researchers mix different data collection methods (for instance quantitative and qualitative approaches) within one study in order to address one research question. In contrast to the two previous perspectives, the pragmatist view is that no absolute connection between theoretical perspectives and data collection methods exist. Pragmatists agree that, theoretically, these strict divisions of methods according to methodology seem logical, but argue that in reality researchers rarely follow the guidelines for the two methodologies. Instead, the pragmatists suggest that using methods that are suited to the purpose of the research is more important.

Of course, some researchers simply disregard the theoretical issues and select what methods they want from each paradigm but this is not what we mean by a pragmatist view. "True" pragmatists address the paradigm concerns and have theoretical reasons for combining methods. Ford-Gilboe Berman and Campbell (1995) suggest that it is possible to use quantitative as well as qualitative data collection methods within any paradigm without violating basic assumptions, but find the critical paradigm most suitable (Berman et al 1998). Rather than adhering to the design issues we presented elsewhere (e.g., guidelines for sampling and trustworthiness) they suggest four other criteria for evaluating the quality of research quality of the data, investigator bias, quality of the research process and usefulness of the study. Quality of data is enhanced through the use of a diversity of

data sources and theoretical perspectives. Interactivity between researcher and participants is regarded as one of the most powerful aspects of the research, and this should be emphasised in the research design. The quality of the research process refers to the degree of change resulting from the research, including system change as well as personal change. Finally, usefulness of study findings is judged by the applicability of study findings to other similar areas.

Today a mixed method approach is seen as a research methodology on its own right (Creswell 2012), in which a pragmatist view is prominent. Within this approach efforts have been made to distinguish between the order in which data is collected and analysed (parallel, sequential or concurrent). The concept of triangulation of both data sources and analytical approaches is central with an on-going discussion about how to interpret and present complementary, convergent and divergent results (Östlund, 2011).

In conclusion, different stands on whether it is possible to mix methodologies exist. Still, every researcher must first learn about the assumptions of each paradigm in order to make an informed decision.

Trustworthiness

We sometimes say that we trust a person. With this we mean that his or her behaviour is predictable in that similar behaviour is expressed at different occasions and we believe that the person is not lying. A trustworthy person is someone who tells us the "truth" and does so consistently. What then, is trustworthy research? How can we judge what findings are worth believing?

Several criteria have been established within both quantitative and qualitative researchto judge their trustworthiness or rigor (Lincoln and Guba 1985, Sandelowski 1986, Rothman and Greenland 1998). These criteria capture similar issues within the two traditions but have actually been given different names to indicate that differences in applications and interpretations also exist. Still, some researchers choose to use names from quantitative research when discussing qualitative research.

Table 1. The four most common criteria for both traditions, together with the issues and questions that they address.

Question asked	Issue	Qualitative criteria	Quantitative Criteria
Have we really measured what we set out to measure?	**Truth value**	**Credibility**	**Internal Validity**
How applicable are our results to other subjects and other contexts?	**Applicability**	**Transfera-bility**	**Generalisa-bility**
Would our findings be repeated if our research were replicated in the same context with the same subjects?	**Consistency**	**Dependa-bility**	**Reliability**
To what extent are our findings affected by personal interests and biases?	**Neutrality**	**Confirma-bility**	**Objectivity**

Truth value

Truth value refers to the ability of the study to capture what the research really aimed at studying, meaning that the results are not simply the product of research design errors, misunderstandings, or influence of unknown factors. In quantitative research we talk about *internal validity* or lack of bias. A sample has been drawn from a source population and research has been carried out with members of the sample. Do our conclusions from the sample also pertain to members of the source population? If, for instance selection bias has occurred, our findings in the sample (e.g., an association between taking iron supplementation during pregnancy and having better iron status) have been generated by the way we have selected people from the source population (e.g., only the richer women can afford iron tablets and these have a better nutritional status in general). Strategies for increasing internal validity aim at identifying proper selection criteria and at distributing known and unknown factors evenly among different groups of study subjects. Means of achieving this include random sampling of subjects, randomisation of study subjects to different treatments at the beginning of the study and stratification of subjects during data analysis.

In qualitative research, truth value is assessed by *credibility* Credibility refers to our ability to really capture the multiple realities of those we study. How well have we understood and reconstructed the subjective reality of our study participants? Would our study participants recognise their own reality in our descriptions? Would other people, having read our findings, recognise this reality if later entering the world of our study participants? Strategies for increasing credibility include activities that bring the researcher closer to the study subjects as well as activities that help the researcher negotiate with the study participants about the findings. These have been described most extensively by Lincoln and Guba (1985).

Prolonged engagement refers to spending lengthy periods in the field. Of course, the longer time the researcher spends in the field, the greater the likelihood that the researcher will grasp the reality of those studied. Extended fieldwork allows the researcher to build trust with the study participants. Also, the researcher must acquire cultural competence and become familiar with the overall context and this takes time. Prolonged engagement should be combined with *persistent observations*, which translates into a heightened focus on issues relating to the danger of coming too close ("going native") and therefore being unable to separate one's own experiences from those of the study participants should be mentioned. This may be avoided by personal note taking and peer debriefing (see below).

Yet another technique for enhancing credibility is *triangulation.* In triangulation, we evaluate an issue with the help of perspectives that come from several different angles (compare with the determination of positions in navigation). Triangulation can occur in data sources, data collection methods, investigators and even research methodologies. Triangulation in data sources may entail collecting data from different people involved in an event, e.g., doctors and patients. Triangulation in data collection methods may include the combination of in-depth interviews with focus group discussions. Further, triangulation in investigators refers to the use of more than one investigator. Of importance for the qualitative research design is that the team be kept together and continuously involved in all stages of the research. Finally, triangulation in research methodologies refers to the combination of quantitative and qualitative methodologies for studying the same research topic.

Peer-debriefing, the presentation of preliminary findings to colleagues is a technique that helps the researcher to evaluate his or her own role in the research process. It also allows the researcher to receive input and critical comments from those outside the research process.

Further, *negative case analysis* involves the conscious search for data that do not fit the current working hypotheses within existing data as well as in planned data collection. The results of this activity may force the researcher to further revise the working hypotheses.

Finally, *member checks* are an activity that entails bringing back the results to the members of the studied group. As a first step, results and interpretations from a first in-depth interview can be sent back for reading or narrated back to the interviewee if a second interview occurs. This allows for clarification of information provided and for confirmation of the researcher's interpretations. As a second step, a preliminary report of the whole research project can be discussed with members of the studied group through the use of seminars or focus group discussions. However, caution should be given about the outcome of this process. Disagreement should not necessarily lead to full revisions of the report but can lead to critical evaluations of the research process. The preliminary interpretations, concepts and theories might be too abstract or threatening for the informants to grasp or agree with.

Applicability

Applicability is evaluated in quantitative research as external validity or *generalisability*. One may ask whether the prevalence of a disease or the association between a risk factor and an outcome found are applicable to subjects outside of our source population, i.e., to a larger target population? In survey research, external validity depends on how representative the sample is for the target population in terms of demographic characteristics. This limited sense of generalisability is called (e.g., Brinkman and Kvale, 2013 and Kvale (2017)) *statistical generalisability* by some. The level of generalisability depends entirely on the sampling scheme used and on the demographic resemblance between sample and target population. Using statistics, it is possible to make probability statements about the target population. Thus, the external validity improves the more the study sample resembles society at large. Examples of this type of generalisation include opinion polls where results from say 1000 people are used to predict

the attitudes of the general population. The 1000 people are carefully selected to represent all demographic strata in the population.

Several epidemiologists argue that for epidemiological research this narrow interpretation of generalisability is insufficient (e.g., Rothman and Greenland, 1998). We may have experiments where we want to generalise the results beyond the laboratory setting and we may have animal studies where we want to generalise the results to humans. Therefore, the type of generalisation done by many epidemiologists goes beyond demographic representation. For example, results from a study in northern Sweden on the association between dietary intake of vitamin A and later development of breast cancer are used to state a theory about the relationship between these two factors that should apply to all women, Swedish and foreign. Hence, the process involves moving from the particulars of a set of observations to the abstraction of a scientific hypothesis or theory that is more or less divorced from time and space. These abstractions apply to a broader domain of experience than that observed or sampled. This process is by some (e.g. Yin, 1994) referred to as *analytical generalisation*; it depends on judgement and logical reasoning. Actually, much of the discussion about analytical generalisations comes from case study research in the legal and clinical fields (Kennedy 1979).

How applicable are findings from a qualitative research project to other contexts (in qualitative research referred to as *transferability*)? As described earlier, qualitative researchers work with few cases to study a phenomenon in-depth meaning that their samples are small and demographically non-representative. However, qualitative researchers never try to obtain statistical generalisation. Hence, demographic resemblance between study sample and target population is of no importance.

Instead, qualitative researchers aim to achieve analytical generalisations and it is with this purpose that sample selection is carried out. Each subject is selected to contribute to the theory that is being developed. As Morse argues (1999) this ensures that the theory is comprehensive, complete, saturated and accounts for negative cases. The knowledge gained from this theory should fit all scenarios that may be identified in a larger population. Hence, the theory is applicable beyond the study sample to all similar situations, questions and problems, regardless of demographic characteristics.

The knowledge gained is not limited to demographic variables; it is the fit of the topic or the comparability of the problem that is of concern. It is the knowledge that is transferred to other contexts. In this way, qualitative researchers are no less able to generalise beyond their source population than are epidemiologists!

A more conservative stand on transferability is that represented by *naturalistic generalisation* (originally proposed by Stake, 1978). Proponents of this view are among others Lincoln and Guba, 1975, who prefer to end their research with the delivery of *working hypotheses*. According to this view, transferability claims can never be made by the researchers because it is never possible to know other contexts as well as that which one has researched. Instead, judgements about transferability will be made by the readers who are familiar with the new context. The task of the researcher is to provide a description of the research context detailed enough for a reader, familiar with the other context, to make an informed choice about transferability to that other context. This is what Geertz has labelled a *thick description* (Geertz, 1973). Case studies may here be an optimal presentation mode. The naturalistic generalisation thus rests on personal experiences of the researcher as well as of the reader and entails that the results are shared, in detail, with the audience.

Qualitative researchers who closely follow the theoretical reasoning behind the naturalistic paradigm of Lincoln and Guba may want to follow the naturalistic generalisation. However, we believe that in qualitative research in public health it is important that we go further. If we want qualitative research to be useful for the design of interventions, we should also provide analytical generalisations. Also, naturalistic generalisations may be more relevant in descriptive qualitative research, where findings are truly context-bound. In conceptual qualitative research, such as Grounded Theory the results have transcended the empirical data. Here, analytical generalisations make sense.

Consistency

Consistency or *reliability* of measurements is in quantitative research, a cornerstone of trustworthiness. If reliability is high, repeated measurements arrive at the same results. Reliability can be improved by the use of good measurement equipment and the training of field workers. In qualitative research, the issue of being able to repeat the

same data collection activity with similar outcome is absurd. The epistemological stand is, after all, that researcher and study participants are interrelated and inseparable, thus affecting each other. Consequently, consistency in qualitative research, i.e., *dependability* refers to the ability of the researcher to account for the constantly changing conditions of the phenomenon studied, for the interaction with study participants and for the entire research process carried out with an emergent design. Lincoln and Guba (1985) suggest that this ability can be evaluated through inquiry audits, where another researcher should be able to follow the "decision trail" used by the researcher. This auditor should check the process of the research - how records were kept and if decisions about the emergent design were sound. Different types of personal notes are important parts of the audit trail left by the researcher. Thus, it is not a matter of increasing or decreasing dependability but to make attempts to control for it.

Neutrality

Finally, in quantitative research *neutrality* refers to the ability of the researcher to maintain distance from the observed phenomenon (*objectivity*). The researcher does so by being a detached observer. Traces of this tradition can be seen in the common wording such as "….measurements *were* done…., ….significant differences *were* found", in scientific journals within the quantitative tradition, where the researcher is not presented in active tense. However, much criticism has been mounted against the possibility of a truly objective researcher, for instance from feminist researchers pointing out the male bias within many disciplines. In qualitative research, the closeness between researcher and study participants is entirely

unavoidable because both parties belong to one interaction; actually, this interaction is the basis for credibilityclaims. *Confirmability* refers to neutrality of the data rather than neutrality of the researcher. Confirmability is also checked by an inquiry auditor; if the research is confirmable the auditor should be able to find conclusions grounded in the data. Thus, the audit this time focuses on the end product rather than the process. Of course, audits for achieving dependability and confirmability are often combined into one activity.

Overall, keeping personal notes is an important tool that enhances all aspects of trustworthiness. This means that the researcher notes down impressions and decisions made along the research path. This allows for reflections on self and others and even becomes part of the emergent research design. It also allows a more detailed audit at the end of the research.

For an illustration of strategies for increasing trustworthiness, we again turn to the research on women's perception of health in Pakistan.

Women's health in Pakistan

Many activities in the Pakistani project were implemented to increase credibility. Both researchers spent 12 months full-time in the field talking with study participants and making broad as well as more focused observations (prolonged engagement). All informants were visited several times outside of the interview schedule to increase trust. Triangulation occurred on three levels. First, several kinds of informants were included, i.e., daughters-in-law, mothers-in-law, husbands and traditional as well as Western health care providers. Second, multiple data collection methods were applied, including in-depth interviews focus group discussions and observations. Third, the two researchers represented outsiders and insiders (one Swedish and one Pakistani), different disciplines and different religions. Both took part in the planning, data collection, interpretation and report writing phases of the research project.

Peer debriefings took place through seminars provided for public health workers, paediatricians, gynaecologists and women's groups in Pakistan as well as in the US and Sweden during the research process. Input from these seminars was used in refinement of the research design and to help interpret the results further. At the end of the project, preliminary results were brought back to members of the community through four focus group discussions where non-study participants were given an opportunity to react to the interpretations (member checks). Feedback from these meetings was incorporated into the final report.

Much contextual information was collected and provided in the reports to allow readers to judge transferability (naturalistic generalisation). Further, a discussion was provided in the articles about what aspects of the results that may be transferable beyond the source population (analytical generalisation).

Finally, extensive notes on important decisions along the research process were taken and kept in a separate file (audit trail). Also, the researchers kept personal journals where general impressions and reflections were recorded.

POL-ETHICAL CONSIDERATIONS

When it comes to ethical considerations, public health research differs from biomedical and clinical research in several important respects. Its focus is mainly on the distribution, determinants and consequences of health and disease patterns in populations rather than on individuals or patient groups. In this book we describe how, with the help of qualitative methodology, we try to understand the underlying mechanisms behind these patterns both on the individual and community level. Thus, public health research has a clear political aspect in the way we choose which health problems to study and the aspects of the problem that we decide to focus on. The pol-ethical (political and ethical) considerations in these choices are to a large extent based on our evaluation of what a fair and just society should look like in terms of health.

However, the ethical guidelines for research conduct that have been developed for medical research involving human subjects are more individually oriented. They are mainly a result of the debate following the horrifying medical experiments performed during World War II, the overall motive being to defend the autonomy of individuals and to protect human subjects from any harmful effects of research. This is sometimes a problem for public health research, when ethical committees base their assessments mainly on these bio-medically and individually oriented guidelines.

Overestimating the potential risk of doing harm can create "paralysis" in areas concerning serious health problems that are important to study. Of course respect for individuals' autonomy and protecting informants from harm should always have high priority but the risks have to be realistically weighed against other principles, both from a societal and an individual point of view.

The most important international code applied in biomedical research today is the Declaration of Helsinki, from 1964, which has been continuously revised (World Medical Assembly, 2018). But for public health research the more relevant codes are found in the CIOMS/WHO's Guidelines for Biomedical Research involving Human Subjects (CIOMS, 2002) supplemented with specific International Ethical Guidelines for Epidemiological Studies and for Good Epidemiological Practise (2016). However, to find guidelines

specifically addressing qualitative methodology we have to turn to guidelines for social sciences developed by for example the American Sociological Association (2018). In Sweden ethical guidelines for research concerning good research practice for both qualitative and quantitative studies have been presented and summarised by the Swedish Research Council (2017).

Basic ethical principles

Most ethical guidelines assume some consensus on four basic principles for conduct.

The *principle of autonomy* has its roots in liberal ideology and implies that all persons have a right to decide about their actions and resources and that society has a moral duty to respect this right. For persons who are not fully autonomous the principle requires that they be protected from risks and adverse consequences of research and even sometimes excluded from research. This principle directs us to guidelines on openness self-decision, confidentiality, respect for privacy, and includes the demand for informed consent by the participants.

The *principle of beneficence* is grounded in the utilitarian view that we have a moral obligation to do as much good as possible, to maximise any benefits and minimise any risks for the general population and for the individual. This principle calls for research and asserts that people have a right to know about health risks in society.

The *principle of non-malevolence* is sometimes referred to as the *principle of no harm* which has been associated with the Hippocratic Oath formulated to regulate the doctor/patient relationship. We have a moral obligation to heal and at the very least, to not harm. In research, this principle implies respect for a person's integrity and it strives to prevent all possible harm to subjects that might result from participating in the research.

The *principle of justice* requires that human beings be treated equally unless there is a strong ethical justification for treating them differently. The distribution of benefits and burdens should be equitable. It can also imply a moral obligation to favour the worst off in society when allocating burdens and benefits, and to always aim at greater equity. Applied to public health research this principle would

prescribe studies that favour those worst off, when choosing the research principals.

In our view the above principles can be divided into two types; the more individually oriented (autonomy and no harm) and the more collectively oriented (beneficence and justice). Most people probably agree upon the relevance of all these principles. However, it is also easy to see that there will be a conflict when one of the principles can be used in arguing for one way of acting while another will support another way of acting that excludes the first.

The risk of harming or threatening people's autonomy can sometimes be used to defend no action/research, while the principle of beneficence primarily can be used to argue for action/research. The principle of justice more directly acknowledges the underlying political standpoint and can therefore openly be used to promote studies focusing on the equity aspects ofa problem. As researchers in public health we need to be aware of these different principles and be able to justify the way we balance them and on which grounds.

In this chapter we discuss ethical considerations specifically in relation to the use of qualitative methodology in public health research. Qualitative methodology is often regarded as less threatening on an individual level, because of the implied interaction between informants and researchers and the interest in viewing or understanding the "real world" of the informants. On a societal level it is also often argued that qualitative methodology empowers people through their active participation in the research process. However, even if this is true, there are ethical considerations to be taken in all research, some from a more pol-ethical angle and some from a more individual point of view.

Overall assessment and the need for a study protocol

There are ethical or moral issues related to all the stages of a qualitative study. Initially, in deciding on the purpose of a study you have to consider how the study will contribute to general knowledge and who will benefit from the study results (beneficence, justice). The first overall assessment is to weigh the importance of new knowledge in a field against the price of collecting that knowledge (autonomy, no harm). A *research protocol* can be an important tool for researchers to justify their study and to demonstrate the appropriateness of the

proposed methods as well as to demonstrate the investigators' scientific ability and skills. The protocol should include reflections on the ethical principles and specifically indicate how potential harm for the participants will be minimised. This is important not only for the formal ethical evaluation of a study and funding agencies but also for the research group's documentation and own evaluation.

Designing the study

Already in designing the study you have to consider how to obtain informed consent and ensure confidentiality, what the possible harmful consequences for the study participants are and how to view the role of the researcher.

The exploratory nature and "emergent design" of qualitative research can create some difficulties in complying with the requirements of a detailed study protocol regarding issues like the length of interviews questions to be posed and number of informants. As a researcher you will have to describe the qualitative research process and consider what this might imply in terms of ethical considerations.

The guidelines tell us that the study participants should have enough information to make a voluntary decision of whether to participate or not. It should also be made clear that they have the right to withdraw at any stage of the study. But the question of who should actually provide consent is not that easy. What about studies performed in a small community, in schools or at workplaces? Is it the village leaders, the children, the teachers, the parents or the employers that should give the consent? What about the amount of information needed to make a truly informed consent. Must all the details about the study be disclosed? If you reveal too much of the information you might destroy your possibility of getting trustworthy data.

In our collaborative studies we are often faced with cultural differences in viewing ethical dilemmas. Informed consent in the Swedish setting is most often a question on the individual level, while in other countries the main effort is devoted to informing the community and getting the consent of the community leaders. What the guidelines tell us is that even if we have consent on the community level, the participants themselves should always be asked.

However, you can never be sure that this consent is really voluntary, if the cultural norms are that people obey their superiors.

In all research the role of incentives for participating is an issue. The balance between reimbursement for expenses or time spent and true voluntary participation is difficult, especially in settings where resources are limited. Even a soda or two can create a standard where other research groups are not welcomed if not offering the same things. The only possible advice is that the use of incentives should be considered and justified in the design of the study.

People may also agree to participate in research in the hope of other immediate gains, such as increased knowledge and information about subjects of great concern, such as HIV/AIDS. From an ethical point of view this form of "involuntary" participation may not be so serious. However, participants' wish to be taught rather than sharing views might influence, for instance, the flow of a focus group discussion, and decrease the quality of the information.

Concerning observational studies, the issue of consent is even more difficult. To demand total openness and informed consent would in some cases make certain studies impossible to perform. If you study secret or sensitive behaviours the information and openness about the aims would probably change the behaviours of the studied groups and thus make the results unreliable. More effort then has to be put in arguing for the need for using covert participant observational methods in order to gain new knowledge in this area. An observational study on "sexual negotiations among homo- and bisexual men regarding safer sex at erotic oases" (Henriksson, 1999) is an illuminating example of this dilemma. In this study the use of the participant observation method was justified in the following way; 1) There is very little research on homosexuality in Sweden, 2) The subject is controversial and there are large differences in views between outsiders and insiders and, 3) The meetings at erotic oases are very much an unknown phenomenon.

In our Tanzanian collaboration we used observers acting covertly in a study on the social transmission chain of HIV-infection. The aim was to explore how patterns of sexual networking and norm systems in defined high-risk environments interact in the social transmission

route of HIV-1 infection. Our report included a description of the ethical considerations involved.

> *The research questions and methods demanded permission or approval of the study on several levels. The district administrative officer, as well as the village chairman was informed about the overall aims of the study and of the use of observers. They gave consent to perform the study and to the methodology used. The observers acted covertly which was judged the only possible way to get access to information on the process of sexual networking in the village. Studies of sexual behaviour have experienced difficulties with both over and underreporting when relying only on respondent's information. When interviews were performed by the research team the purpose of the study was explained and the participating individuals gave informed consent Anonymity in publishing the results was guaranteed by changing names and places mentioned in the narratives*

Most ethical guidelines nowadays recommend as much openness as possible. It is too difficult in the long run to have secrets and the influence on participants is often exaggerated. However, the difficulties for observational studies are recognised. It can be acceptable to abandon the rule of informed consent and openness if there is a risk of jeopardising the aim of the study. Patton (1990) mentions the need to act covertly during a period in order to grasp what is happening in a programme, when for instance there is suspicion of a corrupt system. But if covert observations are used the researchers are often asked to try to find alternative ways of informing about the study after its conclusion, maybe as part of a feedback procedure aiming at determining the credibility of the results.

However, even if the observations are made overtly you have to consider how much and when to inform about the actual aim of the observations. The researcher may only provide general themes of the investigation or he/she may present more detailed descriptions of working hypotheses. This dilemma of what degree of honesty about the study's purpose is of course faced by quantitative researchers as well. Again, ethical consequences have to be considered together with the effect that different degrees of openness may have on the research process.

Consequences of the study

The principle of non-malevolence or doing no harm is to a large extent related to confidentiality and privacy. It implies that the collected data will not be reported in such a way that persons could be identified. If identities are revealed the participants should explicitly have given their agreement. In interview studies and focus group discussions the publication of identifiable parts or whole interviews risks harming the participants through negative attitudes and actions from society, friends or family. Much effort must therefore be put into eliminating or disguising identifying information in the data. It is important to emphasise that it is the responsibility of the researcher to foresee possible consequences for the participants, and not simply rely on the consent of the interviewees/participants themselves.

Confidentiality/privacy does not only concern the promise that the research results will be published in a way that identification may be impossible. It also has implications for the handling of the data sources. Agreements on who has access to the data and on how to deal with the transcripts of interviews tapes or other data sources must be stated and developed. Real names should never be used in transcripts or summaries of the material. People involved in the research process should sign an agreement regarding confidentiality and documents, tapes and videos should be safely stored out of reach of outsiders.

In qualitative research the reporting of "thick descriptions" is recommended to provide the contextual basis for the analysis and to increase the trustworthiness of the study. However, the principle of no harm forces us to consider the fact that interview studies or observational studies aimed at describing beliefs, attitudes or behaviour among certain groups in great detail risk encouraging people to make generalisations and thereby sometimes increase prejudice. Thus, you should carefully consider how your results might increase stigmatisation of already vulnerable groups, if these are identifiable because of the thick descriptions.

Performing interviews or focus group discussions depends on "the human as an instrument" both for gathering and analysing data. The skills needed to be a good interviewer or moderator is extremely important in minimising the potential harm for informants.

Interviews are interventions and they affect people. They lay open thoughts, feelings, knowledge and experiences. They affect the persons being interviewed and leave them knowing things about themselves that they did not know or were not aware of before the interview. If performed in a professional and sensitive way, interviews and focus group discussions can often have a healing effect and are perceived as beneficial by the participants. They give the participants a chance to share life events and tell a story to an interested listener, thus contributing to new knowledge and a possibility for positive change. However, you must also be aware that they can cause potential harm by increasing psychological stress when discussing sensitive issues and encouraging self-disclosure. As an interviewer you must also be aware of the limitations of your promises of, for instance, confidentiality. Some information must be handed over to the police and you may be obliged to witness in court.

In our collaborative research on domestic violence in Nicaragua many of these dilemmas were obvious. It was necessary for the research team to arrange for counselling possibilities for women in need and to put extra emphasis on securing a confidential situation during the actual interview.

> *Special measures were taken to ensure the safety of the respondents and interviewers. Interviewers received special training on domestic violence and crisis management. All interviews were carried out in complete privacy. Interviewers initially presented the study to the household as a maternal and child health study, and the actual subject of the interview was revealed only to the woman herself. Alternative questions were agreed upon in advance and used if someone arrived during the interview. If it became impossible to achieve privacy, or if the woman became too distressed to continue, the interview was suspended and resumed at a time and place chosen by the respondent. An educational pamphlet on domestic violence was offered to all informants, and women with violence-related problems were offered referrals for free psychological, health or legal assistance. Over one hundred women were referred for mental health services, and three women for medical or legal services (Ellsberg et al., 2000).*

In focus group discussions a special threat to privacy/ confidentiality arises in that the participants learn things about each other. There is a risk that during the flow of a discussion people will disclose things that they later regret. Even if you as a researcher can claim to keep the information within the research group, you cannot make promises on behalf of the other participants. The best way to deal with these problems is to make the group aware of the risk of

over-disclosure and ask the group to discuss in advance how they will limit what they disclose to others.

The principle of doing no harm also has implications for the interviewers/moderators themselves. It is essential to debrief them and to help them process and deal with the difficult things that have been discussed during an interview. Their experiences, observations and feelings can become part of the research data.

In the Nicaraguan study of domestic violence, weekly debriefing sessions were held with the field workers to discuss technical concerns related to the fieldwork and to provide emotional support. The fieldworkers were overwhelmed with the difficult life stories that were recounted and the debriefing sessions became essential for their mental wellbeing.

> *We spent days thinking about that poor girl and how we left her, without being able to help her. All we did were giving her the pamphlet and leave. The interviewers were very upset, because they would think about their daughters, and that tomorrow something could happen to them and there would be no one there to help them (supervisor) (Ellsberg et al., 2001).*

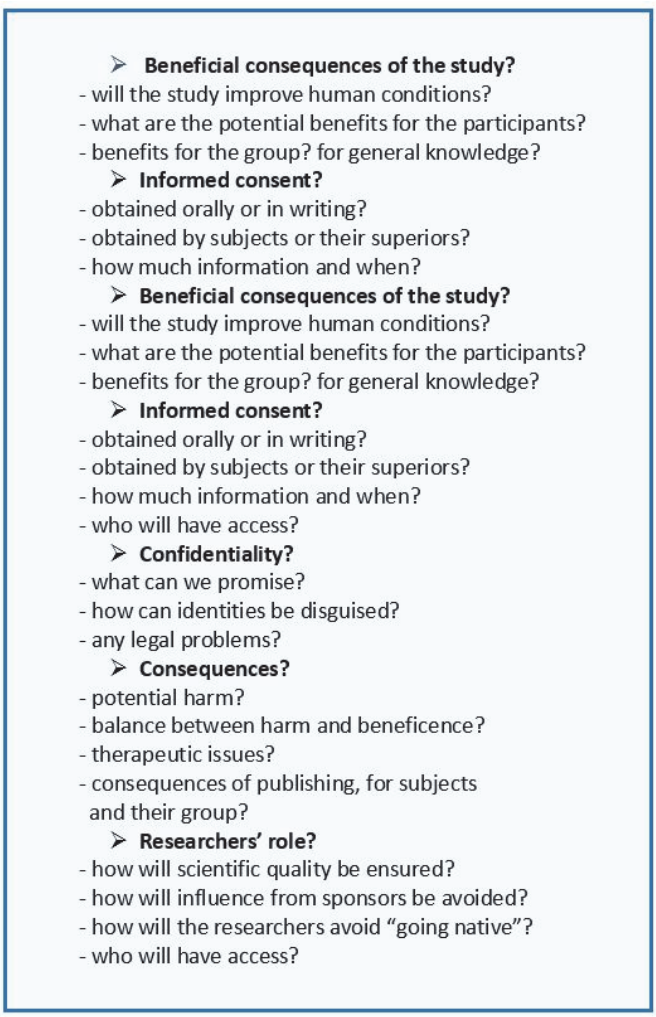
At the same time, the research experience became a turning point for some of them who had experienced violence themselves.

> *[when I joined this study] I felt that I had finally found someone I could tell everything to, someone with whom I could share my burden, because it's horrible to feel so alone. Now I feel that a weight has been taken off me… I feel relieved... (interviewer), (Ellsberg et al., 2001).*

In observational studies the principle of no harm has somewhat different implications. The researchers interact with the individual under "normal" conditions in the same way and under the same circumstances as everybody else in the study population. There is no presumption of harm. The anonymity problem is normally not there, because observers are not expected to obtain names or other identifying information from the studied individuals. However, as mentioned before, describing in detail the norms and attitudes of certain groups can lead to unintended consequences, like increasing prejudice or stigmatization. The principle of no harm also relates to the need to protect the observers. If they are recruited from the

community or from the group being studied they are at risk of suffering if their mission is disclosed.

In summary, ethical considerations in qualitative studies have to be taken into account during the whole procedure of the study and discussed specifically in relation to informed consent, confidentiality and consequences. We feel that the questions that Kvale recommends us to address before starting an interview study are applicable to qualitative studies in general (adapted from Kvale and Brinkman, 2009).



4. Data collection in qualitative research

A TOOLBOX OF METHODS

Any type of research method refers to the particular procedures used to gather information. As a public health researcher you have a basic choice between three different approaches to obtain your information: listening to or questioning the research participants observing people and examining records. Depending on the research questions and the procedures used in conducting the studies these methods may generate information to be analysed quantitatively or qualitatively. In this chapter we focus on the procedures for collecting information suitable for qualitative data analysis.

The qualitative researcher has a varied toolbox of methods to choose from. Many good "cookbooks" exist that describe different types of qualitative data collection methods. We have chosen to present some of the most commonly used techniques - those that constitute the backbone of most qualitative research projects - namely observations, interviews and focus group discussions. At the end of the chapter some additional methods that we have found useful are presented, such as rapid assessment procedures (RAP), free listing pile sort and ranking.

Often, several data collection methods are combined within the same qualitative research project. One reason is that different methods are suitable for different kinds of information sought. Depending on the research aim or stage of the research, we may need initial broad information or specific in-depth information; we may be looking for conscious (explicit) or subconscious (tacit) knowledge and we may want to learn what is socially acceptable to express or what is too

personal and sensitive. When the research aims at discovering patterns of actual behaviour, observations as well as individual or group interviews about typical behaviour are suitable. Beliefs and attitudes are better accessed through individual or group interviews or even free listing pile sorting and ranking. If the spread of beliefs in the population is in focus, structured observations or surveys on representative samples are most appropriate.

Another reason for using multiple methods is that we want to increase trustworthiness through triangulation of different methods. Finally, ethical implications may affect the choice of method. For example, interviews may be more suitable than participant observation if the studied activity is illegal.

Becoming a good interviewer observer or moderator in a focus group discussion depends on personality as well as on training. Some people seem to have an innate capacity to quickly establish trust with informants and to encourage them to share thoughts and experiences However, much of the skills come from good knowledge and experience of the data collection techniques in combination with thorough preparation. As Patton says (1990, p 201), "A scientific observer cannot be expected to engage in scientific observation on the spur of the moment any more than a world class boxer can be expected to defend his title spontaneously on a street corner or an olympic runner can be asked to dash off at record speed because someone suddenly thinks it would be nice to test the runner's time". We all require training and mental preparation to do our best. Below, we provide advice on training and mental preparation for the different techniques in our toolbox.

Observation

Observation, especially participant observation, may be what many people associate with qualitative research. We have all read about anthropologists spending years as members of a foreign culture, carrying out participant observation. Actually, one of the first to emphasise the need for systematic observation was Bronislaw Malinowski. His stance was a reaction against traditional "arm chair" anthropology, where the researcher was far removed from the people being studied. Instead, the task of the anthropologist should be to get close enough to the study subjects to grasp their point of view and to see their vision of their world. Malinowski's detailed descriptions of participant observations during his fieldwork in the Trobriand Islands (Malinowski, 1961) were ground-breaking. The technique was subsequently used by his students in anthropology all over the world. Together with interviewing, observation is today the most commonly used tool in qualitative methods.

Of course, we all make observations in our daily lives but to do them as a qualitative researcher means to do them systematically. Without training, our observations will heavily reflect our personal choices of what to focus on and what to remember. To become a good observer you need to learn techniques that help you handle the subjectivity in what you focus on and what you remember. As Patton comments (1990), training to become a skilled observer is a no less rigorous process than the training to become a skilled quantitative scientist.

You need to heighten your sensitivity to details that you would normally ignore and at the same time be able to focus on phenomena of true interest to your study. Also, you must have a good system for taking field notes.

Observation can be used primarily for four purposes. Firstly, broad, general observation may be used as the starting point in a qualitative research project to get acquainted with the setting and the new context Secondly, more focused observation may be used to evaluate whether people really do what they say they do. Thirdly, observation may be used to access the tacit knowledge of subjects, that is, the subconscious knowledge that they would not be able to verbalise in an interview setting. Fourthly, observation may be used to capture a phenomenon and its specific components in greater detail, for later analysis.

Patton (1990) describes several important dimensions of observation that allow the researcher to make informed choices. Of course these dimensions all represent continuums, where the researcher can take a position at any point between the extremes. Certainly, the position of the researcher may change several times during the process of research. However, decisions with respect to these dimensions form an important part of the planning stages of the observation where information needs, practicalities and ethical issues are taken into account.

Most importantly, the role of the researcher could either be as full participant observer or as a passive onlooker-observation as an outsider. In participant observation the researcher is able to develop an insider's view of what is happening through a mix of personal experiences observations and informal discussions. Participant observation is "…a conscious and systematic sharing, in so far as circumstances permit, in the life-activities and, on occasion, in the interests and effects of a group of persons" (Kluckhohn 1940). Challenges in participant observation are to be able to combine note taking and participation, and to participate enough but still avoid "going native". The latter refers to the situation where researchers cease to collect data and become a full member of the community they study. Patton suggests that the ideal is to negotiate and adopt that degree of participation which will yield the distance needed to

gain the most meaningful data and interpretation. Full and complete participation has no value in and of itself.

Participant observation is the most suitable tool for evaluating unknown events or hidden subcultures, where interview guides would be difficult to develop due to lack of insights into the phenomena. Also, participant observation is highly relevant when subcultures to which not everyone has access are explored. However, in some instances full participation may be impossible for ethical legal, political or social reasons. The strengths of participant observation are that it facilitates all other data collection because the community becomes used to the presence of the researcher. Also, it improves the ability of the researcher to grasp the culture and to formulate questions that are culturally appropriate. The challenge of participant observation is the enormous amount of data that may be generated and the time lag between observations and note taking that is likely. Also, participant observation is time-consuming and requires good skills in the local language, good memory and good ability to take notes.

Also of importance is whether the researcher wants to be known (overt) or unknown (covert) to the people studied. Of concern here is that people who know that they are studied may change their behaviour. If so, only covert observations would yield trustworthy data. For this reason, many famous projects have relied on covert observations. One such example is Günter Wallraff's investigations of immigrant workers' conditions in Germany (1977). Today, people are more aware of the ethical aspects of performing covert observation. Some people take the stand that covert observation is never justifiable; people should always be given an opportunity to consent to research being done on them. At the other extreme are researchers who argue that it is of great importance to evaluate all consequences of covert observation from ethical standpoints and that some covert observations may be deemed ethical. Still, it must be emphasised that if the observational period is long enough, eventually most people will revert to their normal behaviour. Few people have the capacity to keep up a "perfect" artificial behaviour for extended periods! Hence, the need for covert observations may be eliminated by extended, repeated overt observations.

Finally, observation can vary in duration and focus depending on the information needed. Towards the more quantitative end of the continuum we have repeated, short observations of single behaviours, for instance minutes spent on child care in the home. Field workers may be hired to observe this behaviour during short intervals, e.g., one hour at a time. The observations may even be spot checks, for example is the drinking water barrel covered in the house? These kinds of observation data are later processed statistically. Pre-requisites for structured observation are careful planning and selection of what to study (i.e., who and what behaviour). Hence, focused observation usually requires that broader observation has already been performed. Towards the other end of the continuum we have the more holistic observation of behaviours or sequences of events where the researcher as an instrument is more obvious. It is this kind of holistic observation that we focus on in this book. At the start of projects, broad observations may be warranted to learn more about the setting before further activities are planned. Spradley (1979) talks about this as descriptive observation "Grand Tour". Further into the project, narrow observation of a single behaviour may be optimal for evaluations of specific working hypotheses. This kind of observation is referred to by Spradley as focused or selective observation. Most likely, the researcher will be using both broad and focused observation throughout the entire project in response to changing information needs as a consequence of the emerging design of qualitative research projects.

In everyday life, we consciously as well as unconsciously ignore information around us to avoid information overload. Only in situations where we arrive as total strangers in a new place do we take in most impressions uncensored. As we get acquainted with the new environment, we learn to block out information that is not necessary for leading a normal life. For example, the first time we learn to drive a car we are fully aware of all steps needed to change gears. As experienced drivers, these steps are given no attention and instead we can focus on traffic signs and traffic flow. As qualitative researchers, we need to reverse this process and overcome selective inattention and instead become as attentive as the inexperienced driver. Again, mental training is the key to success in this process. For example, the researcher can decide beforehand what dimensions of the social situation to pay attention to in greater detail. It is possible to focus

on any one or a combination of the seven dimensions presented below (adapted from Spradley 1979):

- space (the physical place or places)
- actor (the people involved)
- activities (the set of related acts people do)
- object (the physical things that are present)
- time (the sequencing that takes place over time)
- goal (the things people are trying to accomplish)
- feeling (the emotions felt and expressed)

In a study on the use of private pharmacies in Vietnam the researcher combined the dimensions space and activity (what activities take place where in the pharmacy?). Later the dimensions time and activity were combined (in what order do activities take place?). Of interest to the research was the interaction between pharmacists and clients with respect to information on drugs given (Chuc and Tomson, 1999).

Selection of observation site must be done with care. It must be possible to observe the phenomena within a defined geographical area; it cannot be an activity spread out over a large area as this will not be feasible for the researcher to cover in a systematic fashion. Also, the phenomenon of interest must be one that the researcher has access to as an observer, and of course activities taking place in public space are the easiest to observe. Activities in non-public places, such as prisons, may be more difficult to get access to. It is also an advantage if the activity takes place frequently so that multiple observations can be carried out. Finally, it is important to consider whether the presence of a researcher will be seen as obtrusive, as could be the case with a funeral.

No easy guidelines exist for optimal sampling and sample size for qualitative observations. Sampling of social situations is purposive and different strategies like snowball sampling or maximum variation sampling may be applied. Observation is carried out until saturation has been reached, i.e., where no substantial further information is generated by further observation. The point at which this is reached varies of course with the complexity of the research question. Also, for observation it is important that data collection take place at the same time as data analysis so that saturation can be identified in a proper way.

Data from observations may be analysed with different kinds of techniques, depending on research question and type of data collected. Sometimes broad, initial observations have been performed to provide a thick description of the study site. Here, the information is simply summarised and presented as a rich narrative. Strauss and Corbin (1990) use an example from an observation in a restaurant. This is the famous lady in red. She works at the restaurant and the researchers observe her and try to inductively determine just what her job is. They identify characteristics and work tasks that they give labels such as watching, information passing, attentiveness, unintrusiveness, efficiency, monitoring, timing of service, customer response, providing assistance, experience, conferring, and information gathering. From this, Strauss and Corbin develop three categories: *"Food Orchestrator"*, *"Types of work for Assessing and Maintaining Work Flow"*, and *"Conditions for being a good Food Orchestrator"*. Illustrations of working with properties and dimensions within Grounded Theory also build on the lady in red case.

An example from health research is the study on care of ventilator-dependent children in the USA performed by Wilson et al (1998). Non-participant observations of the development of a caregiver-child relationship were performed in a summer camp for ventilator-dependent children. With the aid of Grounded Theory, a model for the caregiver-child relationship was developed.

An example from nursing research, within Swedish dementia care, focused on the interaction between a woman with dementia and aggressive behaviour and her professional caregivers (Graneheim et al. 2001). Two observers, representing an outsider and an insider perspective, performed participant observations. They followed the woman throughout her activities during morning toilet and breakfast. Subsequent to each observation the researcher held a reflective dialogue with the participating caregiver. The texts were subjected to Qualitative Content Analysis and revealed that the woman fought to protect her human territoriality, i.e. her needs of privacy, autonomy, identity and security.

Interviews

Interviews can be done with one person individually or with groups of people. Interviews done with groups, i.e. focus group discussions, are presented separately and this section deals with individual interviews only. These often provide the main material for qualitative analysis.

Individual interviews may be done on a large number of people to yield standardised answers that are later analysed with the help of statistics. We refer to these interviews as closed, quantitative interviews or survey interviews. A characteristic of quantitative interviews is that they are carried out mainly on the researcher's terms; the language used is that of the researcher and the informants may even have to choose among pre-coded answers only. As the aim of qualitative research is to access people's own perspective, these types of interviews are not suitable. Instead, qualitative research relies on informal conversational interviews or open-ended interviews. These are sometimes referred to as in-depth interviews or qualitative research interviews.

In anthropology, it was Franz Boas who first emphasised the need to access people inside, *emic* perspective (Boas 1943). Boas argued that

if we really want to understand people on their terms, we need to collect verbatim transcripts of what has been said so that we can build our analyses on their native terminology. Hence, Boas emphasised in-depth interviewing in which native language is used.

Different kinds of qualitative research interviews exist. Informal conversations are initiated spontaneously and follow the normal flow of conversations. The researcher may take short notes during the conversation or write them down soon afterwards. People usually feel more open to talk under these circumstances and unexpected information may come up. These kinds of interviews are often preferred at an initial stage of the research. A disadvantage of informal conversations may be that data are not collected systematically nor tape-recorded. Information provided in an informal conversation can of course later be recorded more thoroughly if the informant is willing to provide it again in a more formal situation. However, once the situation is more formal the informant may suddenly be less willing to share information as openly.

In more formal qualitative interviews an interview guide has been prepared beforehand. This guide may either be on the level of large themes to be covered during the interviews or it may contain exact order and wording of each question to be asked. The choice between thematically structured or standardised interview guides depends on several factors, one of them of course being the personality of the interviewer. Some researchers are most comfortable with a fully prepared guide where all questions are stated. Other researchers want to be as flexible as possible and only develop themes, written out or presented as mind maps, i.e., graphic illustrations of the themes and their relationships between each other. At the initial stage of the research standardised interview guides may be preferred but as the researcher gets more used to the situation a thematised guide may be more optimal. Also, in situations where more than one researcher is involved or the interview is performed through an interpreter, a standardised guide may offer more control of the process for the researcher.

Another factor that affects the choice of interview style is the type of research carried out. On one hand, qualitative researchers try to be as open-minded as possible to new emerging ideas and to unexpected

information from the informants. This requires a flexible interview style. On the other hand, in some stages of the research the focus may be on comparing and contrasting certain ideas among groups of informants to test some emerging hypotheses. Here, it may be important that similar types of questions are asked of all informants. Hence, the researcher is faced with competing demands between being flexible enough to capture the unexpected and being systematic enough to give all informants similar types of questions. The compromise could be a standardised interview guide with all questions to cover, but where the order in which they are asked is allowed to vary in response to the interaction with the informants. If repeated interviews are carried out so that many chances are given to cover all questions, these types of interviews may still be quite flexible.

Characteristic of qualitative interviews is that they entail a high level of participation on behalf of the informants. Questions asked are open-ended, in contrast to the closed questions of quantitative surveys. With open-ended questions we mean that the questions encourage the informants to speak with their own words. The questions should not be possible to answer simply with one word like yes or no. Such questions are closed. Examples of open-ended questions are "please describe to me a typical day at work", "what have you heard about breastfeeding?" or "in what way has your wife's behaviour changed since you were diagnosed with tuberculosis?". To construct good open-ended questions takes time and experience. Pilot testing of planned interviews often reveals a large number of closed questions unless thorough planning and mental preparation have been done. This is one reason why many researchers prefer standardised interview guides - simply to ensure that questions are correctly worded even when the interviewer is under stress.

How to follow-up or probe the answer is as important as the initial open-ended question. Follow-up questions provide a chance to clarify and expand on what has been said and they also indicate to the informant that the researcher is really listening. A follow-up question may start with a summary of what was just said, for example "you just mentioned several reasons for wanting a son rather than a daughter. Can you think of any more reasons?" It may also start simply with the repetition of the last sentence such as "'I never

thought he would do that' - why did you not think so?" or "what did you mean by 'being done with it all'?"

One way to enhance the ability to access the informant's thoughts is to mix different types of open-ended questions during the interview. One type of questions is the hypothetical one, e.g., "suppose you had more money, how would you spend that"? Another type is the provocative one, e.g., "some say that HIV is the punishment of God, what do you think about that"? A third type is the ideal one, e.g., "please describe to me what a good delivery would be like". Finally, a fourth type is the interpretive one where you refer back to previous answers, e.g., "you said earlier that you go to healers for diarrhoea, how is this related to ideas about hot-cold"? Piloting of these types of questions will reveal whether they are appropriate in the setting of the research. In some cultures, hypothetical questions may not be well understood.

One of the key issues in qualitative interviewing, that may ultimately determine the quality of the data that are collected, is the ability of the interviewer to build trust with the informants. Of course the personality of both interviewer and informant affect whether trust will emerge or not. But interviewing technique is also important. If possible, plan for repeated visits with the informants. One visit just to introduce the project before real interview sessions start often helps to build trust. Repeated interview sessions further enhance trust and thus data quality. Further, non-verbal language affects interactions in all cultures. Unofficial rules exist for how to express interest and how to show that one is an eager listener, whether these expressions are eye contact, movements with the head, utterance of sounds or even mumbling of words. It is therefore a good idea to start a research project with observations of conversations in the culture of interest, to simply record these non-verbal cues. Also, it is important to be relaxed enough during the interview to remember to express these non-verbal clues. Too often inexperienced interviewers are so focused on remembering the questions that they forget the non-verbal part of the interaction. And remember not to fear silent moments! These may actually feel comfortable and allow both researcher and informant to contemplate the topic. Finally, do not perform the interview if in a hurry. Stress on the part of the interviewer quickly transmits to the informant as well.

The start of the interview should always include an explanation of the purpose of the activity. Informed consent should of course be obtained. The more reasonable the project appears to the informants, the more willing they will be to share. The researcher must judge the level of detail that is appropriate to share regarding the actual aim of the project without negatively affecting the research process. However, a general aim is always possible to share.

The type of question asked must be adapted to the changing level of trust between interviewer and informant during the interview. Responses about actual personal experiences can often be given even though trust in the interviewer has not yet developed. Hence, interviews should start with questions focusing on experiences like "if your child develops fever what do you usually do?" The next level can introduce questions focusing on opinions with questions such as "what do you think about the health care provided by the church here?" Only later during the interview, when the atmosphere is friendlier and trust has started to emerge, should questions related to feelings be asked, e.g., "can you tell me a little about how you felt when you learned that you were pregnant?" Questions about knowledge such as "tell me about different causes of AIDS" are usually also asked only at the end. These questions may at first seem impersonal but for many people it is unpleasant to reveal one's ignorance of certain topics to unknown researchers. Hence, these kinds of questions are often perceived as just as intimate as questions about feelings. Finally, batteries of background questions about education, family life, and social situation should preferably be asked at the end. The initiation of the interview should be utilised for activities that help build trust, whereas lengthy background questions

may bore the informants before the real interview starts. When trust has developed, more patience exists for that activity.

In building trust, it is important that the researcher exhibits "cultural ignorance". By this we mean that the researcher should not come across as the expert who already knows what to expect. People are more willing to share their experiences with someone who lacks knowledge and who is open-minded. Hence, the most difficult environment to do research in is one's own! Common answers will be "you already know this". Therefore, a good research team may consist of insiders together with outsiders. The insiders help the team interpret experiences shared by the informants, thanks to their better understanding of the culture. At the same time, the outsiders analyse the data with fresh eyes and the outsiders may also be better at asking real open-minded questions. Of course, the researcher must also avoid making judgements about any information provided.

To build trust it is important to use the "native language. This does not only refer to speaking Spanish with Spanish-speaking informants, but to using the level of formality/informality and local expressions used by informants. To achieve this, initial observation and participant observation may be helpful.

In his book with the very apt title "InterViews", Kvale (1996) describes a person doing qualitative research interviews as being on a journey that leads to a story to be told when returning home. He or she meets and communicates with people, asks questions reflects, and interprets. Kvale regards interviews as conversation that is sequential and systematic. He provides useful advice about how to perform a good interview and we will briefly recapitulate some of his suggestions.

Kvale identifies several aspects of a qualitative research interview that jointly represent its main structure. He argues that interviews normally take place in the life world of the respondents; the questions are about the subject's experiences. The interviews are thematically structured and the premise is that both parts, the interviewer and the interviewee, find the themes interesting. The aim of the interview is to understand something. The interviewer attempts to take the role of his/her informants and his/her ambition is to interpret the meaning of certain parts of the life world of the subject. The

interview aims at obtaining descriptions that capture variance and nuances. In elaborating on this, Kvale uses the analogy of a doctor/patient encounter in which the doctor is supposed to ask for the symptoms rather than asking the patient why he or she is sick. Sometimes it is of interest of course to ask for the subject's own motives and explanations, but ultimately the researcher is the one who formulates interpretations and hypotheses. Even if it is far from unusual to ask for the informant's general opinions, this is not the main purpose of a qualitative study. The focus is rather on specific situations and phenomena in the subject's life world. Also, to draw general conclusions from specific events is a mission for the interviewer rather than for the interviewee. An interview strategy pointed out by Kvale is that the interview should be characterised by what he calls deliberate naïveté. The interviewer should be curious as a child and avoid letting his or her pre-understanding show through or stand in the way of his or her unprejudiced interpretations.

Even if a qualitative research interview is thematic and rather open, it is also important that the interviewer sticks to her themes. The interview is in this sense focused but it is important to state that this focusing does not imply that the interviewees are prohibited from adding what they find important within the focus area. Ambiguity is a phenomenon that is present in many interview investigations. Kvale reminds us that this is an interesting aspect, not an indication of mistakes in data collection. It is necessary to clarify to what extent ambiguity mirrors real ambivalence or contradictions. A similar situation occurs when there are changes in the course of an interview. These changes must be elaborated, preferably during the interview.

Kvale states that an interview is an emotionally loaded situation. In the same way that a musician needs to have an ear for music, a qualitative researcher must be sensitive and empathic. An interview is an interaction between two people and the relationship between them is one of mutual influence and reciprocity. Of course, there are emotions involved in this. Respect and mutuality should characterise the interpersonal situation of the interview. Finally, Kvale emphasises the positive potential of the interview situation. On this topic he points out how enjoyable an interview normally is perceived, both by the interviewer and the interviewee, which accords with our own positive experience. In the interview, matters of interest to both participants are discussed and if the interviewer succeeds in his/her

endeavour, both interviewer and informant will remember the interview as a positive experience. Leaving an interview situation can often leave both participants with feelings of sadness and loss.

Sampling and sample size for qualitative research interviews follow the same general guidelines as those discussed for observations. That is, sampling is purposive and the strategy chosen could be any of those presented earlier. Interviewing is performed until saturation has been reached which occurs when no substantial further information is generated by further interviews. Also as for observations, it is important that data collection takes place simultaneously with data analysis so that saturation can be identified in a proper way. It is probably more common that too many interviews are performed than too few. This may be because it is still difficult to convince funding agencies that trustworthy data are generated from only ten informants or because of one's own insecurity about having enough. When too many interviews are performed, the risk is greater that analyses may become superficial. Preferably each interview should be followed by some preliminary analysis before the next one is performed so that insights gained from each activity are used in the following step. Hence, it is not advisable to carry out more than one interview per day.

Who makes a good informant? It is important that the person is still actively participating in the culture of interest. A person who recovered from tuberculosis ten years ago may be a perfect informant on what it is like to have recovered from the disease but not on what it was like to be treated for it. Too much will have been forgotten and too much may have changed since then. Further, as both Spradley (1979) and Brinkman and Kvale (2013) point out, the informant should not aim at being overly analytic. The researcher wants to learn about people's own reflections about their reality not hear an analysis in accordance with social theories.

Should a tape recorder or even a video camera be used? Initially, the researcher must of course ask the informants for permission to use either a tape recorder or video camera. Negative answers must be respected. However, even if permission is granted it is not always true that the use of this equipment is optimal. A decision has to be made about what level of detail is appropriate for the research questions. In quantitative research, similar judgements are made - is it enough

to measure infant birth weight to one decimal or are two decimals needed? If a video camera has been used, verbatim transcriptions of a one hour interview where observations also are noted in the transcript may take four hours. If a tape recorder has been used, verbatim transcriptions of a one hour interview may take two hours. In comparison, expansion of short notes may take one to two hours per hour of interview. Hence, there is a price to pay for very detailed information so an informed choice should be made. Indeed, Glaser (1998) advises against using a tape recorder and transcriptions. He finds it much more important to take good field notes and write down memos. However, we feel that this may apply more to truly experienced researchers who move quickly from data to theories.

In addition, as Boas pointed out (see above), in much of our qualitative research we want to build the analyses on what was actually said, verbatim, and then recording is a necessity. Only if a recorder has been used is it later possible to cite informants verbatim unless the researcher confirms quotes written down in her/his notes during the interview. Also, when we take notes we unconsciously sort out what does not seem important and these parts will be lost forever. If the conversation is stored on tape or digitally, new issues may be discovered with repeated listening.

Focus group discussions

The use of focused interviews with groups in public health research has gained an increasing interest during the last decade. The method of interviewing groups to collect information on specified topics is however not new. It dates back to the 1930s and 40s when it was used by social scientists in an effort to develop tools for collecting data on people's own definitions and perceptions of a problem in focus. It was part of a scientific shift to approaching and seeing research informants as active participants in constructing new knowledge about social processes (Krueger, 1994, Morgan 1997, Morgan and Kreuger 1998).

In an article from the 1940s about focused interviews the sociologist Robert Merton and his colleague (Merton and Kendall, 1946) build on their experiences gained by participating in communication research about increasing military morale during World War II. Later on Merton reflected on how it all started (Merton, 1997). He describes vividly how in 1941 he was invited by a colleague, the

sociologist Paul Lazarsfeld (see for instance Lazarsfeld, 1968) to a radio studio where a small group of students were listening to radio programmes on war morale. The students were asked to press green and red buttons indicating their likes and dislikes. Their cumulative answers were then registered and displayed as cumulative curves of positive and negative reactions. After the session the group was interviewed about the reasons for their reactions. At that point Merton realised the need for developing more detailed curricula for these types of focused interviews. He had seen how the interviewer had difficulties in focussing sufficiently on questions how he had been guiding the responses and how he was not following up on the spontaneous expressions from the group members. This resulted in Merton becoming involved in the research group, continuing with interviews of groups of soldiers in Army camps on their responses to training films. He also evaluated the influence of a pop singer advertising for war bond pledges. When he describes how the research group viewed the use of focused group-interviews he underlines that they "were taken as sources of new ideas and new hypotheses, not as demonstrating findings with regard to the extent and distribution of the provisionally observed patterns of responses" (Merton, 1997).

In their classic presentation from 1956 "The Focused Interview – a manual of problems and procedure", Merton and his colleagues discuss focused interviews both with individuals and groups (Merton and Kendall, 1990). They state four criteria for an effective interview i.e. *range*, *specificity*, *depth*, and *personal context*. This means that the interview should cover the whole range of possible meanings and responses and provide data that are specific to the question in focus. It should also allow the participants to explore their perceptions and views in depth and to take the personal context into account when analysing their responses.

However, focused group interviews did not become an important tool for collecting qualitative information until later. Instead the method was much utilised in market research where the producers were interested in a quick and efficient tool for collecting information on the views of consumers in order to develop or manufacture new products. This development was not anticipated by Merton. He saw the method as a procedure for the collection and analysis of qualitative data that help us to gain a better understanding in

whatsoever sphere of human experience (ibid). Thus, the re-emergence of the method as a qualitative data collection tool in communication research, sociology and health sciences would most likely have satisfied him.

As we see it, focused interviews with groups, now usually called focus group discussions, is a useful qualitative tool in collecting data in public health research. The method can be used for many different purposes depending on the research question. The advantage is that you utilise the group interaction to explore people's own experiences and their knowledge. You get a chance to know what and how they think regarding a specific problem, how their views are constructed or expressed in a certain context. Thus focus group discussions are ideal for capturing experiences, opinions and norm systems. In a study with a major quantitative approach focused group discussions can be used to help in constructing culturally relevant questionnaires. It may also be used as part of the analysis phase to help interpret the results from survey questions by generating ideas and hypothesis about the properties and dimensions of people's ways of thinking. Further, focus group discussions can be used as a complement to other qualitative methods like interviews when there is a need for comparing individual experiences with the ones expressed in a group situation. Finally, focus group discussions are also suitable on their own if the research question implies uncovering factors relating to complex behaviour, for understanding communication gaps or barriers between groups of people, for studies of the interaction process in decision making or when studying how people negotiate about their norms and belief systems.

Qualitative research is sometimes seen to only mean the use of focus group discussions to quickly obtain a lot of information. However, focus group discussions should, as any other qualitative method, be justified and chosen on the basis of its appropriateness for a specific research question.

Different aims of a focus group discussion create different demands for sampling and for the procedures used in carrying them out. Thus, like other qualitative methods, focus group discussions rely on purposive sampling. What kind of people should be included in the group depends on the research question. The aim of the focus group discussions is not to quantify comments or opinions but to gain a

deeper insight and understanding. Therefore, we need to construct groups that will generate the most elaborate discussions. We have to invite people that have some experience of the question in focus and in addition are prepared to share their thoughts and experience with us. This also means that, based on our research question, we will use systematic and well-defined criteria for selecting the group participants. If we are interested in viewing women's perceptions on condom use we have to invite women with some sexual experience. If we expect the views to be very different in different groups of women we have to vary the composition of the groups according to specific criteria such as age or social background. This will enable us to make comparisons between groups. We should avoid depending only on those who for some reason volunteer because they may reflect only certain aspects of a problem or phenomena, while others may be neglected.

In order to create a comfortable and productive discussion we need to consider how we can best create an atmosphere that increases the participants' willingness to talk. The advantages of homogenous groups have often been underscored both to meet the need for focusing the discussion and to ease the situation for the participants However, the criteria for reaching compatibility are not easy. If, for instance, you stratify your groups for age, ethnic background or social class you may find that there are other characteristics that create tensions in the discussion. The only way to find out which works best is to use the "emergent design" of qualitative methodology to change your strategy in the subsequent group sessions. However, as discussed earlier, if you on the other hand want to compare views of different groups you need to stratify on this basis.

Another issue often raised is whether you should aim at groups with participants that are unfamiliar with each other to avoid effects of relations among the members. Familiarity might inhibit disclosure which could be a problem when you are discussing sensitive issues with participants that are at risk of meeting again or depend on each other in other contexts. In real life it is sometimes difficult to find people who do not know each other and for some research questions you need the experiences from certain working groups, decision makers or community members. However, strangers would probably discuss in greater detail the reasons for their standpoints while participants who know each other would take much more for

granted. In summary, the way of dealing with the issue of familiarity is a balance between the research question and the foreseen group dynamics. Whatever you choose there is a great demand on the moderator's skill in elaborating on the questions in focus and building trust in the group.

There is no specific advice to be given regarding the suitable number of participants in a focus group discussion. It should be small enough for everyone to make their voice heard but large enough to provide both depth and range in the discussion. We do not want the group to be too large or too small. Six to ten participants is often recommended, but even smaller groups have proven to work well. Smaller groups are more suitable when the participants are deeply involved in the topic and are expected to contribute a lot. Larger groups may be more appropriate when the research question aims at getting many ideas about a phenomenon and when depth is less important. Again the only way to decide on the composition is to try and modify during the course of the study.

Likewise, the number of groups to be included depends on the research question. Normally three to five focus groups are enough in order to capture the diversity of people's views. However, as in all qualitative research you have to rely on your own judgement on when the point of "theoretical saturation has been reached. This refers to the point when you do not expect to gain any substantial new knowledge from yet another group session. However, if you aim at comparing different kinds of groups, saturation for each type of group must be reached.

The role and skills of the moderator are crucial. It is his/her role to focus the discussion, to encourage people to talk, to allow everybody to be heard and to ask for elaboration on the questions in focus. The moderator is also responsible for the flow of the discussion and has to interrupt participants who talk too much and to encourage the quiet ones to share their opinions or experiences. If sensitive issues are discussed it is the responsibility of the moderator to create trust in the group, and to prepare and support participants when discussing unpleasant topics. This means that a moderator needs skills in listening, probing and making decisions on when to move into new topic areas. Most often it is desirable that the moderator belongs to the research team and has participated in setting the aims of the study

and in planning the topic guide or the questionnaire route. However, in real life this is not always possible. Focus group discussions are sometimes held in foreign settings, where there is a need for training local moderators who will be accepted by the group. In these cases much effort is needed to involve the moderators in the research process and to have continuous training sessions to motivate them to collect high quality data. For example in our studies in rural Tanzania we arranged training sessions for the field assistants on moderating skills, putting much emphasis on role-playing. We also organised pilot focus group discussions before starting the main study. To become a good moderator requires a lot of support, accompanied by both positive and negative feedback on your performance. It can be wise to perform the focus group discussions together with an assistant moderator. The assistant moderator can help in the probing and can also assist in documenting the sessions by taking care of the tape-recording and note-taking. However, if you conduct discussions with only a few persons it is important to consider that having an additional representative from the research team can threaten the power structure and make participants feel less free to talk.

To recommend a certain setting is neither possible nor advisable. This depends entirely on the context of the research study. In rural Tanzania, focus groups regarding people's perceptions about HIV/AIDS were preferably held outside under the shade of the banana groves, to provide privacy and protection from the sun. In Vietnam, when performing focus group discussions about people's experiences with tuberculosis efforts were taken to avoid the "medical sphere" and instead schools were used. It was regarded as important that the participants not feel threatened or prevented from talking by the presence of medical personnel. In the Swedish setting participants are most often invited to a conference room that is situated in a neutral place. However, it is very important in all the settings that the arrangement encourages people to talk. Thus, we need to think about how participants the note-taker and the moderator are positioned. Placing people in a circle, either around a table or sitting on the ground has proven to be most efficient. It allows everybody to have eye-contact with both the moderator and their fellow participants.

In a focus group discussion the topics should be carefully predetermined, based on a preliminary analysis of the situation and the research question. You can decide to use a topic guide or a questioning route that present the questions in detail and the specify sequence is specified. This depends on the moderators' involvement in the project. A topic guide allows you to adjust the language to the language of the participants and works best if the moderator is the same for all the groups. However, the guide demands greater skills in terms of adapting to the unexpected. The questioning route takes a longer time to prepare but decreases the risk of differences in the language that may change the content of the questions. This method is preferred when several moderators are used in the same project or when you rely on local moderators because it ensures that they follow the intent of the research. In rural Tanzania we chose to use a questioning route as we worked with trained field assistants as moderators, who were divided into two teams of moderators, one for women and one for men.

Just as in all qualitative research you should aim at truly open-ended questions. This means that you should avoid dichotomous questions only allowing yes or no for an answer. "Why" questions tend to demand a rational answer and should therefore be broken down and specified to questions like "What causes people to…."? "What do you think influences decisions about using condoms"? You should

go from the general to the specific, from factual to the more sensitive issues and you should be aware of the importance of putting the questions in a logical order. It is also so that individual experiences can be used when answering questions on group level. We have found the flow of questions suggested by Krueger (1994) very useful when planning a questioning route. You start off with some *opening questions*, to identify the characteristics that the participants have in common. Participants should be given an opportunity to introduce themselves. The *introductory questions* then introduce the general topic of the discussion so that the participants can tell about their past experiences and their connections with the overall research theme. The aim is to stimulate conversation and improve interaction in the group. The *transition questions* are supposed to move the participants into the focus of the discussion, preparing for the *key questions***,** which concerns the focus of the interview. The *ending questions* should give the participants the opportunity to make a final statement, having all the aspects from the others in mind. Here the moderator can give a summary of his or her perceptions of the discussion and ask the participants for comments. A *final question* should always allow the participants to add things they think have not been considered during the interview. However, as pointed out by Barbour and Kitzinger (1999) there is often a need for using other stimuli material to prompt discussion. Sometimes a provocative cartoon or some statements to agree or disagree with can be enough for initiating an elaborate discussion.

Focus group discussions are often tape recorded and also documented with written notes taken down during the discussion. Again, an assisting moderator is essential because it is too much for the moderator to concentrate both on the flow of the discussion and to be responsible for the note-taking. The note taker can focus on capturing reactions and feelings expressed during the discussion. Further, the note taker can also facilitate the transcription by writing down the sequence of input by the different participants.

Since focus group discussions are focused, the analysis should also be focused. Not all questions deserve analysis on the same level. As a researcher you concentrate on the critical areas of your interest. Finally, it is important to remember that the unit of analysis is the group and not the individual. As a researcher you always have to put the statements of the participants in the context of the group.

In a Swedish project aimed at developing information to parents of children suffering from cancer, focus group discussions were used to gather data from health care providers and parents. Four focus groups were performed with health care providers, consisting of three to seven participants in each group. One researcher guided the interviews and another one observed and kept mind maps of what was being said. The mind maps were used in addition to the transcribed interviews to validate the interpretations. Parents of ill children were interviewed in four focus groups, consisting of three to four people in each group. These were moderated by one researcher only since we believed that having two researchers in such small groups could affect the interviews negatively from a power perspective. In addition, one parent from each focus group was interviewed on a one-to-one basis half way into the analysis in order to validate the data and obtain personal experiences about the preliminary themes (Ringnér, Jansson, & Graneheim, 2011a, 2011b).

In both these cases, the number of participants in the focus groups was lower than recommendations found in mainstream focus group literature, where some eight people are considered an optimum. However, also other researchers have had good results with smaller focus groups, especially if the groups are homogenous and the interviews are focusing more sensitive topics (Peek & Fothergill, 2009; Toner, 2009).

Focus group discussions in public health can be analysed with different qualitative approaches and depending of the research aims both Qualitative Content Analysis and Grounded Theory can be applicable.

Other methods

A set of techniques that we have found useful at the initiation of a project to access people's own view of reality are *free listing, pile sorting* and *rank order*. These methods are also suitable to utilise as stimuli material for starting a discussion in a focus group discussion. Free listing is a systematic technique that helps explore a specific topic or cultural domain (category that has meaning for a particular culture). Identifying cultural domains moves us closer to understanding how people organise and make sense out of their subjective reality. The

domain could be the community's view of acts that constitute domestic violence or illnesses that affect women. In the Nicaraguan domestic violence study, each informant was asked to list as many acts of domestic violence as possible. The question asked was "Could you tell me all acts that you regard as domestic violence". It is also possible to use a different questioning style, e.g., "Some people have mentioned cutting with a knife and hitting in the head as examples of domestic violence. What other acts do you regard as domestic violence"? Some probing may be necessary but the exercise is usually quite easy for informants to carry out. Of importance is to word the initial questions in a culturally appropriate way. The combined list from this activity can be utilised in further research in that local terminology and extent of variation within the topic become known. The activity should be repeated with 15-20 people, preferably representing different sections of the community. In the study on domestic violence, the activity was utilised to discuss the seriousness of different types of violence in focus group discussions with different groups of participants.

Pile sorting is a continuation of the free listing so that relationships within the selected domain can be explored. The items identified through free listing are depicted on cards (written or drawn) and the informant is asked to sort the cards into different sets of piles. The number of piles created may be free or restricted. Afterwards, a discussion takes place with the informant about why certain cards were piled together and what differences exist between piles. The exercise is repeated with 20-40 people and the overall results can be summarised in tables. Statistical tools may even be used to further explore proximities between different items. An excellent example of the usefulness of this technique is the set of studies on women's health in India (Gittelsohn et al, 1994).

Finally, ranking is similar to pile sorting in that the items identified in the free listing are further explored. This time however, the informants are asked to rank the items according to a characteristic determined by the researcher. In the domestic violence study, participants were asked to rank all listed acts of violence into mild, moderate and severe violence. In general, either all items can be ranked in one exercise, or subsets can be used at different times. This exercise should be repeated with 20-40 people and statistical tools may also be used to further explore the results.

A method that has been the first acquaintance with qualitative research for many public health researchers is *Rapid Assessment Procedures* (RAP). During the 1980s this method emerged from the combined efforts of researchers and programme managers within rural agriculture as well as child survival initiatives (Scrimshaw and Gleason, 1992). The method grew out of a need for rapid methods that produce knowledge quickly (in contrast to in-depth qualitative research that often take a long time) but at the same time knowledge that goes deeper than what is generated by quantitative surveys. The method is popular in the area of international public health. Guidelines for applying RAP have today been developed for health issues such as diarrhoea, epilepsy, acute respiratory infections, malaria breastfeeding, HIV/AIDS and women's health. A good review of RAP studies in public health is provided in Utarini et al (2001).

In RAP, quantitative as well as qualitative methods for collecting data are combined and undertaken in a rapid, focused manner. No more than 6-8 weeks should be used for data collection analysis, report writing and feedback to users of RAP. The latter may include health planners and managers, local level decision makers, and community members. The report should ideally also be short - only 15-20 pages, and include findings, lessons learned and recommendations for action.

The method has always been closely linked with programme management and has been used to define and prioritise health problems, to plan interventions, and to monitor the interventions as well as to evaluate programme effectiveness and efficiency. Hallmarks of RAP are that it is action-oriented and process-oriented; insights gained should be used for programme improvement and not only the end product but also the programme process is in focus. It emphasises the use of interdisciplinary teams that include both "insiders" and "outsiders" so that in-depth knowledge is complemented with fresh perspectives. Community involvement is encouraged. A RAP may be most suitable when research is needed for intervention development, monitoring and evaluation.

Common data collection methods combined within RAP are in-depth interviews focus group discussions and observations. Additional methods sometimes used include community mapping, free listing pile sorting case history, secondary data analysis, cost analysis and limited surveys. By using the combination of multiple methods it is hoped to compensate for the shortcomings of doing such rapid data collection.

The study on user-provider interface in the malaria programme in Jepara district in Indonesia is an example of a RAP (Utarini et al 2003). To start with, different kinds of community members were invited to participate in free listing of common illnesses in the area. In total, about 25 people were involved in the exercise. Thereafter, the same participants were asked to rank the listed illnesses with respect to severity. These exercises yielded important information on the multitude of local terms used for malaria. During a two-month period, focus group discussions and in-depth interviews were held with young women, young men, women of childbearing age, formal and informal leaders, and health care staff. The malaria terms

discovered in the free listing exercise were here further probed, in addition to questions on reasons for getting ill, suitable treatment and perceptions of the malaria control programme. In addition, field workers followed the malaria workers in their daily activities and made structured observations according to a pre-defined check list of the interaction between malaria workers and community members with symptoms of malaria. Finally, Qualitative Content Analysis was applied so that the information was sorted under important main themes. The results were fed back to the local health planners in a seminar a few months later.

IN THE FIELD

In this book we focus on qualitative methodology in public health thus putting questions relating to health, illness, health care systems and their relation to social structures in the centre. We utilise methods such as observations, interviews and focus group discussions. Qualitative research is based on the theoretical assumption that the world is holistic and socially constructed by the participants (symbolic interactionism). To understand the mechanisms behind certain phenomena we have to understand the world from the participants' points of view. Their actions have to be related to their experiences and the social context that surrounds them. This implies knowledge about "the field e. g., people's everyday life, the social structures, the specific culture and the norm systems that surround both our informants and us.

Newcomers as well as experienced researchers therefore must consider which strategies to use in order to gain knowledge about their field area. There are ethnographic techniques for field work that a qualitative researcher should get acquainted with. We have found the book "In the Field" by Burgess (1991) most useful and many of the issues raised here are inspired by him. How will you reach/choose your informants, how will you create trust, how will you document your experiences and how will you leave the field? These are some of the questions that you must put to yourself. Most often your study protocols only superficially indicate the types of data collection activities needed. How to actually gain access to the field and how to

be introduced to potential informants are matters that are left to you to consider. A formal approval of your study protocol is of course needed but this does not provide much help in face-to-face interaction with people.

Entering the field

Entering the field can imply many things. It can mean entering an institution, a workplace, a village or a town. Sometimes a field is placed in a foreign country. In all these settings you need guidance into your field, to be shown around. You need to identify key persons who can help you in the process and who can also inform you about potential gatekeepers to contact in order to anchor your study. In an ideal situation this has been planned for and contacts have already been taken before entering the field. However, we have all experienced shortcomings at this stage. As researchers we have suddenly found ourselves quite alone in an unfamiliar place, left to rely only on our own intuition of what to do next. In this situation you have to lean on your own competence in a number of social skills. The time needed just to get acquainted with certain places and to introduce you to people on different levels, should never be underestimated.

How you enter the field is very context bound. In Sweden for instance, the process can often be quite informal. The researcher does not have to receive official permission on so many levels. In the "Rönnskär project" we were given access to the field by asking their representatives for permission and by applying to the ethical committee at our university for approval of the study. But the best help we received was from a small group of old and retired workers living in the same neighbourhood the company was located in. They had worked together in a study circle and had published a book about their work place. We introduced ourselves to the group and asked for help. To begin with, they told us about the smeltery and its work environment with special focus on old times when they themselves worked there. They helped to identify and theoretically sample other informants and to get in contact with them. They took part in our work to thematically organize the interview guidelines and they functioned as a reference group through the whole project. Their contributions to the project were thus substantial. In other social contexts, you may have to spend much more time informing about and explaining the study at the community level. In the Kagera AIDS Research Project, for instance, we had to visit many different levels of local authorities to ask for permission to interview people in the villages. Fortunately the local authorities were eager to help us in all stages of the data collection but if we had not taken the right steps we would have had problems in reaching our informants.

Once your real research starts, you have to get close to your informants. You must be able to legitimise your presence, describe the aim of your visit and ask for participation. This is often not as hard as expected. Most of the time people are friendly, helpful, and willing to share their experiences if they are met with respect and openness. However, some of the qualitative methods like participant observation raise important ethical issues about how much you should reveal about your role as an observer and whether it is proper to lie to get access to some information. Getting close and building trust is essential but you have to be prepared for difficulties. Even if you are open, curious and flexible, you can be met with suspicion and resistance for reasons that are outside of your control. Rumours can for instance start that you have been sent out by the government to report on certain behaviour which might bring about fear of later punishment. This situation can ruin your plans and ways of solving problems as they arise must be found.

Getting too close to your informants in the field can as a consequence give problems to see things clearly, being at risk of "going native". Of course you get emotionally engaged in what you experience, but you have to try to keep a certain distance. After all, you will be leaving the field eventually and other people are left to handle situations that you have been part of creating.

In short, being in the field is not an easy task and most often it is a highly personal experience. You have to prepare yourself both for the enjoyable feeling of really learning something new and for the difficulties that you meet in the process. One way of reflecting on your experiences of the process is to document your experiences, which is an important part of the qualitative research process anyway.

Field notes

In qualitative research we naturally document, take notes or tape record the observations, the in-depth interviews or the focus groups discussions that we perform. When transcribing these, it is good practice to always start with a log. The log contains practical information about the data collection activity – details that may be forgotten otherwise. Hence, the log lists the project name, date and place of data collection, research type (for example thematically structured interview) research team and how the documentation was done (for example tape recorder notes, observations). Never reveal the real name of your informant in this log, because the transcript may be seen by other people. Use an acronym and keep the list of real names in a safe place.

As the data collection and the analysis are seen as simultaneous processes we usually also document our preliminary hypotheses and our methodological considerations during the process. However, the importance and additional value that extensive and systematic field notes can have for the possibilities of interpreting the interview/observational data are often underestimated. In all research information is gathered from different sources. You have your pre-understanding about the problem area and your more specific scientific knowledge about the research question in focus. But the setting in which you perform your studies can either be very familiar or sometimes completely new to you. Sometimes you spend more time being a curious observer than actually performing the

planned interviews. Keeping a descriptive diary of the period during which the interviews are done often seems natural but is sometimes done more for the purpose of training than as a data source in itself.

In this section we will focus on an "ideal situation" where field notes are part of a planned data collection procedure. We advocate the idea that the recording of events, feelings and decisions made during the course of a study should become a natural and important part of the data collection procedure.

The importance of utilising your notes as a specific data source has actually been described by many researchers involved in qualitative research. We will use Burgess' (1991) terminology in describing what field notes are and give some examples from our own studies on HIV/AIDS in Tanzania and women's health in Pakistan.

Burgess advocates the importance of researchers revealing and discussing how they go about their craft, because of the implications this has both for the analysis and for the reporting of the data. As we discussed earlier, such notes are important for judging the trustworthiness of a study. Burgess refers to the sociologist Mills (2000) who advises researchers to keep a journal where they note personal experience and professional activities and relate these to the work in progress. But field notes according to Burgess should be something more. They should include experiences from everyday life and should be systematically recorded. It is important to find time to write them regularly with detailed information of date and time, and also to include notes on places, events, activities, people and conversations. To be able to retrieve the notes later they also have to be categorised and put into a personal indexing system, manual or computerised.

But most important is that making them also involves decisions about what to include based on the theoretical interests of the study you are performing. Not everything can be observed and not everything can be recorded. A certain focus in the observations results in a decision of what to focus on in the recording. The different types of field notes that Burgess suggests to distinguish between are substantive, methodological and analytical field notes.

Substantive field notes are created when the researcher continuously records situations, events or conversations in which he/she participates during the course of the research process. They can also consist of a record with a summary of the observations and interviews reviewed. Sometimes they are systematically recorded using predetermined sections and categories for particular events and situations. Sometimes there is a need for using systematic observation sheets, perhaps designed on the basis of preliminary observations. Substantive field notes could also be described as detailed portraits of various situations, physical descriptions of situations and informants and details of conversations and events.

The example below shows substantive notes from a sub-study in the Kagera AIDS Research Project on peer-education in secondary schools. It includes a description of how we went about organising the meetings with teachers and students during field work in 1995.

> *This government school with co-education is situated just in the centre of the town. It has approximately 600 students. We met with the second mistress of the school who at first was a bit hesitant to receive us at the school as she would have preferred us to have brought some kind of introductory letter. But nevertheless she agreed to arrange a meeting the following day with teachers involved in the teaching and related activities regarding HIV/AIDS We arranged to meet at 9 o'clock on Friday morning. Taking her advice we formulated an introductory letter and went to the Regional Medical Officer's office to have it signed.*

Methodological notes can be described as more personal reflections of the activities in the field. These are also very important as additional or summary information after performing an interview. They can include descriptions of the problems and feelings experienced during the interview but also discussions of the research role in general. Through these notes the researcher is forced to be reflexive and to engage in some form of self-analysis during the research process. The example below is from the Pakistan project on women's perceptions of health, illustrating the need for flexibility in the qualitative research design and reflections about reactions from the informants. These notes were taken during early fieldwork in 1992:

> *March 3: Decided to start working in the village rather than the city slum area first, because the village will be hottest during the summer months. I decided not to use the tape-recorder because the women in the pilot study were uncomfortable about it. We have to take extensive notes instead. The families have now been*

informed about the purpose of our study, that is: "to ask questions about reproduction and health to better understand women's situation".

March 16: First refusal in the village: a mother kept working in her courtyard trying to get water, and refused to walk over and talk to us. She was not shy. Her mother-in-law and sister-in-law tried to convince her to talk, but she kept refusing. She was a mother of many daughters. The atmosphere from the mother-in-law and sister-in-law seemed friendly.

The next example is from a field visit, following the home-based care team in Kagera, Tanzania. It illustrates how you as a researcher reflect on your own reactions and feelings in new and challenging situations. These notes were taken during field work in 1993:

A new visit outside town……A man is very sick. We have to refer him to hospital immediately and the car has to function as an ambulance. I volunteer to stand on the platform at the back of the car, although the others advise me not to. But after one quarter of an hour I have to give up. The roads are too tough for me "a weak Mzungu" (white person). I feel miserable, not only because of the serious situation, but also because I could not live up to my own expectations. My friends laugh friendly.

Analytical notes should be the start of and a preparation for the preliminary analysis of the material. Therefore, it is important to include also the preliminary questions that were posed together with the emerging hypotheses that are developed. By constantly comparing the collected data you get ideas about patterns and themes from the data itself. This is actually the first step in the Grounded Theory analysis where you start to analyse your data immediately, while being open for emergent changes in the data collection. These notes or analytical memos form the basis of the analysis and include; summaries that are written at the end of the day in the field lists of themes that have emerged, concepts that can be developed, and a discussion of the possible analytical or theoretical framework. Below is an example of a preliminary analysis of the situation after only having spent a short time in the field planning for a study on HIV/AIDS and its stigma within the Kagera AIDS Research Project. These notes were taken after one week of field work in 1993:

- *Most people we have met have a weak social support and a poor social network. They have come into this situation because they are sick and they now have difficulties to support themselves.*
- *The extended family network has difficulties caring for their sick relatives. The economic burden to take care of an additional sick member in the family is too big.*
- *The official help is not sufficient. The support is irregular and uncertain. The help available concentrates on orphans and their families.*
- *Prostitution is common in this area. However, preventing others from getting the disease may not be motive enough to stop when there are few alternative ways of earning a living. The women are trapped in a very difficult situation.*
- *Those who are sick withdraw from social contacts, in fear of being stigmatised. Very difficult to tell about their situation. We need to go back to Goffman's theory on stigma.*

In an ideal situation the field notes are indexed and carefully categorised already in the field and a plan exists for how to use them in the final analysis. Perhaps most of your notes are related to specific interviews observations or focus group discussions. Then you file them together with the transcript and they form a natural part of that specific data source. However, sometimes notes may be more specific or more general and indexed separately as an additional data source. In your final presentation it is important to clearly state how you have used your field notes in the process of data analysis.

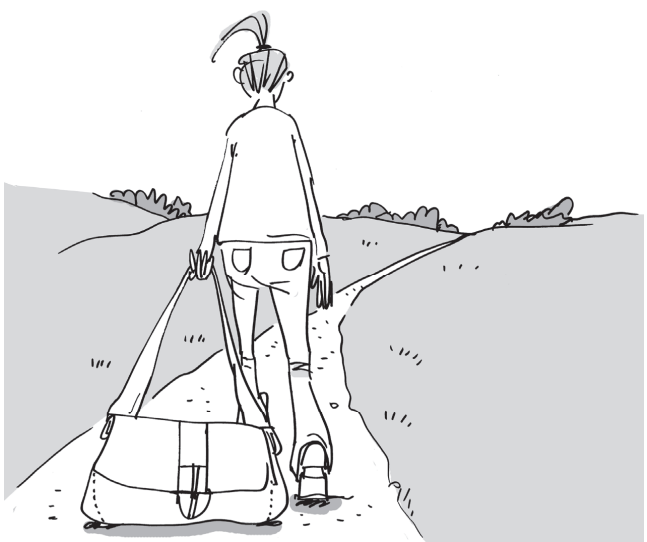
Leaving the field

Surprisingly, leaving the field is often more problematic than entering the field. How do you know that the information you have collected is sufficient for addressing your research questions? Have you really reached saturation in the data collection? Here there is a clear advantage of having an advisor or other research colleagues that are more detached from the field to help making decisions along the way.

Further, how will you arrange for giving feedback of the results to your informants? Will this feedback process be part of your analysis? Our experience is that it is easy to promise too much when in the field. Our recommendation is normally not to promise the informants to be part of the analysis stage unless this has been clearly planned for. Of course they may all receive a final report.

Glaser (2001) points out that even an experienced researcher sometimes tend to stay in the field longer than can actually be justified. The reasons vary from real love for the research field and its people, to an unconscious reluctance to go home and start working with more difficult and less seductive research tasks. Also in our experience the risk is higher that you wait too long before you dare to say that you have reached saturation than the opposite, that you conclude a study too early.

Lastly, how you plan your field work and data collection procedures are of utmost importance. But remember, it is how you document, organise and interpret your data that will matter in the end.



5. Interpreting qualitative research

There is a plurality of interpretation methods available in qualitative analysis, ranging from very close (concrete/ descriptive) representation of the views of the informants, to very distant (abstract/conceptualizing) attempts to generalise to wider contexts of meaning. Researchers who work with close representations are at risk of "going native", but of course there have also been many excellent renderings of social context and biographies. For public health research a pure descriptive level may be too limiting. Hence, more abstract interpretation methods may be more suitable, especially if the findings are expected to be applicable for public health practice.

Qualitative methods are well suited to mirror concrete observations from the field but also to exceed them by conceptualising on a more abstract level. Descriptive qualitative analysis works with descriptions of what is going on in reality but in a data close sense. Quotations and thick descriptions are in focus and the voices of the informants are core. This means that great emphasis must put be on validation of results. Descriptive qualitative analysis most often results in concrete descriptions and the results can generate an improved understanding. Other qualitative methodologies, such as Grounded Theory take empirical data as points of departure. Sometimes the analyst "jumps over" the descriptive phase and prefers to go almost directly to the conceptual level of analysis. This conceptual research field is simply more extensive than a straightforward descriptive one. Because of this the possibilities to apply theory beyond the study sites are usually greater.

Now, let us illustrate the relations between different levels of interpretations with the help of an example from a study presented by Newcomb (1943) and applied by Zetterberg (1965) in his book about theorisation. As is shown in Figure 4 we start on a concrete level with the help of an ordinary field observation (1) and end up on a high level of abstraction (4).

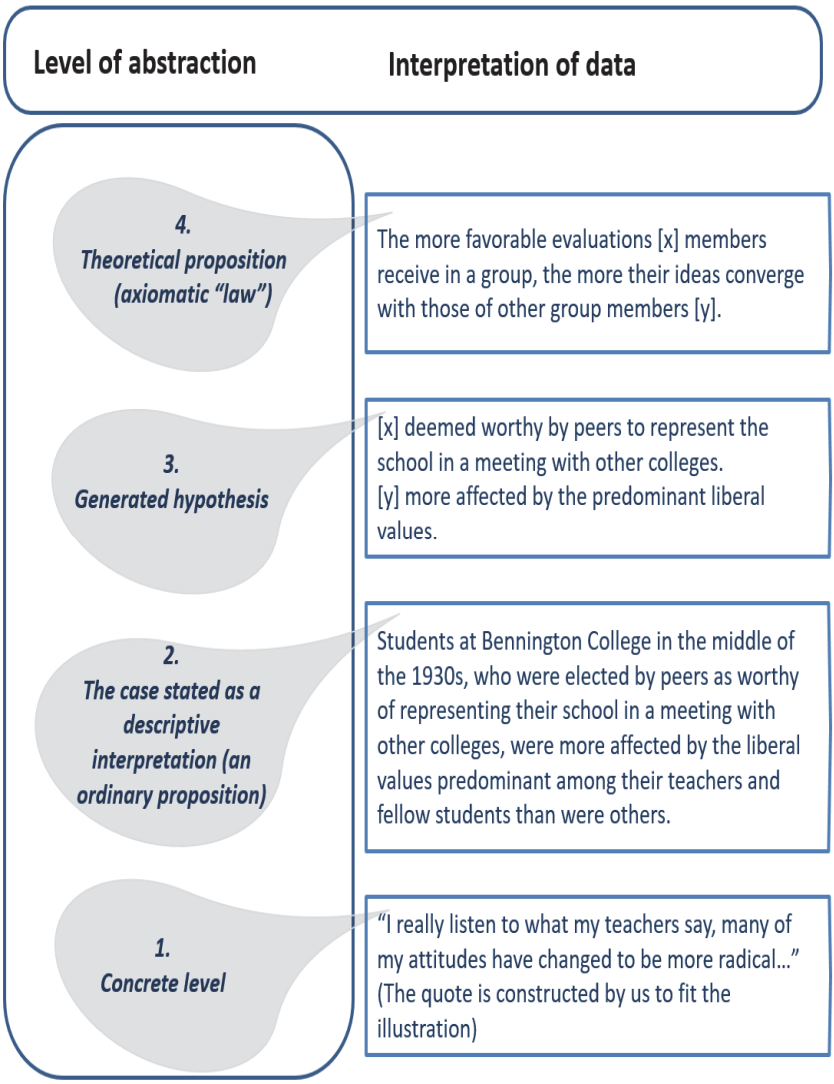


Figure 4. Interpretation of data on different levels of abstraction.

The findings state (2) that what happened took place in a college among students and teachers. These people can be subsumed under the more abstract concept of "group members". This is the first step in the process of going from ordinary to theoretical propositions. If we then, in a second step (3), look at the categories or variables presented in the case we find two (indicated by x and y in the table). There is now material for stating a hypothesis presented in the next

step (4) as a theoretical proposition. The two categories now constructed are indicated by italics. As Zetterberg (1965) points out, we have during the process of formulating the theoretical proposition, dropped the reference to Bennington and the fact that the study was made in the 1930s. "In highly theoretical propositions we do not make references to time and space; these propositions are presumed valid in all places at all times. Nor do they contain proper names (e.g., of specific individuals); they are presumed valid for all" (Zetterberg, 1965, p 86). Finally, it should also be stated that it is only in its most extreme form that our interpretation results in something similar to an axiomatic "law".

We have put the concept "law", within apostrophes simply to emphasise that such laws are rare in social science. Rather, it deserves to be mentioned again that many sociologists follow Robert Merton when he argues for theories of the middle range, meaning theories with limited claims on transferability. The result of the on-going search for axiomatic laws or "grand theories in social science has been described by for example Berelson and Steiner (1964). Their enumeration of "axiomatic laws" highlights that most such laws are trivial and add very little to the understanding of what is going on in the society. As we see it, there are different types of generalisations and different levels of ambitions. Which level of abstraction to choose depends on aim and context.

A crucial distinction in qualitative methodologies is to distinguish substantive theories from formal ones. In "The Discovery of Grounded Theory, Glaser and Strauss (1967) exemplify the former by empirical research fields like professional education and patient care while the latter are to be found in conceptual areas such as stigma and deviant behaviour. Let us probe on this with the help of Figure 5.

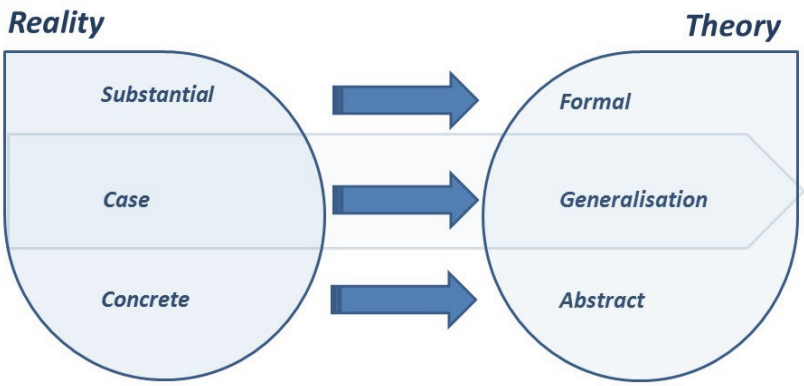


Figure 5. Constructing theory.

To begin with, the formal theory is on a higher level than the substantive theory in the sense that it is generalised over and above the same. A case study for instance, offers the empirical base for an emerging formal theory.[2] From concrete descriptions, perhaps phenomenological ones, the analyst can construct theories that generate abstract understanding and even explanations. The formal theory also aims to deliver more in-depth understanding of latent patterns under "the surface". We will come back to this under the heading of: "Understanding Grounded Theory".

NEED FOR COMPLEMENTARY APPROACHES

As has been discussed, there are good reasons to let qualitative and quantitative approaches complement each other. The strength of the latter is their ability to investigate how previously defined phenomena are distributed in a population and to give statistical measures of associations between variables. The strength of the qualitative approach is illustrated in Figure 6. Imagine a quantitative study in a given population where an association between drug abuse

2 Michel de Montaigne stated that interesting theories are possible to find in every concrete case. They can be found in the life of Julius Caesar as well as in our own lives. (Montaigne, 1991) Arthur Schopenhauer expressed the same thought when he attributed the poet the property to be able to write about an individual life in a way that makes it possible to see and grasp what is general (Schopenhauer, 1966).

(dependent variable) and unemployment (independent variable) has been identified and measured. Qualitative methodology can complement this information in at least three ways.

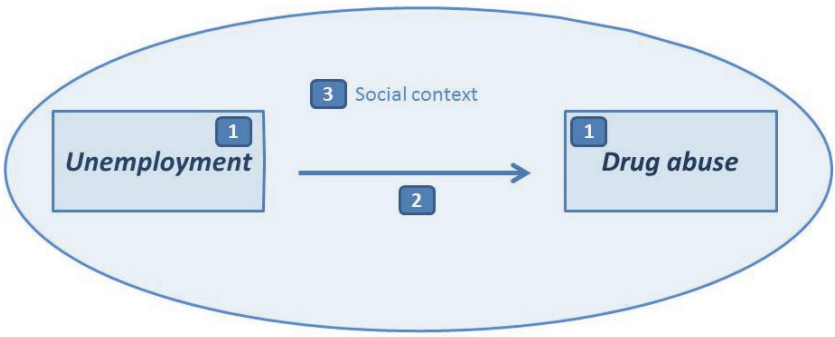


Figure 6. When to use qualitative methodology.

Firstly, qualitative methodology can complement a priori, as a pilot activity, by identifying relevant variables for later investigation using quantitative methods. The quantitative variables can also be constructed and defined with the help of qualitative methods.

Secondly, qualitative methodology can clarify or illuminate one's understanding of the association between the variables. Why is it so that people who have become unemployed start drinking too much? Qualitative research interviews can shed light on this by describing what social mechanisms that generate the risk behaviour. For instance, unemployment may create shame and people may attempt to escape this shame with the help of alcohol. Most often, it is of crucial importance to describe such mechanisms if the goal of research is to fully grasp the situation.

Thirdly, qualitative methodology can also contribute to the often very complex connections between contextual properties and individual behaviour patterns. In our example, norm-systems in the social environment, for example emphasising the importance of having a job, are of relevance since they are internalised by the subjects. Qualitative methodology can be considered a short cut to this type of association between the individual at one pole and the aggregated level of analysis at the other.

Finally, it is reasonable to state that qualitative methodologies are appropriate in situations where the research problem in focus is a new one, or when existing theories have been shown to be inadequate. Understanding and discovery are the two prestige words.

Oscillation between inductive and deductive reasoning

The line of reasoning in quantitative and qualitative research is often described as disparate. As was briefly presented above in the chapter on "Designing qualitative research", quantitative research normally starts with the generation of a hypothesis based on existing theory as illustrated in Figure 7. The hypothesis is thereafter tested against reality i.e., verified or rejected based on data collected for that very purpose. This line of reasoning is referred to as *deductive*. Qualitative research instead has reality, as mirrored in data, as the main starting point. Based on data collected with an open mind, new concepts hypotheses or even theories are discovered. This line of reasoning is referred to as *inductive*.

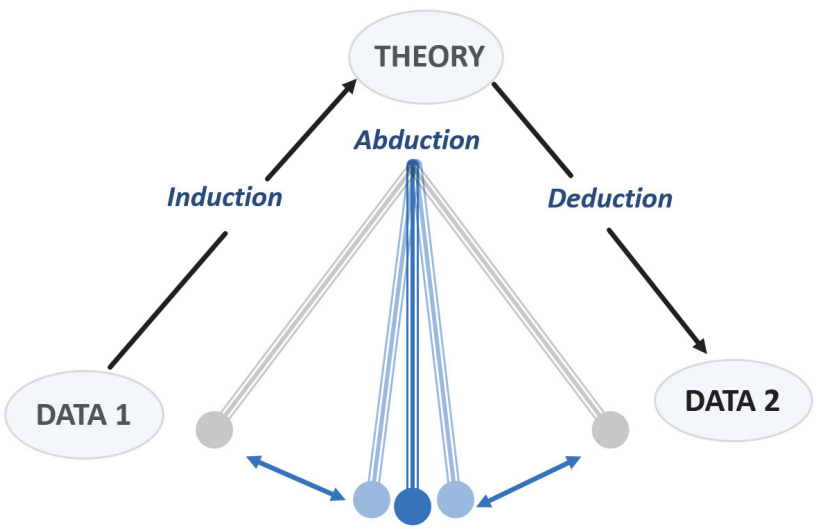


Figure 7. Deductive, inductive and abductive reasoning.

However, qualitative researchers may also at a later stage test emerging hypotheses or theories against data, thus oscillating between data and theory. This research process is referred to as the

abductive method. The term abduction is well known within semiotics, and most often associated with American pragmatism. The aim of the abductive research strategy is to reach understanding gradually deepen it, and discover latent patterns behind what is conspicuous. This is accomplished by alternating between searching and testing. Without using the term, Barney Glaser states that most research "involves alternating between inductive and deductive logic as the research proceeds" (1978, p. 37). This inductive/deductive mix, as Glaser (1978) puts it, is characterised by the fact that sampling procedures, data collection and interpretation interact with each other.

DOING QUALITATIVE RESEARCH

Now, let us turn to the more practical aspects of Grounded theory and Qualitative Content Analysis where we will argue for research situations in which our two methodologies are especially relevant.

Seen in the light of the research process, there are different options for when to apply qualitative research following the inductive or the deductive path (Figure 8). As indicated in Figure 8 the two methodologies can be of use both in the inductive and deductive paths, i.e. both when the aim is to generate theory, or when the aim is to operationalise followed by a test of the theory but now on new informants.

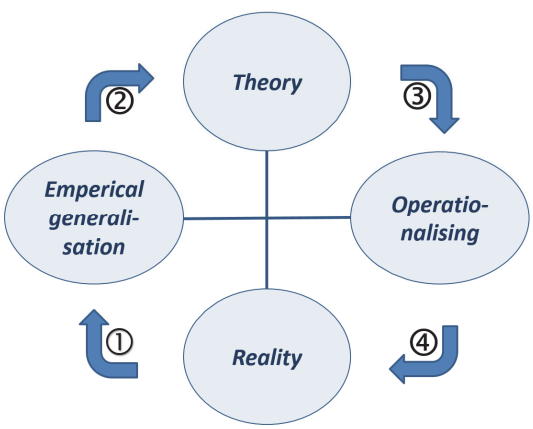


Figure 8. Different applications of following the inductive and deductive paths in the research process.

At least four applications within the two paths can be identified:

① GT/QCA can be used to generate empirical generalisations from observations of reality. With help of the coding procedure, findings can be discovered and described.

② GT can be used to generate theory from empirical generalisations by identifying and defining categories and sub-units of categories, as well as axes between categories and models. This theory-generating ability of the method is perhaps its most striking characteristics, for example when analytical hypotheses are formulated about associations.

③ GT/QCA can also be used in the often neglected work of operationalising variables and hypotheses. In pre-coding variables for questionnaires or in post-coding open ended questions the method is useful, for example when constructing an attitude scale and suggest as well as implement interventions.

④ Finally, GT/QCA also offers tools that help to illustrate and/or illuminate theories in a deeper way, especially by identifying and describing cases of theoretical relevance for example when presenting a narrative or a case study.

As indicated in this summary of the versatility of the method, the *oscillation* between induction and deduction is prominent. This abductive feature is present in all stages of the research process, from the interview situation to the meeting between your discoveries and existing theories.

In modern versions of Grounded Theory (Bryant & Charmaz, 2007) the abductive elements are more pronounced. Three tendencies are worth mentioning. Firstly, there is an obviously lowered ambition regarding the goal to generate formal theory. Working hypothesis, critical points of view, modifications, and in-depth description are most often looked at as sufficient for good research. Secondly a theoretical pre-understanding is supported because of its potential to guide Grounded Theory analysis straight through the whole of the coding process. Let us probe on this by using Charles Ragin's (1994) model of the research process.

Ragin describes retroduction (a concept akin to abduction) as a joint venture between theoretical and empirical applications, especially fit for use in research aimed at discovery. He understands retroduction as an interplay between induction and deduction and consequently between ideas and empirical phenomenon. Ragin describes this interplay as an oscillation between images primarily originating from data, followed by an understanding of these images that are guided by analytic frames in order to generate representations of the phenomenon. Thereby the research process is akin to what's going on in real life when serious problems insist on getting solved. This implies that theories are present from the beginning to the end; they are framing questions and suggest interpretations of use in coping activities.

The use of analytic frames suggested by Ragin associates to Herbert Blumer (1954) and his "sensitizing concepts", and also to Barney Glaser and his code families (1978) as well as to the theoretical sampling of issues and informants that most often follows as a crucial step in the ongoing data collection. Another relevant reference is Adele Clarke who in her book: "Situational Analysis" from 2005 emphasizes the value of being guided when analysing associations between different levels and contexts. According to Ragin, qualitative methods tend to either condense or exceed data. To condense mirrors an ambition to use in-depth knowledge to interpret associations indicated in epidemiological investigations. To exceed, on the other hand, implies attempts to translate concrete circumstances to abstract generalisations.

Ragin labels this interplay between the images generated from data and the analytic frames as representations of social life and he thereby belongs to the constructivist sociologists often associated with Grounded Theory.

Grounded Theory in practice

Grounded Theory offers a systematic way of transforming collected data into a more abstract form of information. The technique can be described in six distinct steps, which are shown in Table 2.

Table 2. Six steps in Grounded Theory[3].

Steps	Comments
Data collection	Normally based on recorded qualitative research interviews.
Documentation	Verbatim transcripts, memos and field-notes
Open coding	Going through the transcripts by writing down codes aimed at characterising important information in the material.
Selective coding	Deciding which open codes are important. Clustering them and transforming them to categories. Choice of core categories and identification of properties and dimensions. Going through the material again, now better knowing what to look for.
Theoretical coding	Attempts to find axes between codes and later on between categories. Construction of concepts and hypothesis.
Integration	Attempting to create a meeting between generated theories and existing theory.

Let us begin to examine these steps with the help of two examples. Thereafter we will review these steps again, from a more theoretical standpoint.

Our first example of Grounded Theory analysis is taken from an interview within the Kagera AIDS Research Project in Tanzania. It is a short example that highlights the open coding process. The respondent was a woman, 30 years old, and dying of AIDS. The interview was performed in, even for Tanzanian circumstances, a very simple dwelling; no furniture, earth floor, leaking roof, and no conveniences. Her husband had died, probably of AIDS, a year earlier and she had no children. She had come to this place, which

[3] Instead of naming steps four and five in the Grounded Theory process selective and theoretical coding (the terminology used by Glaser, 1998) Strauss and Corbin (1990) label them focused and axial coding.

was located in a small village close to the only town in the region, just a few months earlier. When she felt she was dying she had preferred to leave her home in town, but she chose not to go back to her home-village, to her family and old friends. Instead she went in the opposite direction to the village in which we found her, to a place filled with strangers. Because of her predicament, the villagers supported her with this dwelling, and they also assisted her with food and water, but her position was really very miserable.

In this situation it was generous of her to agree to be interviewed. The conversation and atmosphere were very deep and sensitive. In the quotation below consisting of only a short sentence of the interview she was asked about her relations with her family, especially her mother. We asked her how she had informed her mother about her present situation. Her answer was; *I send her a message that everything is okay*.

With this quotation it is easy to generate many codes. There are several options. To begin with you can take her statement for granted. She means what she says. She feels okay, perhaps because she has become reconciled with her fate, been conciliated with her God. A possible code following this line is *okay*. Another option can be based on the assumption that she is afraid to hurt her mother by giving her bad news. She wants to protect her. She lies because she is extremely *considerate*, which in this case can be a relevant code. A third option is that she is afraid to inform her mother about her situation for some reason. Of course the choice between different interpretations was clarified during the rest of the interview and *secret* was a code that was shown to be most relevant. Why secret? The code gives rise to a question that insists on an answer.

The answer to this will form our choice of category. Category is a central concept in Grounded Theory. It can be described as a concept with which we organise reality. It is an important part of people's cognitive maps. It is not always that it is possible to develop a category from only a few open codes. However, in this example the three codes could easily be linked to a more abstract category. The category chosen in our example is **shame** HIV/AIDS in Tanzania as in most countries has become a dishonourable disease. It has been associated with imprudent behaviour and people's norms about AIDS have created increased motivations to avoid sexually risky

behaviour, but at the price of stigmatisation of people already suffering from the disease. Our interviewee had decided to keep her situation a secret even from her mother and close family which we interpreted as a sign of the shame associated with the disease.

The second example is taken from an investigation in the northern part of Sweden. Here we will illustrate the construction of several categories as well as the choice of a core category. Data were collected in the form of an interview with an old man, 80 years old, who previously in his life had been a sawmill worker. He was still living in his birthplace, which formerly had been known as a very radical environment politically. During the first decades of the 20th century more than 90% of the adult population were communists.

The interview aimed to cover the inhabitants' way of living in the past and how it had changed. The upbringing of children was in focus in the passage in the transcript. The man and his wife had two children, both sons, who were in their mid-forties. One of them was still living in the village (a mill village with less than 1000 inhabitants), working in the same sawmill where his father had worked before retiring. This son was doing well and was very well integrated into the life style of the village. The other son was living in the capital of Sweden, Stockholm, and working as a teacher. According to the father, he had some problems. He did not like his job, or his place of living, and he was sometimes depressed even if the symptoms were minor. Also, his economic situation was problematic. His salary was about the same as his brother's, but the living expenses in Stockholm were much higher than in his birth village.

Below is the passage of the transcript referring to the son now living in Stockholm.

Table 3. A passage from the transcript of the interview with the son in Stockholm and suggested codes.

Text	Codes
I have tried to get him educated	Paternalistic, ambitious, strategy
I don't despite saw mill workers, not the henchmen either	class conscious, bad conscious, stratification
They are as good as others	Ideology, failure,
But I just mean, what about the income	Egoistic, defensive disappointment, ambivalence

You can see that the suggested open codes are almost as many as the words of the interview text. This is not unusual and it would have been easy to expand the codes in the example.

The first code on line 1 is *paternalistic*. The code is an adjective, which is most common for open codes. It marks a property of the respondent. Why then paternalistic? Well, because he starts saying "I" on the question about upbringing in spite of the fact that his wife was present in the kitchen. The second code is *ambitious*. He (and his wife hopefully) had great ambitions for their sons, but they could only afford to put one in secondary school (the one who became a teacher). The last code on line 1 is *strategy*. Strategy is a noun and the strategy in this text is to have him educated, which the parents at that time hoped, would give him a good life.

On line 2, the first code is *class conscious*. Why so? Well, because he makes an important statement that he sees no difference between people in different social status positions. Observe that he says this spontaneously, he was not asked about this. This motivates also the second code on line 2; *bad conscience*. In this case you have to read between the lines. His statement can be seen to express a sense of pain. The father has perhaps done something a good communist is not supposed to do. The last code on this line is *stratification*. This code is purely descriptive and indicates that he says something about differences between occupations.

On line 3, the first code is *ideology*. Also this code is descriptive and refers to his statement that one man is as good as another, i.e. a statement deeply rooted in communist ideology. The next one is *failure*, and here again the code is motivated by something read between the lines. Why does he say this if he does not perceive a failure of some kind?

On line 4 finally, the first code is *egoistic*, meaning that income is something he strives to attain for his son, even though this may be some kind of vicarious egoism. The second code on the line is *defensive*. This code sums up a strategy directed against the interviewer in answering his questions. Obviously the respondent feels a need to defend something, perhaps also for himself, perhaps because he is *disappointed*, which is the second to last code on the line. Finally, the whole sentence expresses some kind of *ambivalence* or conflict.

Now then, in a real coding session, you have to consider four things: First, which codes to keep and which ones to drop? Those you choose to drop are not necessarily bad, but for your purpose not as relevant as the others. Normally you drop a majority of codes, which can be mentally taxing. Second, which of the remaining codes can be married to each other? This means that together they will form a more theoretically loaded category. The categories most often can be seen as products of clustering the open codes. Third, are there axes between the codes or the emerging categories? That is, are they associated with each other? Now you enter the process of theoretical coding and as an end product you will produce models of associations between your final choices of categories. Fourth, what are the most important findings of your open coding? Now it is time to make a final decision about which will be your core category (categories). The core category is of course about the same as a dependent variable in a quantitative design. Let us go back to our example about the sawmill worker.

It is not easy to drop so many codes from our example as most of them seem relevant, but we decide to drop *stratification* and *paternalistic*. We drop stratification because it does not seem to be so important and paternalistic, although promising, because it seems to be irrelevant to our present investigation. Perhaps a later publication will focus on this aspect. It is also rather easy to see that some of the codes are so similar that they can be merged into a single category.

Let us look at three of our codes: *bad conscience, defensive* and *disappointed*. They can be regarded as separate; he is disappointed and has a bad conscience and because of that he is defensive. However, it is also possible to group them under a joint umbrella or category. Our suggestion is **remorse.** He expresses feelings of regret which his defences (external and internal) indicate. We have now constructed our first category, **remorse** and we can proceed.

Let us reflect on the code *ambivalence*, which seems to be a crucial one. What is he ambivalent about? Yes, two of our other codes seem to contribute to an answer, namely; *ideology* and *egoistic*. Ideology may belong in a preliminary category labelled **collectivistic**, and the code egoistic seems to belong to yet a category of its own, **egoistic**. However, further reflection on a later code of the text, *strategy*, leads to the understanding that it is a good idea to regard these two categories as just parts (dimensions) of a superior category: **action strategy**. We now have two categories: **remorse** and **action strategy** and our second to last open code, *failure*, helps us to set the axes between them. Our respondent has failed to combine two action strategies, one individualistic and one collectivistic. He regrets this and as a result *feels remorse*. If we return to the moment three decades ago when he decided to send one of his boys to secondary school to give him a chance to become a teacher, we can recognise a duality of motivation underlying his decision-making process. One possible strategy of action, the collectivistic one, was to persevere in the communist struggle for equality: "one guy is as good as anyone else". The other possible strategy was to diverge from this line of thinking and leave the door open for, what we can call, family success, in case the collectivistic strategy proved to fail.

Choice of core category

Following the above example we see that one open code remains, namely *class consciousness*. This code is related to the theoretical concept of **class journey,** meaning the process of moving from one social class to another during one's lifetime.

This category for us touches on the key points in the story told and is related to most other categories identified. Therefore, we choose this as our **core category** - a category similar to the dependent variable in a quantitative study. What we have arrived at so far is the possibility of uncovering some social mechanisms on a micro level of

relevance for our core category. We have discovered motivations for people of the working class to embark upon this journey, but also some consequences of it expressed in terms of compunction. We now know what to search for in a more systematic way in our material, but we also have some valuable ideas for further data collection. We are a little more prepared to continue the process of selective coding. This implies going back to our interview revising the set of open codes in the light of our deepened understanding and looking for further elaboration of the selected categories and their possible properties. Further on we may get opportunities to integrate our findings into already existing theories in this field of research.

In trying to explain the meaning of the core category let us quote Glaser:

> *It is what is going on! It emerges as the overriding pattern. Thus the goal for GT is to discover the core category as it resolves the main concern" (Glaser 1998, p. 115).*

Given this description of how to identify the core category of the emerging theory the way is laid open for interpretations and conceptualisations that far exceed the data. Remember that the core ambition in Grounded Theory is to move from curiosities to abstract patterns!

Properties and dimensions

In their book "Status Passage: A Formal Theory", Glaser and Strauss (1971) provide an illustrative example on the sometimes tricky distinction between the two concepts of category and property. They identify twelve properties of their core category of status passage Four of them are shown in Table 4. These four properties focus on whether the status passage is something nice or unpleasant for the individual (desirability), if the passage can take different directions (reversibility), if it can happen more than once (repeatability) and if the individuals are in charge of the process (control).

Table 4. Four properties of the category status passage.

Category	Properties
Status passage	Degree of desirability
	Degree of reversibility
	Degree of repeatability
	Degree of control

Glaser and Strauss point out that there exist several good examples of theoretical analysis that focus on status passages, for instance Howard Becker and his associates' (1961) analysis of the collective passage of medical students through medical school, and Erving Goffmans' (1961) depiction of the moral careers of mental patients. Most often, however, these authors focus on just one property of the status passage and ignore the others. Hence, in these examples the one property instead will be analysed as the core category Glaser and Strauss remind us that the category is open and will be modified when new properties are identified or old ones become less interesting. They state that properties are "the sprouts of the branch" that specify the category and result in a conceptually dense theory.

Particularly when the aim is to use empirical data to discover new concepts of relevance for the research topic, there can be a need to further analyse the categories by identifying their properties and dimensions. A property is defined by Glaser as "a type of concept that is a conceptual characteristic of a category thus at a lesser level of abstraction than a category. A property is a concept of a concept" (Glaser, p 38, 1992). With the help of properties, you can describe the substance of a category – what it is. A dimension on the other hand is the location of properties along a continuum, examples of variation within the property. An example from Vietnam will help clarify.

In the research in Vietnam on tuberculosis two important categories that emerged were **isolation** and **being-in-control**. The former referred to the isolation that tuberculosis patients experienced from both family and society. The latter referred to the whole process of

recognizing illness and taking treatment and how active the patients were in this. Table 5 shows these categories and their suggested properties and dimensions.

Table 5. Properties and dimensions of the categories of isolation and being-in-control.

Category	Properties	Dimensions
Isolation	Origin	Felt ⟷ Enacted
	Impact	Small ⟷ Severe
Being-in-control	Extent	None ⟷ Fully
	Focus	Self ⟷ Others

The isolation experienced could be felt (perceived by the individual but not necessarily true) or enacted, that is acted out by family and society. Depending on the individual patient, the impact of this isolation could be small or severe. Further, in the treatment process the patients could have different degrees of control over themselves or their surroundings.

Building a model through theoretical coding

After defining the core category (categories) and identifying properties of the categories the researcher starts recognising something to theorise about. She then moves on to the process of theoretical coding. This is the process in which the fractured or analysed parts will be merged or synthesised again.[4] The theoretical codes "weave the fractured story back together again" (Glaser, 1978, p. 72). Of help in this process is what he calls theoretical code families. Among the families mentioned by Glaser, three appear as the most important or at least most applicable: the *strategy family*, the

[4] In philosophy the ability to find differences in a material, i.e. to analyse it, is a matter of judgement. (Sartre 1962).

process family and the *six C's family*. The first one includes handling codes and can be described with the help of key-words such as strategies, tactics, ways and techniques. The second family includes time codes for example stages, phases, steps, passages, ranks and chains. The six C´s family includes the codes related to causes, consequences, conditions, contexts, contingencies and co-variances. These theoretical code families function as a theoretical smorgasbord from which the researcher is free to choose the most useful dish. However, a warning is justified, because many analysts prefer to use just their "pet" codes and are unwilling to "kill their darlings". Glaser therefore underscores: "It is necessary for the grounded theorist to know many theoretical codes in order to be sensitive to rendering explicitly the subtleties of the relationships in his data" (1978, p. 72). We, ourselves have expanded the smorgasbord by adding the emotive code family, an analytic frame we have used in different contexts and situations.

To illustrate how to conduct theoretical coding let us return to the old man in northern Sweden. Our core category was **class journey** and another important category was **regret**. With the help of the theoretical code *consequence* we can hypothesise that a price to pay for striving for a class journey for one's family could be failure and regret. The step from category to theory is taken with help of these theoretical codes and of course the data themselves. Most important, however, are the memos the analyst is supposed to write down as soon as new ideas emerge – almost every day. It can also be of value to put down ideas in the shape of models or other types of graphic illustration – how to do this a matter of personal choice.

We have now walked through the first five steps in Grounded Theory. Below these steps will be further elaborated and at the end of the chapter, the last step of linking discoveries to existing theories is presented.

We will now describe corresponding steps in QCA. Since many procedures are similar to Grounded Theory we will confine ourselves to address relevant differences.

Qualitative Content Analysis in practice

Qualitative Content Analysis offers a systematic way to analyze data. The method emphasizes variation, i.e. differences between and similarities within parts of the text; categorizing as well as thematising are central issues. Meaning units from the original text are condensed, labelled with codes that are organized and brought together according to their similarities. This aims at forming categories and/or themes on various levels of abstraction and interpretation. The analysis process can be described as a chain of steps, which are shown in Table 6.

Table 6. Nine steps in Qualitative Content Analysis.

Steps	Comments
Data collection	Usually based on recorded research interviews, observations and/or video-recordings
Documentation	Verbatim transcripts
Identifying content areas	An extensive text may be easier to handle if it is sorted into content areas, a rough structure that often corresponds to the areas of questioning.
Dividing the text into meaning units	A meaning unit comprises several words, sentences or paragraphs containing aspects related to each other through their content and context.
Condensing meaning units	The process of shortening an extensive text while still preserving the content.
Coding the condensed meaning units	A code is a conceptual label on the content of a condensed meaning unit that can be understood in relation to the context.
Making categories	Organizing codes with similar content into categories on different levels of abstraction (sub-categories, categories and main categories).
Creating themes	A theme is a recurrent thread of underlying meaning through codes and/or categories on different levels of abstraction (sub-themes, themes and main themes)
Integration/comparison	Comparing results with the existing knowledge base

Let us apply these steps, using the study of experiencing loneliness among the very old that live alone from The Umeå 85+ project (Lundman & Graneheim 2017, Graneheim & Lundman 2010). The interview study aimed to illuminate the experience of loneliness among the very old who live alone. A total of 30 persons, 23 women and 7 men, aged between 85 and 103 years participated in the study. They had been living in a sparsely populated area in northern Sweden; in a community with strong religious traditions.

Based on recent research on aging, and on experience within the research group from previous studies, an interview guide was developed. The opening question concerned informants' experiences from growing old. Other thematic areas included were experiences of loneliness, the aging body, significant life events, experiences of consolation and experiences of meaning. Researchers with experience of working with the elderly performed the interviews in the informal setting of the informants' home. The participants were asked to talk freely about their experiences relating to the themes mentioned above. If something was unclear, follow-up questions were probed. The interviews lasted between 35 and 100 minutes, were tape-recorded and transcribed verbatim. This analysis focused on the thematic area experiences of loneness.

In Table 7 the progression of analysis from meaning units to the category "abandonment" is illustrated.

Table 7. The analysis process; meaning units to the category "abandonment".

Meaning units	Condensed meaning units	Codes	Sub-categories	Category
Friends die one by one … all of them have died before me … all the others are dead	Friends die one by one	Friends die	**Feeling left alone**	***Abandonment***
I'm the only one among my siblings who is still alive … now I'm alone and I miss them	I'm the only one left among my siblings and I miss them	The only one left among my siblings		
If you … no one comes, no one calls, and if you call, no one answers	No one comes, no one calls, no one answers	No one comes No one calls No one answers		
Ah … then you feel you are set aside, neglected (sigh). I have not felt that before I grew old … old people feel … they get set aside. You feel like an outsider in daily life.	You are neglected. Old people get neglected … like an outsider	Neglected	**Feeling neglected**	
Yes … it feels unpleasant nasty … now it is no one who cares	It's nasty when no one cares	Unpleasant when no one cares		
… but why should they care … they have their own business. All people have their own business	Why should they care… everybody has their own business.	Everyone has their own		
… I had gladly joined but I can't because nobody wants me to be there … nobody needs an old person	No one wants to involve me … no one needs an old person	Nobody needs an old person		
The loneliness is enormous … sometimes I feels frightening	The loneliness is enormous and frightening	Loneliness is terrible and frightening	**Feeling exposed**	
… then I asked them (the home care personnel) to come a bit earlier … it is uncomfortable when they come too late, it feels as if I could be forgotten	It is uncomfortable when they come late … it feels as if I could be forgotten	Worried to be forgotten		

During the whole analysis process, **context** must be taken into consideration. There are two aspects of context.

The first of these two aspects concerns the knowledge of the circumstances in which the study is performed, e.g. setting and participants' characteristics. "*Who is the person who tells us their story? Is it a young woman or an old man? Where do they live? In what cultural setting does the interviewee live? What upbringing? What educational background?* This is part of context and an important aspect to consider when performing Qualitative Content Analysis. A thorough description of context enhances trustworthiness.

The second aspect of context concerns the words and sentences surrounding the meaning unit undergoing condensation and coding. This means that data must be understood in the light of whatever information comes before and after the unit undergoing analysis. Words or sentences detached from its context can have one meaning but if you take the sentences before and after into consideration you may understand them differently. Thus, meaning units cannot be regarded as autonomous and free from their context. It is not possible to interpret a single word or sentence without accounting for these two aspects of context.

Identifying content areas will be helpful early in the analysis process. When an interview deals with various phases of a phenomenon, these can become natural content areas. For instance, an interview concerning childbirth may be divided into the content areas: waiting for the child, giving birth and becoming a mother. In our study of loneliness among the very old the content areas "limitations" and "opportunities" were identified.

How to select the most suitable meaning unit is another methodological issue. Meaning units that are too wide, including several paragraphs, could be difficult to manage since they may include great variation of content (various meanings). Too narrow meaning units such as a single word or a phrase, may result in fragmentation. In both cases, there is a risk of losing content (meaning) during the condensation and abstraction process. An exception to this is when one or several words represent a well-known symbol or a metaphor.

Condensing the meaning units means to reduce an extensive text while still preserving its meaning. **Coding** is about giving the

condensed meaning unit a short conceptual label. Both these steps are performed close to the actual text on a manifest level.

A common experience among beginners practicing Qualitative Content Analysis is that it is difficult to handle codes that are created to address various perspectives on the phenomenon under study. If the aim is to describe experiences of loneliness and the codes are worded as other aspects of loneliness, for example, perceptions of loneliness, reasons for loneliness, consequences of loneliness or strategies to avoid loneliness, the researcher may experience problems to sort the codes into meaningful categories/themes. It will facilitate the analysis process if every condensed meaning unit and each code, respectively, are created with the aims of the study in mind.

Making categories. The main findings from Qualitative Content Analysis are presented as categories and/or themes. Categories describe what is in data, "the WHAT" (Morse 2008). This can be seen as an expression of the manifest content of the text. Basically, a category comprises a set of codes that are brought together because of their similarity with each other and their dissimilarity from other codes; i.e. categories should be internally homogeneous and externally heterogeneous (Graneheim & Lundman 2004). This enables the researcher to identify and describe the characteristics of a category.

Categories should be both exhaustive and mutually exclusive. This means that no data related to the aim should be excluded due to lack of a suitable category and no data should fall between two categories or fit into more than one category. However, since all data have multiple meanings (Krippendorff 2013) categories are not necessarily mutually exclusive. One code can fit into more than one category. This becomes obvious, for example when we analyze interviews concerning personal experience. Human experiences are intertwined and it is not always possible to create mutually exclusive categories (Graneheim & Lundman 2004).

Carlsson (1997) has illustrated the logic of constructing categories on different levels with how a store is organized (see Figure 9).

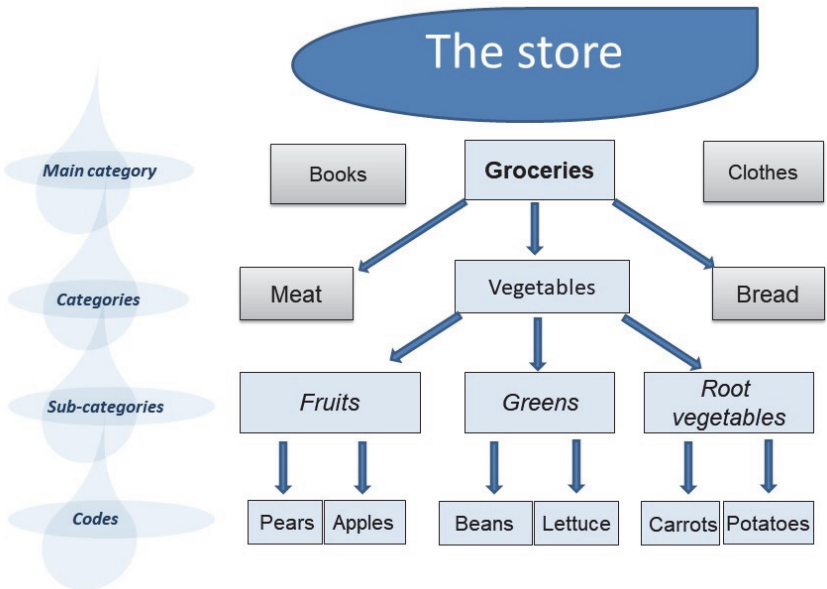


Figure 9. The organisation of a store.

In our figure the grocery department can be compared to a main category. This main category is based on three categories, namely *meat*, *vegetables* and *bread*. The category *vegetables* is constructed of the sub-categories *fruits*, *greens* and *root vegetables*. The content of each sub-category contains several codes, for example apples and pears (fruit), lettuce and beans (greens), potatoes and carrots (root vegetables). The same idea applies to Qualitative Content Analysis, where we hopefully would not find carrots under the *bread* category.

If we return to the example, experiencing of loneliness among the very old, the categories: *losses, abandonment, invisibility, dependency, boredom, freedom, rest, contentedness, security* and *acceptance* were created.

Creating themes. A theme is a recurring thread of underlying content (meaning) running through codes and/or categories. It can be seen as an expression of the latent interpretation. A theme answers the question "What is it about?" (Morse, 2008). Morse describes a theme as a meaningful essence running through the data, and just as in an opera, the theme may occur over and over again. It is sometimes in the background, sometimes in the foreground and sometimes co-

occurring with other tunes. Returning to the example of loneliness among the very old, the interpretation of the underlying meaning in the categories was expressed as the theme: feeling homeless but also at home.

Table 8. Overview of content areas, categories and theme.

Content area	Categories	Theme
Limitations	Losses Abandonment Invisibility Dependency Boredom	Feeling homeless but also at-home
Opportunities	Freedom Rest Contentedness Security Acceptance	

In Table 8, we show an overview of the results from the study of experiencing loneliness among the very old. Interviewees experienced loneliness as feeling homeless but also at home. Homelessness was described as experiencing loss, feeling abandoned, invisible, dependent and bored, representing the limitations imposed by loneliness. At-homeness was described as feeling free, with the possibility to rest, feeling content, feeling secure, and accepting life as it is, representing the opportunities imposed by loneliness (Graneheim & Lundman 2010, Lundman & Graneheim 2017).

UNDERSTANDING QUALITATIVE METHODOLOGY

What does coding achieve?

Two things are important in the process of moving from data to category construction. The first is that ordinary terms are translated to concepts. Sometimes "in vivo" expressions are picked up directly

from the data and used as codes. Other times the researcher him/herself constructs the codes "in vitro". All categories are conceptual constructs. The second thing is that coding takes place in a cultural context. Some codes appear to be more natural than others; they are simply more relevant. This is one of the reasons why theories tend to be modified continuously when translated to another context.

Glaser summarises the coding process by saying: "Coding gets the analyst off the empirical level by fracturing the data, then conceptually grouping it into categories that then become the theory which explains what is happening in the data" (Glaser, 1978, p.55). Accordingly, in Figure 10 the ambition of Grounded Theory work is illustrated, starting in reality and ending in abstract understanding and explanations. The utmost aim is to construct formal theory from substantial cases. This means leaving the concrete level in favour of more abstract theory construction. Glaser describes this as "Once discovered concepts leave the level of people, they become the focus of the research (2001, p.18). Grounded Theory analysis thus transcends the empirical level by conceptualisation. At the same time in vivo codes and categories remain parts of the emerging theory – some of the concepts are still there but the people who expressed them gradually retire.

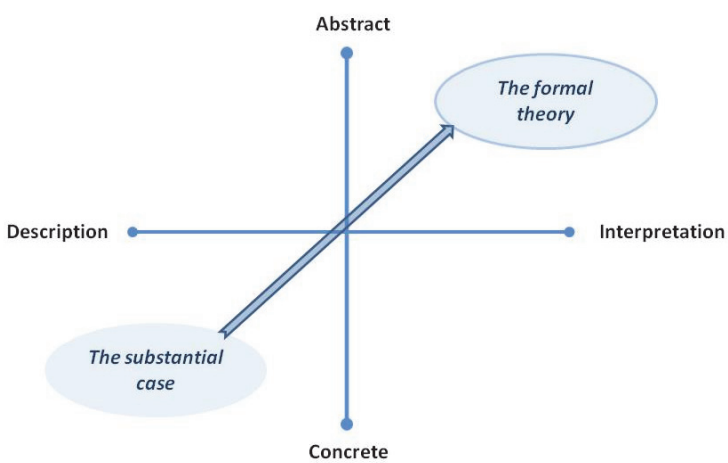


Figure 10. The orbit of Grounded Theory – the path from case to formal theory.

Qualitative Content Analysis has a similar ambition but as showed in Figure 11 the methodology is more focused on detailed manifest descriptions than Grounded Theory. Also in when moving to a latent level the ambitions to reach abstract interpretations are a bit more limited. Instead of searching for formal theory as in GT, QCA tries to identify latent interpretations.

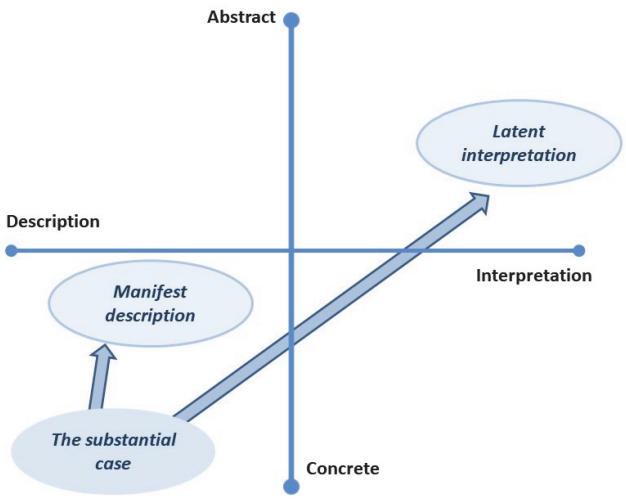


Figure 11. The orbits of Qualitative Content Analysis.

Making constant comparisons

Concept generation is a process that aims at seeing the "bigger" picture. The researcher is empowered to discover and generate codes, categories and concepts that will help make the complex world a bit more understandable and transparent. One of the main features in this process is constant comparative work. In constant comparisons the researcher "compares incident to incident, then as a category emerges, he compares the concept to the next incident. An important question to ask during this process is: "What category does this incident indicate?"

Constant comparisons are core activities during the whole process of doing a qualitative analysis. They are there in the coding processes as well as in the encounter with other research. They are central for deciding when the level of redundancy is reached, which is crucial in

the process of theoretical sampling. Constant comparisons are important in searching for core categories and this can be described as a process of reduction; "By selective coding the theory is boiled down and codified, by saturation, more focused memos, selective theoretical sampling and the shift to a more focused theoretical perspective" (Glaser, 1998, p.150). Metaphorically, this is to say that the dish will become increasingly delicious.

Qualitative Content Analysis does not use the concept of constant comparison but still describe a similar analysis process emphasising that the process is non-linear combining induction, deduction and abduction. The aim of the study determines if data collection and analysis should be performed in an inductive or deductive manner. An inductive approach is data-driven and answers questions about for instance people's experiences, perceptions and opinions. A deductive approach is concept-driven and answers questions about how does this fit with an already accepted knowledgebase, a model or a theory (Shreier, 2012). However, the analysis process is seldom inductive or deductive, rather constantly oscillating including a movement back and forth between original data and interpreted data, between parts of the text and the whole.

The role of existing theories

One of the controversies among different qualitative scholars in qualitative methodology is about the possibility of building bridges between existing theory and discoveries grounded in data. Today, the main line of thinking is that qualitative research, including both Grounded Theory and Qualitative Content Analysis share the ambition to build and test/use theories in a constant ongoing process, even if the ambition of where to reach differ. Particularly, the use of pre-understanding is a matter of timing. Of course, almost all research attempts, both in GT and in QCA, in one way or another are grounded in practical (identification of a practical problem) and/or theoretical (identification of a problem with the help of theoretical knowledge) pre-understanding. It is also true in both methodologies that genuine abduction (oscillation between inductive and deductive work) takes place during the whole research process, regardless of whether the activity is interviewing, observing, coding or interpreting. Research is a part of life and attempting to deny this by putting it within brackets would be not only impossible, but also unwise. It is important to find a practically functioning dynamic

between open-minded interpretation and the use of pre-understanding. The approximate proportions of this mix during the research process are represented in Figure 12.

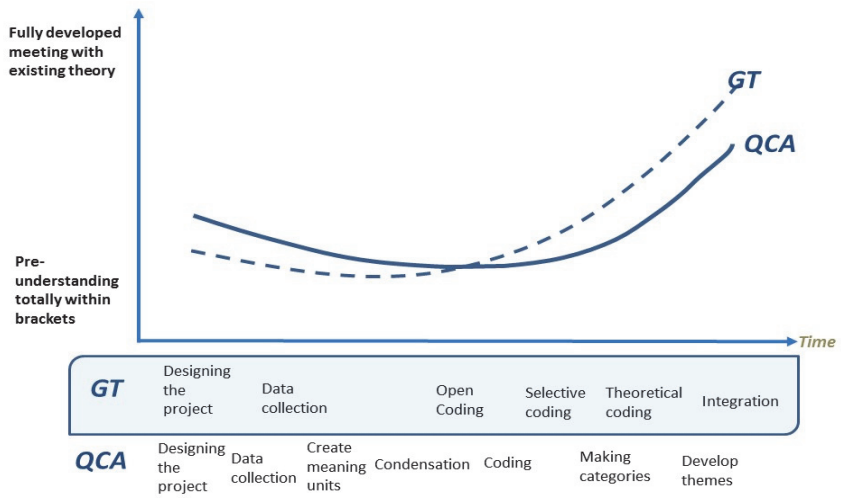


Figure 12. The dynamic between open-minded interpretation and use of pre-understanding during the research process.

Figure 12 also indicates a difference between our two methodologies GT and QCA. GT starts up with little of pre-understanding while QCA can accept more. At the end of the research process the ambitions of GT are a bit more far-reaching in that GT aims at moving towards theory generation and/or integration with existing theories. In QCA, the concrete phenomenon observed is interpreted and transformed into latent themes on a more abstract level and compared to the existing knowledge base.

Examples of linking discoveries to existing theories

To elaborate on this, using examples of linking discovery to existing theory. The first example is fictitious and follows the main steps of the research process from pre-understanding to generalisation via data collection, coding and interpretation. Then we give examples taken from the Rehabilitation project and the Rönnskär project described earlier. All examples use studies analysed using Grounded theory. Similar links to existing theories could of course be developed based on a Qualitative

Content Analysis study to compare and discuss your findings but without the aim of integrating those findings in new theory.

Sometimes in graduate research, a student's choice of research problem is selected from a field he or she is already familiar with. In our example, the researcher is a personwith professional experience from childbirth, for example as a midwife. This is most likely an advantage. He or she is already oriented in the field and can save some time initially. He or she is also very motivated because of his/her practical pre-understanding. The senior researcher on the other hand, often lacks this personal engagement, but is more influenced by theoretical perspectives and ideas. To simplify, the junior researcher attempts to learn something from his/her cases, while the senior one tries to apply theoretical pre-understanding to new research fields. Put in a more practical way, the junior researcher tries to learn something about fear of childbirth in order to use it when communicating with the women in the delivery ward. The senior researcher, on the other hand, tries to specify/ supplement/reformulate general theories about fear in the field of childbirth.

The professional researchers, especially senior ones, are usually "members" of a more or less pronounced discourse or theoretical perspective. As mentioned earlier, Strauss for instance was one of the most prominent representatives of symbolic interactionism and this fact has certainly influenced his contributions to sociological theory-building.

Let us follow Strauss' by assuming that our fictitious researcher chooses the lens of symbolic interactionism when designing his/her data collection above all in the choice of themes when conducting interviews. What he/she has to do then is to draw up an outline for the interview guide, which is rooted in this theoretical perspective (frame of reference). This does not mean to put forward a specific theory in the shape of a hypothesis and even less, to operationalise it for testing with help of structured instruments. It just means to make explicit what theoretical pre-understanding will consciously or instinctively govern the job. In this case the choice of symbolic interactionism will put in focus concepts like reflection significant others, generalised others and communication. These concepts will

then to a greater or lesser degree govern the choice of themes in the interview guide.

As discussed earlier, during the data collection phase, for example when interviewing, the Grounded Theory approach recommends openness. This means that the interviewer and the person interviewing are supposed to communicate in a reciprocal and equal way. The interview person is free to add whatever he/she wants and the interviewer is supposed to come up with follow up questions and even new themes when it is warranted. The ideal interview situation imitates communication between friends on issues of importance. When interviewing women who experience fear of childbirth it is an advantage if the interviewer shares the same experience or has professional experience. On the other hand, it is perhaps easier for an ignorant interviewer to be truly curious. Anyhow, what the interviewer must try to do is to use his/her pre-understanding during the interview without missing chances of taking in and probing unexpected information.

During the process of open coding openness should be the guiding principle. The researcher should try to put his/her theoretical pre-understanding within brackets. One simple way of doing this is to avoid theoretically loaded concepts as codes. If, as in our case, the informant says something like:

> *"I was really frightened when I entered the delivery ward and saw all the technical instruments and devices, and met the doctor who talked to me in a way I didn't understand…"*

The code should not be *alienation*. Why so? Well, because the concept of alienation is already anchored in existing theories and it is too early to close the interpretation. On the other hand, in the selective coding which will follow, it is quite possible that the open codes on this theme will be merged into a category with the name alienation. Therefore, instead of using alienation as an open code use something more basic, for example *lost* or *confused*.

When it is time for the researcher to confront his/her discoveries with existing theories the symbolic interactionist perspective sets the scene for the meeting - but not more than that. Now he/she is supposed to have a set of findings in the shape of concepts

hypothesis models etc., which probably fits under the umbrella of the theoretical frame of reference. The researcher has not tested the theory of symbolic interactionism (which incidentally might be impossible). At best, what he/she has done is to add something substantial to the understanding of the fear of childbirth with the help of this theoretical perspective. Another possibility is that the findings do not make sense within the frame of symbolic interactionism and then he/she has to compare them with something else. A third possibility is of course that the discoveries are unique and possible to formulate in a new and original way. If we use the example of fear of child birth the findings can be described as: The researcher succeeds in defining different types of fear associated with giving birth. These types prove to be possible to connect to the woman's earlier experiences of childbearing and delivery as well as to experiences mediated by her significant others. Another root of her fear is information received from mass media about risks and complications. Still another experience-based reason for her delivery fear has to do with how she has been treated at the delivery ward. Perhaps, because of some kind of labelling, she has experienced a feeling of not being a "real woman" or a coward. Following this line of thinking it is possible for the researcher to create a meeting between theories on stigmatisation (Goffman, 1971) and his/her own empirical findings. The possibilities in this phase of the research process are almost endless.

Finally, some words about generalisation. As has been mentioned previously, Grounded Theory strives at creating abstract knowledge from concrete observations. This means that the ultimate ambition is to discover theories on a level which will make it possible to apply them to a wide range of situations or contexts. From the experiences of the woman who is afraid of childbirth, the researcher may even come to understand something about fear in general. Other positive results of the meeting between discoveries and existing theories are that the qualitative findings can be of help in attempts to formulate quantitative or qualitative hypotheses based on the concrete research case, and also assist in the processes of operationalisation and measuring these.

Let us now move to a broader example of how to create a constructive meeting between data grounded in reality and already existing theories. Our illustration is from a rehabilitation project in

Västerbotten. We start from the thematic interviews performed with the doctors. As a result of the coding process focusing on experiences from the social role of a doctor, eleven pairs of open codes appeared as important. In Table 9 below, they are presented as contrasting pairs and arranged within three categories (the example is shortened from the original report). These contrast codes were developed using the flip/flop technique that helps the researcher become more open-minded about what to see in the data (Strauss and Corbin, 1990). The flip/flop technique means that when identifying *Active* as a code in one of your interviews you define its opposite, in this case *Passive*. Then you start looking for examples of also this contrast code in your data. The flip/flop technique is useful when you want to see the potential variation within your categories.

Table 9. From contrasting open codes to construction of categories.

Open codes	Contrast codes	Categories
Traveller	**Miner**	**1. Action orientation**
Active	**Passive**	**1. Action orientation**
Trust	**Vulnerability**	**1. Action orientation**
Ambivalence	**Self-assurance**	**1. Action orientation**
Generalist	**Specialist**	**2. Holistic view**
Client oriented	**Disease oriented**	**2. Holistic view**
Co-operation	**Individualism**	**2. Holistic view**
Sensitive	**Closed**	**3. Empathy**
Dialogue	**One way communi-cation**	**3. Empathy**
Get close	**Distance**	**3. Empathy**
Committed	**Burned out**	**3. Empathy**

As was shown in Table 9 the codes are distributed into three categories. The first category is about **action orientation**. One crossroad within this category is whether the doctor believes that the body in itself accommodates the answers to its enigmas (diseases) or whether the answers are to be found in the context surrounding the individual. The *miner* symbolises the former attitude, while the *traveller* symbolises the latter. Action orientation in its positive shape is also about how to see and encourage the client to be *active* in the rehabilitation process. It is also about creating *trust* in the meeting and about an attitude that *ambivalence* is not only acceptable but aimed at when meeting the patient. The second category is about having or not having a **holistic view**. The holistic perspective is clear from the codes: *generalist, client oriented,* and *co-operation*, and this picture fits well together with the role of the general practitioner compared with more specialised doctors. The third category is **empathy**. It is about the ability to take the role of the client. When trying to do this the doctor must be *sensitive* and dare to enter into a *dialogue* with the client. The most difficult thing in this attempt is perhaps to *get close* to the client but at the same time not fail to distance you to avoid becoming *burned out*.

The process of getting close and distancing oneself also has another meaning. If the doctor really wants to grasp the whole situation of the patient, he/she must get close. But then, when reflecting upon for instance diagnoses, he/she must distance him/herself and also activate his/her medical pre-understanding. This double-sidedness of the professional role of the doctor was one of the findings, which we found promising to investigate further by creating a meeting with already existing and relevant theories. Another approach was to look at the meeting from the perspective of the clients. Let us review both and start with the latter.

From our data characterised above, we identified two types of doctors or, more correctly, two types of attitudes perceived by their patients. Some patients saw the doctor as a stranger while others identified him/her as an acquaintance. There were also people who perceived doctors as being both strangers and acquaintances. The first type is more common for general practitioners and the other for "super-specialists". The same pattern arose in the data from our interviews with long-term sick people. Let us look a little bit further at these two attitudes of the clients.

① People who perceived doctors as *strangers* gave us many illustrative narratives in which they described the meeting with doctors as something negative and almost insulting. They told us about strong feelings of being unseen and left out, and not seen as a person with capacities of taking responsibility for their own rehabilitation. This disappointment was also associated with disbelief in the competence of the doctors and in the whole system of medical care. The expectations of the patients that the doctor will solve their health problems and release them from suffering were frustrated. The following quote mirrors that frustration:

> *"They are just prescribing losec, losec, losec….[medicine] all the time. When it doesn't help they should test something else. They should go to the bottom of it…."*

Many of the informants experienced their encounters with the doctors as asymmetric. The power was in the hands of the doctors and in addition, the doctors were not perceived as being committed.

Conversely, other people on long-term sick leave seemed to be more positive to doctors as strangers. They trusted them more than more empathetic ones. They had no ambitions at all to make acquaintance with any doctor. They trusted them in their professional role and as

representatives of the medical discourse. In spite of, or perhaps just because of their distance, the "strangers" were regarded as somebody to really believe in, especially regarding matters of life and death.

② Other long-term sick people regarded doctors as an *acquaintance*. They trusted the doctor and were ready to leave themselves in his or her care. There is an obvious risk that this attitude will lead to blind faith in the doctor's expertise and empathy. Instead of a joint effort of the doctor and the patient in which the doctor is successful in mobilising the resources of the patient, the patient starts to enter the sick role more permanently. As in the narrative below, the patient tends to experience the sick role as more stimulating and comfortable than a return to working life. When the doctor performs in the role of acquaintance, he or she may confirm this attitude of the patient. Being with the doctor and continually receiving confirmation may become more important for the patient than rehabilitation and recovery.

> *"If they give me a job just now, I'm not sure if I could tackle it. I think I need more time, I'm not ready…. My doctor is so nice. He has supported me all the time. He says that everything should be just enough…. He tells me that I rather should take it easier. He has helped me a lot."*

Fortunately, doctors can also succeed in combining the two roles of *stranger* and *acquainted*. In this case the patient feels important and well taken care of and tends to trust the doctor's professionalism as well as the effectiveness of the health care system. What the doctor succeeds in doing is to meet the needs of the patient. An important prerequisite for this is that the doctor must be able to take the role of the patient and grasp the social context around him.

> *"I am really satisfied with my doctor. He is really engaged in me and my problems. But he is also very competent, especially when it comes to sciatica and lumbago problems. I am really confident with him."*

Now, let us turn back to the meeting with theories of relevance for our discoveries. From our data we have found some promising categories both about doctors and patients and also some opportunities to say something about the interplay between the two actors. With these categories in our luggage, we now go to a meeting with already existing theories in this field. The possibilities in arranging this meeting are almost endless, metaphorically a smorgasbord loaded

with theories. From this table we chose three theoretical contributions. The first comes from a Swedish sociologist, who unfortunately is rarely published in English, Johan Asplund (1987). The second one is one of the most well-known sociologists of today, Anthony Giddens from England (1991). The third one, finally, is a classic American sociologist, Talcott Parsons (1978). Let us, to begin with, meet Asplund:

① *Johan Asplund and the good encounter* Johan Asplund tries to define and describe what he designates: "the place of the good encounter". It is a social meeting characterised by a definite response, i.e. a genuine social interplay. Encounters of this type spark attention. People take notice of each other and give feed- back. They listen with their third ear. The encounter is balanced and characterised by reciprocity. The opposite situation is a situation in which the actors do not complement each other, and Asplund names it "lack of social response".

Asplund provides us a framework for an analysis of the encounter between the doctors and people on long term sick leave. It so to speak sets the scene. Our own data from the interviews fit very well with his distinction. In order to take one more step in the analysis of the meeting we now turn to Giddens and his view on the consequences of modernity. We will especially emphasise changes in ordinary people's trust in experts, which he observes has taken place in the recent days of late modernity.

② *Anthony Giddens' faceless meetings.* Giddens identifies and describes different threats of late modern societies and one of them is the embedding of concrete face to face relations or their replacements with abstract ones. In this situation it is of utmost importance that people's trust in experts, professional roles and, abstract institutions like the medical discourse can remain intact. In order to be able to maintain this order there is a need for what Giddens labels access points. With that he means meeting-places where faceless (abstract) commitments can be associated with face to face (concrete) commitments. The consequence of this encounter is a matter of trust or distrust, and there are of course many examples of access points, of more or less importance.

One access point of relevance for us is the consulting room. In this room the delicate mission of the doctor is to earn and reproduce the trust of the patient. This trust points in two directions. On the horizontal level the trust is dependent on the face to face communication between the patient and the doctor. The trust will be there if the patient regards the doctor as a fellow being or simply a friend, and this attitude in turn depends on the doctor's ability to take the role of the patient and grasp his situation. On the vertical line, on the other hand the trust is dependent on the doctor's ability to represent abstract systems, i.e. medical science and practice. Expressed in metaphors the doctor is forced to choose between two roles. He or she can choose to be a "stranger" focusing on his or her mission to function as a representative of abstract discourses. He or she can also choose to be a "friend" focusing on the meeting as a joint venture. At best, he or she can succeed in combining these two roles, but as is shown in Figure 13 this mission is tricky.

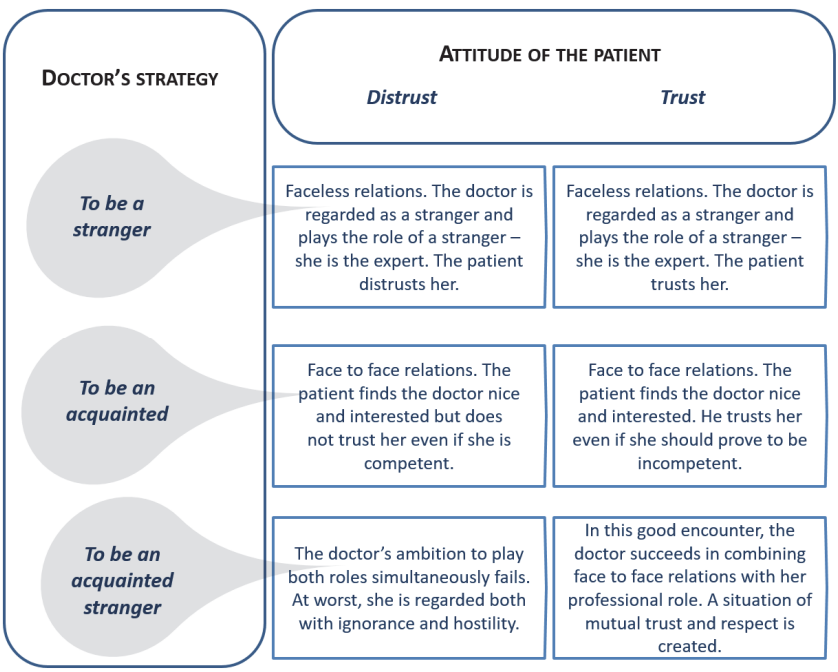


Figure 13. Encounters between doctors and patients in the perspective of Giddens.

Also this time our data fit well with possible outcomes of the encounter between doctors and clients as deduced from Giddens (1984). The most positive outcome of the meeting, and the one which satisfies both parts, is the one characterised by reciprocal trust. The doctor is perceived as an *acquainted stranger* by the clients, and because of that able to function as an esteemed representative of the medical discourse.

③ *Talcott Parsons and the sick role*. In Talcott Parsons' classic analysis of the sick role, he defines it as a position offered to the sick individual. This offer, however, is conditional and society puts demands on the sick person before he or she will be accepted in this role. The society accepts that he or she leaves the labour market, but only occasionally. The person on sick leave is supposed to take an active part in the rehabilitation process, i.e. try to return to the labour market as soon as possible. The line of thinking is that the sick person should regard the sick role as negative and temporary, as something he or she wants to escape from. However, Parsons also observes that not all people in society accept this contract. Some people even strive to attain the sick role. In the analysis of Parsons this attitude depends on a breakdown of the super-ego. This means that this type of person has not internalised the demands and norms of society. Instead they diverge and are happy if they can stay and hide in the sick role.

Following Parsons the sick role seeking behaviour is a threat to society and therefore it is of utmost importance to stop it. Doctors for instance play a crucial role in this process, both in recognising the sick role seeker and in providing the complex therapy needed in the rehabilitation process. This process consists of bringing the patient in line with the existing norms of society.

When people try to orient themselves in different situations, make decisions and act; normally there are options. For instance, when one is sick, there are the alternatives to either continuing to work or trying to be sick-listed. As is clear from Figure 14 ill health can be described and analysed from different perspectives or dimensions.

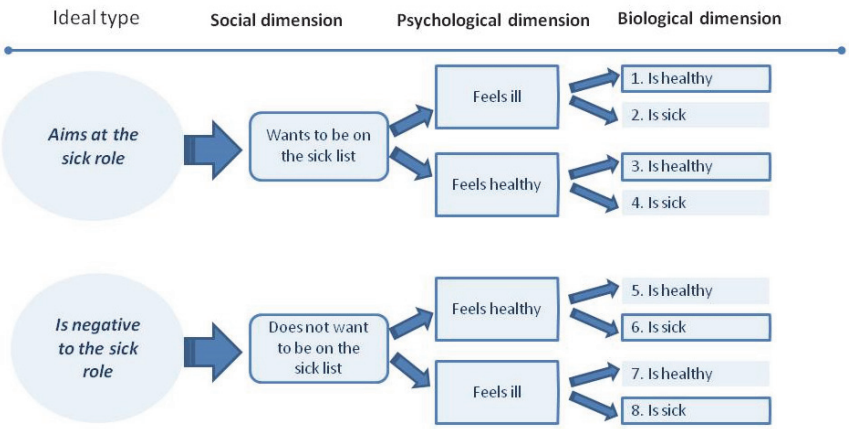


Figure 14. Three dimensions of ill health related to the sick-listed person's attitude to the sick role.

Besides the strictly biological dimension (you are sick), there is a psychological (you feel ill) and social one (you are regarded ill by other people, most important by those who can put you on the sick-list). Most often, probably, these three dimensions coincide which makes the analysis trivial. On other occasions, the picture is divided. Some people attempt to be put on the sick-list even when feeling fine. Others avoid it at any cost even when sick. Applying the distinction between people who seek or escape the sick role, the pattern appears which is shown. Among the eight options which fall out logically some alternatives are odd or irrelevant for this connection (alternative: 2, 4, 5 and 7). The other four, however, are of interest. Alternative 1 fits a situation in which sick-listed people believe that they are ill despite the fact that they are healthy. They suffer from some kind of hypochondria or have been so poorly treated in their work or during their period of sick leave that the sick role appears to be the one and only possibility. Alternative 3 describes instead a situation in which a person is bluffing because of malingering. Alternative 6, on the other hand is about a situation where a person hides his sickness. He insists on staying at work or returns to work as soon as possible. He thinks he is healthy but he is not. Alternative 8 is analogous but in this situation the person at least is aware of his health problem.

The model indicates that there are two cases of under- and over- sick-listing respectively, and that both cases are problematic. In two of the

situations people are healthy but on sick leave or wish to be. The other two situations mirror the opposite situation. People are sick but afraid to enter the sick role. For people responsible for the rehabilitation process it is a challenge to match the right measures to the right person.

All these attempts at linking our own data with abstract and general theoretical perspectives were very useful in the Västerbotten rehabilitation project when formulating conclusions and suggestions. Hence, the project illustrates a fruitful meeting between an emerging Grounded Theory and existing social science theories.

6. Computers in qualitative research

DEVELOPMENT OF OPENCODE

Applying qualitative methodology in research generates large amounts of written information. Transcribed recordings of interviews, focus group discussions, narratives, case-studies and notes from observations or field visits are just a few examples of the main data sources that form the basis of qualitative analysis. Many computer programs have been developed for the process of organising and preparing the data for analysis. In our own research, we have come across programmes like the Ethnograph (www.qualisresearch.com), Nvivo (www.qsr.com.au) and Dedoose (www.dedoose.com). They have been specifically designed for different approaches in qualitative research. In addition, common-use word-processing programs provide tools for sorting and retrieving information from huge text files. The advantages of organising the information in a computerised file system where it can be easily located and stored are obvious. The time when qualitative researchers had to rely on a pair of scissors for compiling and sorting their information is long gone. Still, most existing programs for qualitative data processing are not designed for actual analysis. They rather assist us in the systematic organisation of our data according to codes, categories, themes or concepts, all depending on the focus of the study and type of qualitative analysis carried out. These programs offer efficient sorting of the information in order to help the researcher identify patterns and differences and maybe even discover something new.

We have found, however, that the commercially available programs are either too expensive to recommend to students or too complicated to use during the short practical sessions of a course or for a researcher occasionally using qualitative methods. This led to the decision to develop software for teaching purposes that could be used by ourselves as well as by students in future research activities.

Together with programmers from the computer centre at Umeå University, Sweden, staff from Epidemiology and Global Health developed the program *OpenCode*. The ambition was to create a self-instructive program that was easy to grasp and use. The first version of OpenCode has been improved in several new versions. The last version of OpenCode can be downloaded for free from the Internet (https://www.umu.se/en/department-of-epidemiology-and-global-health/research/open-code2//research/). An easy way to find Open Code is to do a Google search– "Open Code umu".

A comprehensive description of OpenCode 4 is available in the manual included with the program. The manual can be printed or used as a help function. However, in this section we illustrate how the program can facilitate qualitative analysis by describing OpenCode 4's main functions.

OpenCode - a starter

OpenCode 4 is a tool for coding all kinds of qualitative data that have been transcribed. It can be used for transcriptions from interviews, observations or protocols but can also handle comments and free text from open-ended questions in questionnaires. Originally OpenCode was developed specifically to follow the first steps of the Grounded Theory methodology. However, it can be used as a tool for classifying and sorting any kind of qualitative text information and has now been adapted to some specific procedures used in Qualitative Content Analysis as well.

The main features of the program are to:

- ***import text from any word processing program***
- ***to condense segments of the text***
- ***assign codes to segments of the text***
- ***to synthesise codes in two stages***
- ***write memos***
- ***find words in text***
- ***search for codes***
- ***link codes to synthesised concepts***
- ***print the results from any of the above functions***

The program is compatible with PC-systems and is compatible with Windows version 98 or later. The program uses English but the data/material and the different steps in coding and grouping procedure can be in any language. By default, the program is installed in its own program sub-directory under the name *OpenCode 4.0*. The software automatically creates a new folder, labelled *OpenCode 4,* for storing data under *My Documents*.

If you have an earlier version of OpenCode you will still find your data in the old folder for data labelled *My Open Code projects*. Older versions and *OpenCode 4*.0 can be run in parallel. It is important to remember that projects created in older versions can *not* be converted to *Open Code 4.0* projects.

OpenCode was originally developed to follow the first steps of Grounded Theory and thus GT concepts were used in the OpenCode grid. In *OpenCode 4.0* we have not used concepts that are specific to GT, instead we have tried to use a language that is neutral and not specifically connected to any method.

It is not possible to use *OpenCode 4.0* on a MAC system without first adapting your computer. There are basically two ways to make it possible to run OpenCode 4.0 on a MAC. You can boot into Windows at start-up, which means that the computer will run as a PC without the possibility to use Mac applications until you restart. Windows Boot Camp comes preinstalled on new MACs so with the Windows license you are ready to go. If you want the possibility to switch back and forth, the second path is preferable, using specific virtualisation software. For both solutions you need a Windows license. There are also some freeware solutions available on the Internet. We suggest a Google search. Write "*how to run windows on mac"* and study the various possibilities.

This chapter is organised in two sections. The first describes six main steps; how to use OpenCode 4.0. In the second we describe ten different functions that can be applied during the analysis process depending on specific needs, design of the project and choice of analytical approach.

Six main steps

Below we will present six crucial steps important for everyone.

①*To prepare your material:* To be able to work with OpenCode 4.0 you must prepare all documents. The text must be *saved as* a .txt file to be able to import the text into OpenCode. When saving as a .txt file, formatting such as bold text and italics, as well as other formatting, will disappear. It is important to go through the material prior to converting it to a txt. file in order to make sure no important information will be lost. Once the material has been imported into OpenCode nothing in the text, such as misspellings and irrelevant comments, can be changed.

When analysing your data using a Qualitative Content Analysis approach this editing procedure is even more important. First you must divide your material into meaning units. This must be done in your word processing file (.doc file) using line breaks after every meaning unit. For Qualitative Content Analysis this means that in Open Code the column "Text" refers to meaning units and in GT it is the original transcript (Figure 15).

Next, you save the files as *text only files*, the extension.txt. and your original files remain available as a backup.

Open Code - concepts	Text	Text 2	Code	Synthesis 1	Synthesis 2
Grounded Theory - concepts	Text	☒	Code	Category	Core Category
Qualitative Content Analysis - concepts	Meaning Unit	Condensed meaning unit	Code	Sub-Category or Sub-theme	Category or Theme

Figure 15. The conceptual framework in OpenCode 4.

②*To create a project:* In order to work in *OpenCode 4* you first define and label your project with a name that identifies the data content. Each project is created and saved as an empty data-base under *OpenCode 4 projects*. To store all documents from one project in the same database/project is a prerequisite for being able to search for codes later and to see how they are linked to the texts and how they can form a group. Thus, it is necessary to actively import all relevant documents into the database/project one by one. This process can be thought of as being akin to the process of obtaining (and naming) a filing cabinet, in which all paperwork from one project is grouped together. Any project can store an almost unlimited number of documents and thus it is ultimately the size of the computer's hard disk that sets the limit.

③ *To import documents: OpenCode 4.0* only imports documents as text files (.txt). Existing documents saved as .docx files will not be found by *OpenCode 4.0*.

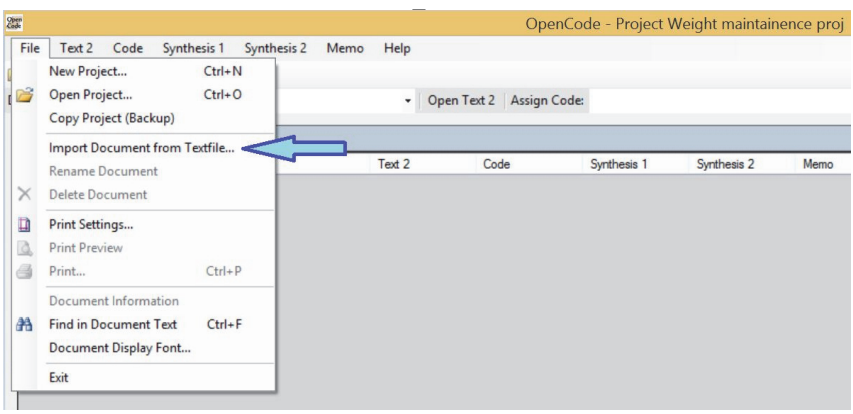


Figure 16. A grid for importing text-files.

After editing and saving documents as text files they can be imported one by one into the project created in *OpenCode 4* where they are stored as lines of a maximum of 60 characters. It is a simple procedure, which entails going to the File scroll box and clicking on Import Document from Textfile. The program will only search for .txt files and it is important to know in which folder the data file is located. In the process of importing documents, you have the option

of re-naming the file, which is important for identification purposes. In some projects it may be wise to name documents in such a way as to distinguish between women and men, in others age groups or different geographical areas are of interest, thereby facilitating comparisons between groups in the specific project.

④*To work with text 2:* In Qualitative Content Analysis, concepts such as *meaning unit* and *condensed meaning unit* are used. As suggested before, create your meaning units in a word document and then save them as a .txt document for import to OpenCode 4.0. Inside the software, you can do the condensation with the function Text 2.

If you click on the Open Text 2 button above the imported text you will open the function. When Open Text 2 is active the button has transformed to Close Text 2.

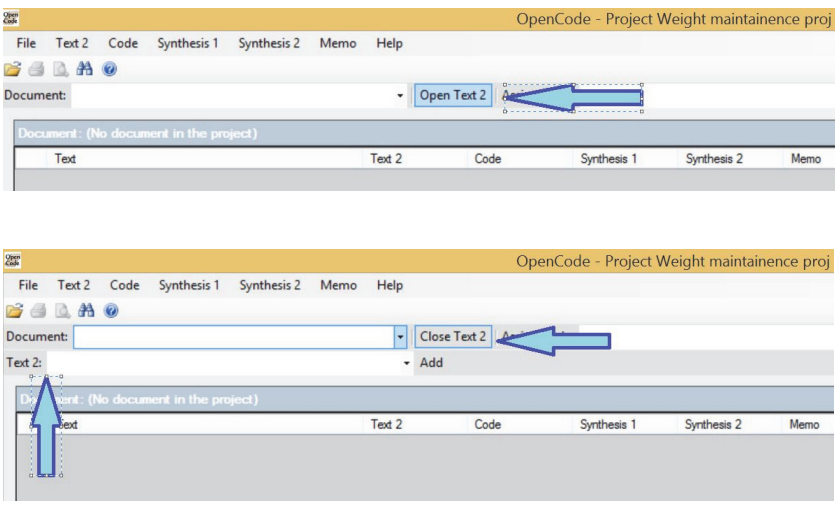


Figure 17. The Text 2 function.

To use it start by selecting the relevant line/lines and then write the summary in the Text 2 box and press Add. The assigned Text 2 then appears on the first line of the selection while the other lines in the selection are marked. You can only have one Text 2 on each line.

If you don't need this function, you simply don't open it and move the Text 2 column to the right side.

⑤*To assign codes:* Working through the manuscript by writing down codes that aim at characterising important information is the basis for most qualitative analysis. Once documents have been imported into a project, they are stored as lines with line numbers, and this provides the space for coding. Each line is limited to 60 characters and the codes (which may include several words) can be assigned to a whole sentence or paragraph by selecting the relevant line/lines and then writing the code in the Assign code box and press Add. The assigned codes then appear on each of the lines. Once a code has been assigned to one of the included documents, it is stored and can be viewed in a scroll box. Previously created codes can be viewed and assigned to text lines from the scroll box. Assigned codes can always be removed or renamed. The codes are continuously saved to the database/project to prevent loss of information when leaving the program.

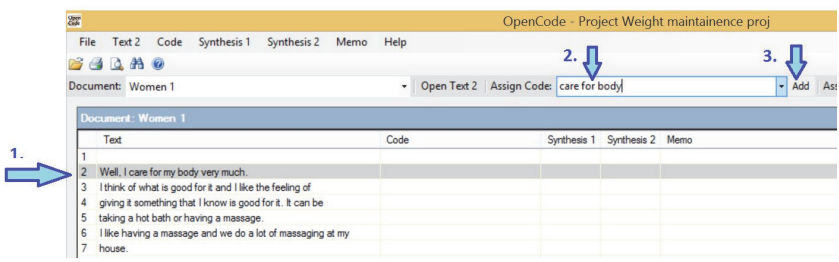


Figure 18. An illustration of how codes can be assigned for selected segments of the text.

⑥*To synthesise your data*: so far, we have been working very close to the data our informants have given us. *Open Code 4.0* gives us a possibility to synthesise our data by clustering our codes in two steps independently of analytical approach. All codes are displayed in the right hand column every time the function Synthesise 1 is used, ready to be grouped or categorized.

The program asks you to label the new synthesis 1 before you can select codes. Since it must be labelled after the codes have been selected, you may give a "preliminary label", for instance "*New*". When you have included the relevant codes from the list you will be asked to rename the synthesis with a more appropriate name based on your interpretation. It is possible to exclude or include new codes

and/or rename or delete *Synthesis 1* concepts at any time. *OpenCode 4.0* allows codes to be included in many categories.

Once a cluster of codes has been identified, it is displayed in the Synthesis 1 column adjacent to the corresponding open codes, the text 2 lines and original text lines in the document window.

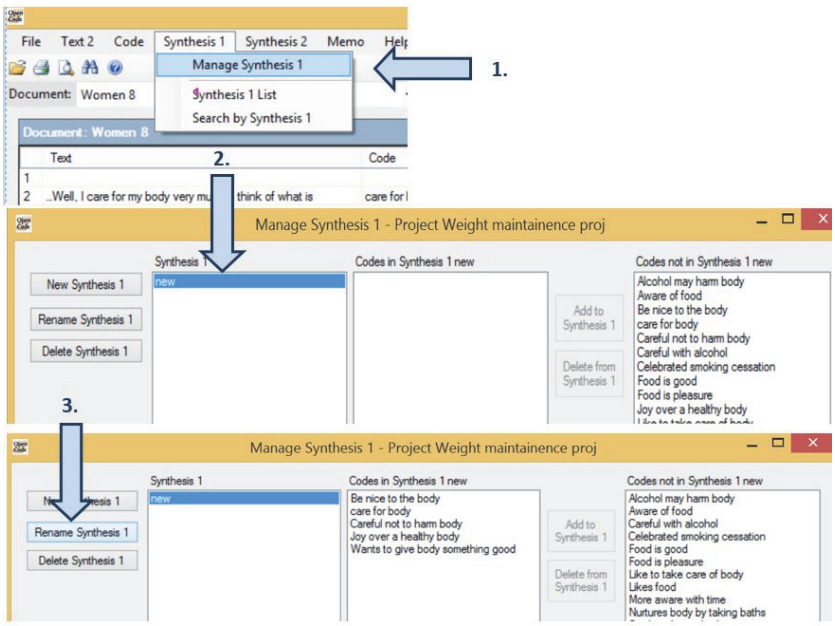


Figure 19. An illustration of how to manage the *Synthesis 1* function.

When you have completed the first step of interpretation, where you have identified codes that belong together and given the cluster of codes appropriate labels, it is time to move to the second stage of interpretation, *Synthesis 2*. In OpenCode there is no structural difference between Synthesis 1 and Synthesis 2. The first function cluster codes and the latter cluster *Synthesis* 1 concepts. It is not possible to include the same *Synthesis 1* concepts in several *Synthesis 2* concepts. However, to change the included parts, to delete and rename them is possible at any time.

Additional functions

Below we will present some functions that may be used at different stages depending on your analytical approach, your project and your aims in using Open Code.

❶ *To write memos:* It is possible to write memos connected to the text in OpenCode 4.0. Memos can be used for ideas for how to justify the clustering in Synthesis 1, connections to existing theory or simply notes from the field. The most important feature of memos is the potential to structure the emerging research report. Memos are stored separately and can be retrieved and printed out. Existing memos are visible in a separate column, possible to move according to your choice.

❷ *To use Text 2 functions:* In the Text 2 scroll box you have a rephrase function. In addition, you have functions for viewing how your Text 2 phrases are linked to the text or to the assigned codes. These functions can be used for the whole project or for selected documents.

❸ *To search for codes:* An advantage of coding data with the help of computer software is the ability to perform searches to locate codes and the text segments related to them. This can be done by simple searches for either one code or combinations of codes.

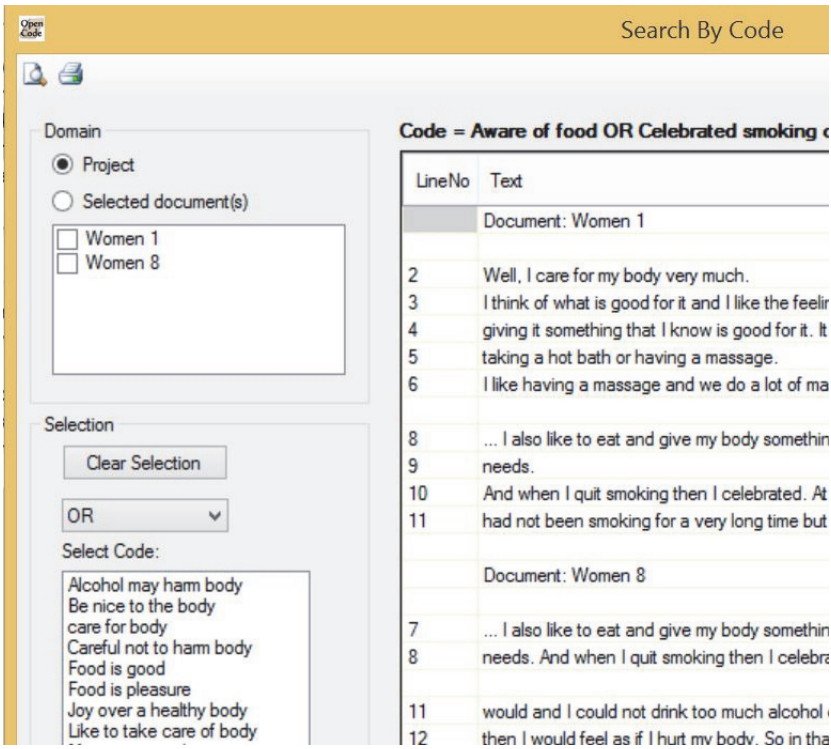


Figure 20. An example of a code search with selected codes.

The searches for codes can be performed for an entire project but you also have the option to search in selected documents. Search results are presented in an output that includes the project name, the search criteria and the text lines belonging to the search. Text is displayed consecutively for each of the included documents, meaning that data can be reorganised in the way most appropriate for the specific research question, based on specific coding.

The search results can be copied and pasted into a MS-Word document. This function makes it easy to search for quotations in your material to include in the final report.

NB: Searches are not automatically saved inside Open Code, you must use "Ctrl" and "a" and "c" and "v", similar to other word processing soft ware (see more on this: ❽)

❹ *To list Codes, Synthesis 1 and Synthesis 2: OpenCode 4* allows all codes and the two levels of synthesis in a project to be listed alphabetically or according to frequency. The lists are automatically updated. A code that is assigned to several consecutive lines is counted as one occurrence. Codes can be displayed either for specific documents or for the whole project. This listing enables you to get an overview and make decisions on changing, renaming or deleting codes.

Similar functions for Synthesis 1 and Synthesis 2 are located in their scroll boxes.

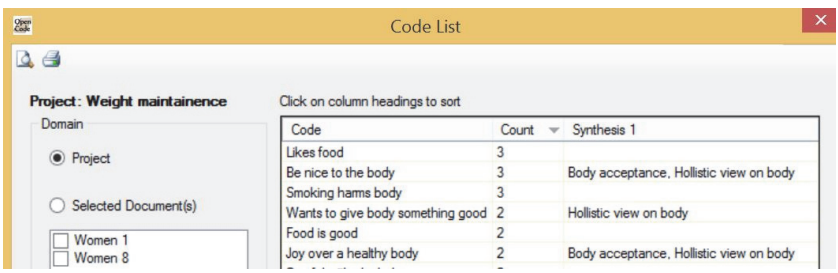


Figure 21. An example of a code list with associated categories.

❺ *To find words in text: OpenCode 4* has a function similar to the one used in Microsoft Word to locate words and phrases in the text. As shown in Figure 22, a search is initiated by clicking on the binoculars symbol close to the top of the screen. Text can be searched for line by line, or by selecting the Find all button. This function can be useful in different stages of the process.

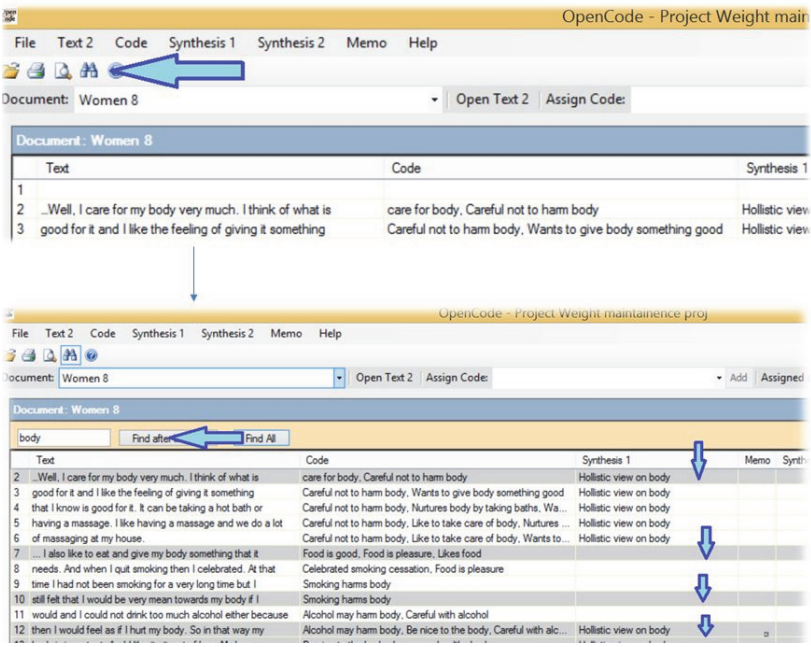


Figure 22. An example of how specific words or phrases can be located using the Find in text, find all function. The word "body" is found in all lines that are shaded.

❻ *To search for synthesis 1 and 2:* The main advantage of coding data with the help of computer software is the possibility to move back and forth in the material. *OpenCode 4.0* gives the possibility to have a list of concepts managed in Synthesis 1 together with codes linked to each. It is also possible to perform a search in the opposite direction to see how the concepts managed in Synthesis 1 are linked to Synthesis 2. In the Synthesis scroll box, the third option is to view and print a tree view.

❼ *About printing: OpenCode 4* has printing options in all different positions. In the left corner the Preview and the Print buttons are located. A search for codes among men can be printed out and later compared with the same search for women. After importing a document, you have the option of printing the interview in the new format, oriented either in portrait or landscape. It is not possible to save a search within *OpenCode 4.0*.

❽ *Possibilities to export:* All visible windows except the tree-view to be found in the scroll box Synthesis 2, and the help function can be exported to an ordinary word processor. Select the relevant output by using your mouse to left click or use Ctrl + a, then copy by using Ctrl + c, and finally go to an open word processing document to paste, Ctrl + v.

❾ *Document information: OpenCode 4* has a function that automatically creates a document information section with specifications of the document, such as name of project, date of creating the project in *OpenCode 4.0*, the original text file, number of coded lines and the number of codes used. The document information also includes an empty comment field, where any information concerning that specific document can be stored. Information can be typed or pasted here from other sources and comments of any kind can be added. The *Document Information* can be found in the File scroll box.

❿ *Suggested citation for OpenCode:*

Harvard system
ICT Services and System Development and Division of Epidemiology and Global Health (2018). OpenCode 4. University of Umeå, Sweden. Available from: https://www.umu.se/en/department-of-epidemiology-and-global-health/research/open-code2[Accessed yy/mm/dd].

Vancouver
ICT Services and System Development and Division of Epidemiology and Global Health (2018). OpenCode 4.Umeå: Umeå University. [cited yyyy Month dd].
Available from: https://www.umu.se/en/department-of-epidemiology-and-global-health/research/open-code2//?languageId=1

In summary, *OpenCode 4* is a software package that facilitates the coding and interpretation phases of qualitative research work. The program helps to store material in a systematic fashion and facilitates several steps in the coding of qualitative data. This latest version also includes features to assist researchers in the time consuming and difficult work to elaborate on the synthesis. However, it still is a truly intellectual process where the computer plays a minor role!

7. Communicating qualitative research

CHOICE OF PRESENTATION MODES

The ability to communicate your qualitative research is of course crucial both for its presentation to the general public and for its publication in scientific journals. Many researchers are used to quantitative research and have a good idea of what it takes to communicate this well. However, when it comes to communicating results from participatory observations or in-depth interviews many are less sure of what is useful.

To begin with, we want to stress that how to write is a matter of choice. In the field of science, there is a discussion between adherents of strict and formal scientific writing and those who prefer more impressionistic modes of presenting results and interpretations. It is hardly surprising that the former style is more associated with quantitative methods. This field has many rules and instructions. An example of this, reflecting demands from many scientific journals, is the widely applied IMRAD model. The acronym IMRAD stands for: Introduction, Methods, Results and Discussion. This model strongly recommends that the author of a report or an article starts with an introduction, followed by sections presenting the methods used, followed by results and finally a discussion of the findings. Robert Day (1993) is one of those who argue forcefully for this model. However, Day is not concerned with qualitative research methodology. It is probably views like his that Michael Agar (1986) has in mind when he criticises "the received view" of science, i.e. that scientific results and analysis are communicated in a standard format to passive recipients. Day and Agar reflect the importance of style in reporting scientific findings.

An advantage of the IMRAD style is that it offers its reader a familiar format. On the other hand, it leaves less scope for impressionistic description. Certain pre-existing concepts are allowed to rule the research process as well as the presentation. Access to a certain

language is necessary if you want to understand what is said. To have access to this language you must pass through a "rite de passage", e.g. formal education or the equivalent. In pedagogic terms this is more of a top-down perspective of the relations between the informant/audience and the researcher. However, the IMRAD model also has advantages because once you have "learned the ropes" you have access to some short-cuts. Hence, you may be able to shorten some parts of the presentation, such as the methodology section. For a beginner the rules and the strict order of things can decrease feelings of "uncertainty".

The qualitative style tries more actively to involve readers, conveying something to them without being sure of how they will perceive and evaluate it. It is walking a tightrope and the result is never a foregone conclusion. In communicating qualitative research there is most often an assumption that informants as well as audiences together with the researcher will construct something; it becomes a joint venture. Qualitatively oriented researchers try to use and/or grasp the words used by their informants and even learn from them how to describe and understand what is going on. The researchers try to imitate normal knowledge acquisition and apply it in the research process. They try to construct concepts from ordinary terms or, as in our methods, categories from codes.

In Figure 23 we have indicated how we view the role of the researcher in communicating qualitative research. (1) The researcher seeks information from the informants and refines the data together with them. (2) Thereafter he or she gives these data to the readers and in that moment he or she partly loses control over the knowledge process. The readers are now free to perceive and interpret what they read. Returning to symbolic interactionism the researcher is supposed to take two roles: that of the informant when collecting data, and that of the reader when writing the paper. Or, following Agar the qualitative researcher aims to address the gap between the received view and the study of how ordinary folks accomplish their everyday lives (Agar 1986 p. 13). He or she mediates frames of meaning and "is interpretative, i. e. mediating between two worlds by using a third" (Agar 1980. p. 19).

Figure 23. The researcher as a mediator between those who know and those who want to know.

The difference between writing in quantitative versus qualitative styles is also a matter of proximity or distance. In step (1) in Figure 23, there is a pronounced demand on the researcher to get close to the informants by entering their field. He or she must try to become familiar with the social context or *social whole* that surrounds the events or individuals that are the focus of the investigation. He or she must also try to understand the whole in order to be able to understand the parts, namely the informants. This dialectic relation between parts and whole refers back to hermeneutics and Ricoeur's (1981) *hermeneutic circle* or *spiral* (Radnitzky 1970). Knowledge of the parts and the whole cross-fertilise each other, which is the same as saying that getting close and distancing are both necessary sides of the same coin. In Michael Agar's terms distancing is the process through which the researcher "detaches and analyses, when he or she works to reason from some data to some pattern" (Agar, 1980 p. 57). This search for a pattern is about generalisation.

In step (2) in Figure 23, the mission for the qualitative researcher is to present this more or less generalised pattern to the readers of the report. In other words the researcher aims at giving something to the reader that has been constructed together with the informants. The informants contribute with their experiences captured in ordinary terms. The contributions of the researcher are "translations" of these ordinary terms to concepts hypotheses or at best fully developed theories. This scientific language must be given to the reader in a way that makes it possible for him or her to grasp the message. This is to say that data-driven and analyst-driven approaches to a large extent coincide when the researcher is regarded as a mediator between the informant and the reader. Even if the analyst-driven researcher is more associated with the reader and the data-driven researcher more

descriptively oriented towards the informant, they both concur in this respect. However, the analyst will more probably present theory when publishing results than will the data-driven researcher, whose ambition is more to communicate the voices of her informants in as undistorted shape as possible (Wolcott, 1995).

As stated above, communicating qualitative research is less formalised and this can be frustrating for the beginner. The urge to enter into a joint venture with the informants as well as with the reader can lead to difficulties in focusing the presentation. There is also a risk of producing lengthy and maybe boring presentations, and this has to be avoided.

Getting it out the door

However, even if you have made your overall choice of presentation mode this does not help you do the actual work. If you for instance have decided to follow the qualitative path and challenge the IMRAD model totally or partly, you still have to develop your skills and test different options. You have to find a way of "getting it out the door" which is how Howard Becker describes the writing process in his book "Writing for Social Scientists" (1986). Becker acknowledges the fact that few researchers are able to get everything right on their first try, that writing is about editing, changing, revising, getting input from others, rewriting again and so on. Below we have chosen some general suggestions by Becker and a few other qualitative researchers that we think are worth reflecting on in the writing process.

It is important to begin writing about your research early in the research process and this is underlined by Becker as well as by others (Becker, 1986, Weiss 1994 and Brinkman and Kvale, 2013). Kvale suggests that the investigation should start with the final report in mind. The book or report should be regarded as an ongoing project which grows in an organic way during the whole research process. A good rule of thumb is to write when inspired and to start with the parts of the report that inspire you the most. According to Weiss, doing research is a matter of "going up the hill" with the reward afterwards of "going down" again. Hard work is repaid by good results and greater satisfaction and the sooner this process starts the better. The challenge of writing is to meet the high standards of being "accurate, precise, clear, fully inclusive – and besides all that, interesting, even entertaining" Weiss, 1994, p 205). Of course, when

writing the first drafts the author must expect the text to have many flaws. This is normal and the author must be motivated to edit and revise. The first draft is written for the researcher herself to reflect on. Later in the process of improving the text, other people should be invited to contribute; well-informed friends, colleagues and, finally critical opponents.

Another important choice in the writing process is whether to begin with the concrete or with the general or more abstract issues (Weiss 1994). If you decide to start with the concrete, you survey your material for stories sufficiently interesting to catch the reader's attention. Different strategies may be recommended. Weiss offers three suggestions: First, you can order your stories in a chronological sequence. For the reader this is a natural way of reading something and because of that, easy to grasp. Second, you can identify illustrative respondents and develop case studies which you present in a logical sequence. A third possibility is to begin with your own experience in doing the study, a strategy that can awaken the interest of the reader. However, there is a risk that the report may be regarded as private and because of that lose in credibility.

If you choose to begin by describing the general or abstract Weiss suggests that you return to the interview guide and use that as a skeleton of the report. Another approach is to go back to the anticipated findings when planning the data collection or, perhaps more correctly in a qualitative study, to the theoretical frame of reference which guided your study. A third possibility is to begin the report by mixing the empirical and theoretical material. There are no limits to the possibilities except lack of imagination.

Even if he avoids favouring a specific format, Becker (1986) suggests that authors give some instruction or "map" with the help of which readers can navigate in the jungle of text delivered to them. This map should preferably be offered in the introductory parts of the report, even if you may start off with an appetizer or a provocation before the map is presented.

The results should according to Becker, preferably be presented gradually and/or you can blend the presentation of results with interpretations, by for example mixing case studies (parts) with more general or abstract theoretical views (whole). A narrative may fit two

purposes. It can act as an illustration of something general (*even* epidemiological findings), but it can also function as a presentation of data from which theories can be generated.

Another general recommendation by Becker is to connect the parts to the whole with the help of contrasts. Instead of describing what is normal, focus can be on what is abnormal or deviant and from that position observe what is regarded as normal. Laurel Richardson (1990) has argued for such an approach when she describes how her presentation of the position of an American mistress led to a description of women's situation in general in the America of the 1990s (The New Other Women). This method of grasping something normal from insights into something abnormal can be seen as a special case of generalising experiences from one situation to another. Metaphors or analogies can be used to mediate this process. A synecdoche can be used when it is possible to reconstruct the whole from a part when you want to illustrate something abstract in a concrete way; metaphors when there is an obvious resemblance between two concepts or events.

Many researchers have discussed the amount of information on data collection and how many reflections by the researcher during the research process that are necessary. One school, represented by anthropologists like Clifford Geertz (1973) insists that the reader has the right to demand "thick descriptions" that allow them to evaluate the quality of the paper. Erving Goffman is a scholar who represents the opposite view, recommending researchers to be meagre with details in order not to be boring (1974).

In his book "Writing up Qualitative Research" and later in an article (1995, 2002) Wolcott summarises the challenges of the traditional segregation of topics in researchwriting. He favours an integration of literature review, theory and methods into the presentation of results. He questions the need for an all-inclusive literature review in each report before telling the real story. He also urges us "to hold off introducing theory until it is quite clear what you are interested in theorizing about….". But once we have introduced theory we should not hesitate to present multiple or cumulative theories to assist interpretation of the data. He also sees a risk in overemphasising the role of method or technique in justifying your results. He sees participant observation as the overall method in all qualitative studies

but you are obliged to describe the way you actually did it rather than describe how others have used the method.

It is how you organise and analyse the data that makes the real difference. Wolcott's message is "to strive for more candour, to be more straightforward in what we report and how we link up with others, not to observe rituals of reporting that interfere with and interrupt, rather than enhance – our modest efforts".

About writing

As this book focuses on qualitative analysis, it limits our perspective for a while in order to discuss some aspects of presenting such studies in more detail. We have stated that the aim of our two approaches is to generate new ways of "seeing things". In doing this, the level of ambition varies. Sometimes just describing an interesting phenomenon in a substantive and concrete way satisfies the researcher. Other times we attempt to construct concepts hypotheses, or theoretical models in a more abstract way. The design of the Grounded Theory research process opens up opportunities for doing both.

Language is crucial in all attempts to understand and construct reality. People seek words or terms with the help of which they can understand and communicate instances of reality. In Grounded Theory coding is close to this natural process. Researchers try to construct concepts for the same reasons. That is the most important process in especially Grounded Theory, i.e. to categorise and generate theoretical ideas. We have described this process as a path from *in vivo* terms, via codes to categories and constructed concepts. This also constitutes a move from something concrete the case, to something abstract and more general. Following this line of thinking it is clear that it is possible for a qualitative researcher to make considerable contributions to social theory.

Glaser exemplifies "becoming famous" by conceptconstruction with the help of Arlie Hochschild (1983) and her concept of emotional work. She associates to one crucial connection between incidents, terms, and concepts, which is also described by the Swedish historian, Karin Johannisson (2001). Johannisson describes the relations between reason (cognition) and emotions as mediated by processes of labelling. "As soon as a feeling has got a name, it functions as

something creates structure and gives meaning to subjective experiences (Johannisson, 2001, p. 15, our translation). According to Johannisson, names structure reality, but the named feelings also reflect norms and values in society. Because of this they are temporal: "they are constructed, exalted, decried, and rejected – they disappear and rest latent until new cultural codes offer them a new or renewed identity" (ibid, p.16, our translation).

The process of presenting and generating concepts is crucial in qualitative research. Well-constructed concepts "'sell('s) well to those to whom it makes sense, and usually 'quick sense'" (Glaser, 1998 p.133). The main advantages of our two approaches are their natural ability to describe the path from data to theory without being boring or far-fetched.

It is easy and logical to describe how open codes are merged into categories and theories. Another important material consists of memos, which are continuously written down during the coding process. There are reasons to be wary of long, possibly boring descriptions from all stages of an investigation, especially regarding thick descriptions of the case, including extensive quotes from interviews. Another risk when presenting quotes from interviews is to give them verbatim, i.e. word for word. This can give a diminishing impression if the informant for instance speaks dialect, though it is naturally important to inform the reader when you choose to rephrase quotes in order to make them more understandable.

You should try to compromise between density, theorising, and light illustration. To maximise density may impress some readers, while others will see through it or, worse, not grasp it at all. If you instead go very light, some readers will find you overly detailed and possibly boring. In order to reduce density, you may use illustrations but overuse may dilute the theory. You can also weave in relevant literature but this also risks diluting the theory. You can be stuck in the trap of "theoretical capitalists" (Glaser 2001). Glaser's advice is like Montaigne's (1991) to avoid hiding behind authorities.

We argue that a middle way between descriptive ambition (QCA) and aiming at generating theory (GT) is recommendable in most studies. In their influential article on how to present qualitative studies, Knafl and Howard (1984) take a similar position when they distinguish

between illustrative studies, aimed at understanding, and theory building studies. Table 10 shows the range of variation in presentations that Knafl and Howard describe. Note that the types of study described in the table are usually part of a large quantitative study.

Table 10. Guidelines for reporting qualitative research
Source: Adapted from Knafl and Howard (1984).

	Research purpose		
In focus	To illustrate	To provide understanding	To generate theory
Introduction	Emphasis on research problems being addressed in the quantitative part of the project	Emphasis on lack of understanding of lived experience	Emphasis on lack of theory
Sample	Comparable to subjects in the quantitative part of the project	Representatives of target group	Purposive
Procedures	Why is there a need for qualitative illustrations	Thick descriptions of data collection and interpretation methods	Description on how the emergent theory guided data collection
Results	Mix of data in order to highlight findings	Grouping data into types which reflect subjects' views	From codes to theories, if needed illustrated by data
Discussion	Qualitative aspects not mentioned	Implications for research and practical measures	Encounter between what is generated and other theories

In this book, we have focused on the aim of generating theory without neglecting the aims of describing and providing understanding. In all types of qualitative study it is crucial to find a balance between concrete findings and abstract interpretations. Following Knafl and Howard specific results should be presented and discussed in the light of their theoretical relevance. This encounter between data and existing theory is regarded as important to show how the conceptsgenerated are grounded in data.

In an article aiming at generating theory, it is also important to provide a valid, vivid, and essential descriptionof what has been going

on in the case – a "thick description following Geertz (1973). Most important perhaps is to avoid being boring by presenting the findings in too much detail. On the other hand, readers want information on practical procedures. They want to look inside the "black box" of procedure and see if they can really trust what has been done in the research process. In the presentation of this "black box", it is vital to give a concise description of the research process. It is important to make a thorough description of how access to the research field was reached, how contacts were made with the informants and how informed consent were gained, how the interviewers were trained and how reference groups were identified. Data handling procedures must be presented in terms of how information was collected and how much time was spent doing it. Equally important is to indicate what measures were taken to increase the trustworthiness of the study. The steps in the interpretation process should be carefully described indicating the path from text to codes and further to categories. Finally, ways of confronting with existing theories should be elaborated on.

We would like to conclude this section by citing Laurel Richardson's justification for her book on different writing strategies (1990): "I wrote this book because I needed to read it." If you as a researcher is able to communicate such correspondence with your text, there is good hope that the readers will appreciate what you write!

Demands from scientific journals

So far, we have tried to offer some general recommendations on how to report qualitative research. We have discussed the challenges presented by the traditional and predominantly used format for presentation. However, we all realise that, whether we like it or not, there are requirements from scientific journals that have to be taken into account in order to publish. It is also important to repeat that the traditional and more restricted format has the advantages of being easy to follow and easy to apply and so maybe also simpler to grasp for the reader.

We will not elaborate on the specific requirements that journals detail in their instructions to authors (on format, length, reference style, process of submission). These demands are not negotiable and authors must simply comply. But there are other requirements that are more general and apply to most journals, whether quantitative or

qualitative, that we suggest that you to reflect upon. Some of these are originally based on Robert Day's (1993) suggestions for adhering to a fairly strict style of writing but also corresponds to the RATS guidelines that many journals uses today referring to *Relevance*, *Appropriateness*, *Transparency* and *Soundness* of the study presented (Clark, 2003).

Authorship: Research projects on complex issues where multi-disciplinary teams have participated, as is usual in public health, often result in articles with a long list of co-authors. Many researchers have contributed to varying degrees and it often seems safer to be inclusive than exclusive. However, scientific journals are becoming stricter in their judgements of who may qualify as a co-author (Horton 1997, Smith 1997). Substantial contributions are required and some journals require signed statements from all co-authors where exact degree of participation in the planning, data collection, analysis and writing stages have to be spelled out (Rennie et al, 1997). Participation in only one of these activities will not justify co-authorship. Further, the list of co-authors should preferably be decided on early in the research project, in order to prevent unpleasant surprises at the end. The researcher who takes major responsibility in most stages of the research should be first author and thereafter the others should be

listed in descending order with respect to input. Sometimes, the most senior researcher in the group is placed last. If the work has truly been a team effort with equal input, a list in alphabetical order may be optimal.

Title: The time and effort needed to identify suitable titles should not be underestimated. Many journals will not accept neutral titles (for example "Associations between number of children and health") but request active ones (such as Mothers of many sons have better access to health care). The title should be short, yet contain key information on the findings. The geographical area of the researchmay appear in the title to indicate that the findings are not necessarily applicable globally (for example "Rural Guatemalan women…."). Phrases like "A study of…" or "Investigation of…" should be omitted in order to make the title short. Abbreviations and articles such as "a", "an", and "the", should be avoided. Some other hints given by Gustavii (2000) are to use verbs instead of abstract nouns and to introduce keywords early, especially in the running title at the top of the page.

Abstract: An abstract or summary of 150-250 words is normally required. This constitutes a short version of the article and should contain brief summaries of all sections in the article. The abstract is usually done at the very end and it is probably the most difficult part of the article to write.

Whether you follow the IMRAD model or not your researchpaper needs to include some basic sections with essential information concerning your work. The order and actual content may vary and should be based on the aim and scope of the specific research question.

Introduction: A study needs to be introduced to the reader with a background section or some kind of "appetizer". This section may be of short or long but is always written in present tense ("Not much is known about the use of traditional healers for treating tuberculosis in Vietnam. Often a focused introduction cannot be written until the results and discussion sections have been finalised so that the most important issues have been identified. It is often in this section that you find the justification for the research problem and where the purpose of the study is clearly spelled out. If abbreviations or technical terms are used they must be introduced here, when they are

first used in the text. Gustavii (2000) advises against the use of Latin abbreviations. Instead of using e.g., i.e., and etc. ordinary English like "such as", "that is" and, "and so forth" is preferable. On the other hand, abbreviations that are more easily understood than the full forms, like AIDS are recommended.

It is also crucial to capture the reader's attention in the introduction. Sometimes the introduction contains theoretical perspectives to help in presenting the researchers' plans. There is a risk that these theoretical tools will be distracting if they are not carefully connected to the aim of the study and thereafter to the results and discussion. A better idea is usually to present these tools little by little as they are connect to results, presentation and analysis.

Methods: Somewhere in the report a methods section is necessary. It should provide detailed information about the study design and methodology used, preferably written in chronological order and in the past tense (such as "Ten in-depthinterviews were performed in the rural area"). Choice of methods, sample size, sampling method and selection of subjects should be described and justified in relation to the study objectives.

Thick description: How thick the "thick description" (Geertz1973) of the study area should be can be discussed, but it must be there. Most often it fits in the methods section, although it may also be included in the results section.

Analysis: An extensive presentation of analysis strategy must be included. It is never sufficient to state that "…data were analysed according to Grounded Theory. The specific steps in the process must be described and important decisions made along the path must be commented on.

Personal information: Inasmuch as the researcher is the human research instrument in qualitative research, the reader should be provided with sufficient personal information to be able to reflect on the interaction between researcher and informants. At a minimum, this includes information on the researcher's sex, nationality, profession and familiarity with the research topic and geographical area.

Trustworthiness: A thorough discussion of how trustworthiness has been achieved must appear either in the methods section or in the discussion section. Potential threats to trustworthiness as well as strengths of the project should be reviewed. Finally, ways of ensuring informed consent from all participants and of ethical approval from appropriate bodies must be specified, in order to demonstrate that ethical issues have been duly considered and respected.

Results and discussion: A qualitative researcher has a broad range of presentation modes for results presentation and discussion to choose from. It is recommended that the results be presented in past tense (for example "In particular it was older people from the rural areas who suggested that women get tuberculosis from thinking too hard"). In which ways results fit findings in literature must be commented on. A conclusion section may be required, or the conclusion may appear as the last paragraph of the results/discussion section. Practical implications of the findings and needs for future research must be presented.

Appendix: If deemed necessary, lengthy material such as interview guides and tables of background characteristics of participants may in some journals, and/or the digital version of the journal, be provided as appendices.

Acknowledgements: In the acknowledgements section, colleagues who participated in minor parts of the project may be thanked. Some journals require that signed letters of acceptance are submitted from people appearing among the acknowledgements. Funding agencies may also be listed among the acknowledgements.

References: The list of references must follow the standards of the journal. Many journals today apply the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (International Committee of Medical Journal Editors, 2018) or to the American Psychological Association guidelines (American Psychological Association, 1997). In content, important work that is drawn upon in the article should be duly acknowledged by being cited. However, a large number of references may rather be a sign of insecurity than a mark of scholarship!

Language: Another aspect of style refers to a manner of expression in language Robert Day (1993) provides some useful advice in his book that is equally relevant to qualitative and quantitative publication. He specifically warns against using jargon or "verbal promiscuity" and falling into the trap of premature submission of manuscripts. Further, in Hall's (1997) anthology on how to write a paper, Norma Pearce lists some "do's and don'ts" on how to reduce some of the "style-problems". She recommends keeping the writing short because editors are biased in favour of short articles and few references. If it is possible to cut something out, do so! Do not tell readers what they already know and be prepared to "kill some of your darlings". Exclude observations or interpretations that depart from the main theme. Avoid figures of speech and national idiom because scientific journals have an international readership. Avoid the passive form; "I love you" certainly is more appropriate than "You are loved by me" (Pearce 1998, s.119). She also advises us to improve our detachment as authors. We should try to distance ourselves from our writing, for example by letting the manuscript rest for some time. It is always advisable to ask friends and colleagues to read and comment.

Of course, all of us have to admit to having fallen into the traps of using too much jargon, being too long winded, or using passive constructions liberally. None of us will ever be perfect, what we can do is to reflect on and consider all aspects of our writing before we accept our work as finished.

8. Closing words

Sometimes in gifted moments, particularly in what Anselm Straussin his book "Mirrors and Masks" (1997) calls turning points in life, you experience something strange but wonderful. You are able to see the remarkable in the very banal. These are the moments in life that the qualitative researcher hopes and longs for - to discover abstract thinking from concrete events or cases, and to find better understanding and new solutions in the ambition to restore part of the paradise Marcel Proust described as lost 1896 in French book "À la recherche du temps perdu", published in several languagees(1993). Such an achievement requires a great deal of experience and imagination, possibly even talent. In this book, we have tried to reveal paths and steps to take in qualitative data collection and analysis that may hopefully result in such turning points.

Qualitative methodology is associated with risk taking. Sometimes promising projects just disappear in clouds of confusion and feelings of failure. There are no guarantees of success. On the upside is the fact that most practitioners find it interesting and amusing, and that qualitative methodology has the potential to create something new.

Johan Asplund (2002) states that thinking and discovery are the fruits of collective activities. We share this understanding of his and included in this book examples of using qualitative methodology as joint efforts. In our description of data collection we have taken Brinkman and Kvale, (2013) definition of interviews ("InterViews" = shared views) as a point of departure. We have also tried to describe the advantages of making the coding process of Grounded Theory and Qualitative Content Analysis a joint effort. To discuss and negotiate codes and categories in collaboration is effective as well as rewarding. We recommend the collective working process in all situations.

Qualitative methodology is a down-to-earth and ingenuous way to describe and interpret what happens in reality. In analogy with how language is constructed and evolves, the qualitative researcher transforms text to codes and codes to categories or thematic issues. The social process of categorisation takes place everywhere and by

everyone even if not everybody is aware of this. The qualitative researcher have the ambition of looking behind manifest phenomenon in order to understand what is hidden, or latent. In the coding process it is striking how often codes are identified "in vivo" directly from the text of an interviewor generated by the qualitative researcher very close to the text. These codes usually express impressions and feelings. From these coded feelings we are able to reflect on our own views of the world.

From the introduction of Grounded Theory in the 1960s, there has been a growing interest in the development of qualitative methodologies. A great number of methodologies have been introduced focusing on different issues and grounded in quite different theoretical frameworks. Many of these methodological attempts, used in public health, are more of variations with limited theoretical reflections.

We have described the roots of Grounded Theory and Qualitative Content Analysis and claim to state that both methodologies are in line with current trends. The most relevant is perhaps the trend presented by Turner and Stets (2006) that focuses on the interplay between cultural circumstances and contexts on the one hand, and on patterns of behaviour and reflections on the other. There is also a distinct trend directed towards the endeavour to combine experiences from different and sometimes heterogeneous disciplines in order to increase the understanding of complex phenomena (Gintis, 2010). Contributions from the English public health researchers Marmot, Pickett and Wilkinson (1999, 2004, and 2009) are representative of this growing genre.

There is also another tendency, which is relevant to qualitative methodology concerning the process of discovery and understanding. Among others Michael Hviid Jacobsen and Sophia Marshman (2008), argue that researchers have a lot to learn from everyday commonplaces as well as from poetry and fiction. Robert Merton's classic concept of "serendipity" reminds the qualitative researcher to be open to accidental associative occurrence and even to pave the way for them. Also personal experiences and feelings are possible to use in a qualitative research process, a possibility stated in early grounded theory publications (Star, 2007).

During the last three decades, qualitative methodologyhas experienced a renaissance. This trend is especially pronounced in expanding research fields like gender studies and the social science of emotions. Even if the signs may seem contradictory, we believe that most qualitative theory generation of today stops on the level Merton (1968) labels; "theories on the middle range", meaning that the construction of conceptsand hypotheses of bearing to well-defined contexts. It also seems that social and behavioural sciences, using qualitative methodology have succeeded in entering research fields where they previously were regarded as intruders. In the field of epidemiology, especially when used in poor communities, this trend is clear.

On a bad day, the qualitative researcher may be tempted to feel that he or she represents something marginalised by colleagues. On such days the researcher may even feel that he or she represents an anomaly in the methodological landscape. On other days, the qualitative researcher may instead fall into arrogance and accuse colleagues of being methodologically inhibited and restricted. In this book, we have attempted to claim that both of these attitudes are misguided and that collaboration is the appropriate pathway. We feel certain that methodological development in public health is on this path.

Let us end this book with a reflection on the fact that the concepts of knowing and feeling are linguistically cognate. The Swedish historian; Sven-Eric Liedman (2002) states that these two terms are closely related in most Germanic languages. Liedman also points out the distinction between the French words "connaître" and "savoir" that reflects the difference between knowledge (claiming absolute truth) and "les connaissances" (based on personal experiences, curiosity, and provisional solutions). Preferably, qualitative methodology deals with the latter.

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