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1 Theory

1.1 Exam guide

- You should be able to discuss qualitative versus quantitative research:
  - What are the strengths and weaknesses, appropriate areas of application, are they complementary?
  - Is there a clear line of distinction?

- You should be able to describe various types or varieties of qualitative studies (e.g. ethnography, action research, case study, grounded theory, ethno-methodology, conversation analysis, discourse analysis – you are expected to have solid knowledge about the first four mentioned).

- You should know some facts about their theoretical basis and the history of emergence, and be able to describe their emphasis, suitable area of application as well as strength and weaknesses (problems, limitations).

- You should understand what the three different research paradigms in IS research imply (positivism, interpretivism, critical research) as well as Silvermans categories (positivism, emotionalism, constructionism).

1.2 Qualitative vs. quantitative research

Research methods can be classified in various ways, however one of the most common distinctions is between qualitative and quantitative research methods.

- **Quantitative research methods** were originally developed in the natural sciences to study natural phenomena. Examples of quantitative methods now well accepted in the social sciences include survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling.

- **Qualitative research methods** were developed in the social sciences to enable researchers to study social and cultural phenomena. Examples of qualitative methods are action research, case study research and ethnography. Qualitative data sources include observation and participant observation (fieldwork), interviews and questionnaires, documents and texts, and the researcher’s impressions and reactions.

“Qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. [...] The goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified.” (Myers 1997)

1.2.1 Differences

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>observation</td>
<td>social surveys</td>
</tr>
<tr>
<td>interview</td>
<td>- questionnaires</td>
</tr>
<tr>
<td>focus groups</td>
<td>- cards</td>
</tr>
<tr>
<td>texts/documents</td>
<td>- logs</td>
</tr>
<tr>
<td>audio/video</td>
<td>statistics</td>
</tr>
<tr>
<td>small number (few subjects)</td>
<td>large number (large samples)</td>
</tr>
<tr>
<td>words</td>
<td>numbers</td>
</tr>
<tr>
<td>analysis + data collect same time</td>
<td>quantity = quality</td>
</tr>
<tr>
<td>in-depth</td>
<td>broad (many)</td>
</tr>
<tr>
<td>focused (fewer)</td>
<td>natural sciences</td>
</tr>
<tr>
<td>social sciences</td>
<td>why” questions and hypothesis testing</td>
</tr>
<tr>
<td>how, what, how come research questions</td>
<td>laboratories, controlled experiments</td>
</tr>
<tr>
<td>social, cultural (naturally occurring)²</td>
<td></td>
</tr>
</tbody>
</table>

¹ Online access (on Nov. 27th) at: [http://www.qual.auckland.ac.nz/](http://www.qual.auckland.ac.nz/). You can look into this page (a paper) for descriptions on qualitative research; but remember to read syllabus (book and articles).

² Remember that interviews are not naturally occurring, they are ‘constructed’ by researchers - other artificial research environments: focus groups, experiments, survey, questionnaires. Also, remember that naturally
1.2.2 What is best?

- No method of research, quantitative/qualitative is better than any other.
- In choosing a method, everything depends upon what we are trying to find out.
  - In what way are these methods relevant to our research problem and to our model of how the world is put together?
- Thus, it depends on your research question.
  - Different questions require different methods to answer them.

[Silverman 2005] chap. 2

1.2.3 Does method matter?

- What do you want to find out:
  - e.g. user study of redesign of web page
- Research problems are not neutral
  - framing of problem reflects a commitment to how the world works
- THERE ARE NO INNOCENT POSITIONS
- Committed to qualitative methods we need to figure out:
  - What approach(s):
    - Interviews
    - Observation
    - Documents
    - Focus groups
    - Audio/visual
- Consider:
  - What am I trying to figure out? Different questions, different methods?
  - What is the focus of my study? Actors, networks, both?
  - Have other researchers dealt with this topic, how? Literature review – what exists already, alignment with literature.
  - Longitudinal study, short study – what is doable? Time, resources, access.
  - What will I learn from using qualitative or quantitative methods?
  - What works best for me?

[Silverman 2005] table 2.1

1.3 Paradigms within the IS field

All research (whether quantitative or qualitative) is based on some underlying assumptions about what constitutes 'valid' research and which research methods are appropriate. The most pertinent philosophical assumptions are those which relate to the underlying epistemology which guides the research. Epistemology refers to the assumptions about knowledge and how it can be obtained.

occurring data is coined by what you want to do with them; that is, no data is 'untouched be human hands'.

1 ‘Why’ questions can be asked within qualitative research, but avoid using them (or wait as long as possible with asking them) – they lead to a path of means and ends / assume that the person knows why / mute open-ended answers / mute the relational. ‘Why’ shouldn’t be rubricated under quantitative, but rather under a heading of ‘positivism’.
Orlikowski and Baroudi (1991), following Chua (1986), suggest three categories, based on the underlying research epistemology: positivist, interpretive and critical research paradigms. (We will mainly use texts from the interpretive tradition).

### 1.3.1 Positivist research

Positivists generally assume that reality is objectively given and can be described by measurable properties which are independent of the observer (researcher) and his or her instruments. Positivist studies generally attempt to test theory, in an attempt to increase the predictive understanding of phenomena.

- Reality is objectively given
- Reality can be described by measurable properties – independent of the observer and his instruments
- Theory testing
- Variables: emphasis on quantitative data
- Statistical tools and packages are an essential element
- Truth, preconceived conceptions

[Klein and Myers 1999]

### 1.3.2 Interpretive research

Interpretive researchers start out with the assumption that access to reality (given or socially constructed) is only through social constructions such as language, consciousness and shared meanings. The philosophical base of interpretive research is hermeneutics and phenomenology (Boland, 1985). Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them and interpretive methods of research in IS are "aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context" (Walsham 1993, p. 4-5). Interpretive research does not predefine dependent and independent variables, but focuses on the full complexity of human sense making as the situation emerges (Kaplan and Maxwell, 1994).

- The aim is to understand phenomena through the meanings people assign to them
- Interpretive methods of research in IS are "aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context"
- Not predefine dependent and independent variables, but focuses on the full complexity of human sense making as the situation emerges
- no objective reality -> subjectivity
- social constructions, language, shared meaning

[Klein and Myers 1999]

### 1.3.3 Critical research

Critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people. Although people can consciously act to change their social and economic circumstances, critical researchers recognize that their ability to do so is constrained by various forms of social, cultural and political domination. The main task of critical research is seen as being one of social critique, whereby the restrictive and alienating conditions of the status quo are brought to light. Critical research focuses on the oppositions, conflicts and contradictions in contemporary society, and seeks to be emancipatory i.e. it should help to eliminate the causes of alienation and domination.

- Social reality is historically constituted and it is produced and reproduced by people
- People's ability to change social and economic circumstances is constrained by various forms of social, cultural and political domination
- Focuses the oppositions, conflicts and contradictions in contemporary society, and seeks to be emancipatory (i.e. help eliminate the causes of alienation and domination)

1.3.4 Silverman’s three models (paradigms)

- **Positivism:** A model of the research process which treats ‘social facts’ as existing independently of the activities of both participants and researchers.
  - social facts, variables, objectivism
  - relation between variables which are operationally defined by the researcher
- **Emotionalism:** A model of social research in which the primary issue is to generate data which gives authentic insight into people’s experiences. Emotionalists tend to favour open-ended interviews.
  - meaning, emotion, authentic insights (open-ended interviews)
  - the actor’s perspective
- **Constructionism:** A model which encourages researchers to focus upon how particular phenomena are put together through the close study of particular behaviours.
  - behaviour, how phenomena are constructed (observation, texts, transcripts of recordings)
  - prioritizes interaction over meaning

[Silverman 2005] chap. 2

1.3.5 Research terms

Silverman delineates the following basic research terms:

- **Model** = An overall framework for looking at reality, could be:
  - Ethnomethodology: Concerned about how people make sense of their social world(s). Rather than assuming the social as orderly ethnomethodology rests on the assumption that the social is dynamic and unpredictable - within this unpredictability, social order is established by continual “repairs” in accordance with the ongoing activities. (e.g. Suchman & Trigg 1991)
  - Phenomenology: Concerned with understanding phenomena from the perspective of the participants (in a society/culture) and describe the environment (surrounding world) as it is experienced by the participants. Focus on the knowledges and meanings of the participants (e.g. Thoresen 1999)
  - Hermeneutic: Concerned with interpretation and the hidden or deeper meaning of texts (culture can be read as texts). The relationship between researcher and texts is a dialog in which the researcher seeks the meaning communicated by the texts. Phenomena can be read in different ways (e.g. Geertz 1972)
- **Concept** = An idea deriving from a given model - e.g. collectivity member (participants in a society, ethnomethodology)
- **Theory** = a set of concepts used to define and/or explain some phenomenon (without a theory phenomena like death, tribes, families cannot be understood) – theoretical propositions.
- **Hypothesis** = a testable proposition
- **Methodology** = A general approach to studying research topics, could be:
  - Grounded Theory (generating theoretically based generalizations from qualitative data)
  - Conversations analysis (qualitative approach to describe how people produce orderly talk-in-interaction)
- **Method** = Technique such as interview, observation, probes, etc.
1.4 Methodologies

Different types of qualitative research: Case study, ethnography, action research, ethno-methodology, grounded theory, discourse/conversation analysis (we will focus on case studies and action research drawing on ethnographic methods). Focus has primarily been on

- Action research
- Case study
- Ethnography
- Grounded theory

1.4.1 Action research (AR)

Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework. (Rapoport, 1970).

Action research is concerned to enlarge the stock of knowledge of the social science community. It is this aspect of action research that distinguishes it from applied social science, where the goal is simply to apply social scientific knowledge but not to add to the body of knowledge. Action research has been accepted as a valid research method in applied fields such as organization development and education.

History of development within social psychology

- Places researchers in a 'helping-role'
- Iterations of AR: diagnosing a problem, action planning, action taking implementing and evaluating outcomes. Evaluation leads to a new diagnosis…
- Contribution to the practical concerns
- Joint collaboration with the people experiencing the problem
- Contextuality and participation
- Vision: researchers have a vision on how the reality should be – not value free
  
  [Myers and Avison 2002]

- AR can be both positivist, interpretive, critical [Klein and Myers 1999]

prescriptive, change, intervention, iteration

1.4.2 Case study research

Case study research is the most common qualitative method used in information systems (Orlikowski and Baroudi, 1991; Alavi and Carlson, 1992). Although there are numerous definitions, Yin (2002) defines the scope of a case study as follows:

A case study is an empirical inquiry that:

- investigates a contemporary phenomenon within its real-life context, especially when
- the boundaries between phenomenon and context are not clearly evident (Yin 2002).

Clearly, the case study research method is particularly well-suited to IS research, since the object of our discipline is the study of information systems in organizations, and "interest has shifted to organizational rather than technical issues" (Benbasat et al. 1987).

Types of case studies [Silverman 2005] p. 127:

- **Intrinsic case study**: Where "this case is of interest … in all its particularity and ordinariness". In the intrinsic case study, no attempt is made to generalize beyond the single case or even to build theories.

- **Instrumental case study**: In which a case is examined mainly to provide insight into an issue or to revise a generalization. Although the case selected is studied in depth, the main focus is on something else.
• **Collective case study**: Where a number of cases are studied in order to investigate some general phenomenon.

Case study research can be positivist, interpretive, or critical, depending upon the underlying philosophical assumptions of the researcher.

Social science – refined and further developed by the founding fathers of GT Glaser and Strauss.

- Case studies involve in-depth examination of a single instance, event or example: a case.
- A case study is an empirical inquiry that:
  - investigates a contemporary instance or event within its real-life context,
  - boundaries between instance, event or example and context are not clearly evident
- IS research: the study of information systems in organizations (not just technical issues)
- Case study research can be positivist, interpretive, or critical. [Klein and Myers 1999, Silverman 2005]

1.4.2.1 Can you say something general from a small case?

- Combine it with quantitative data
- Representativeness -- theoretical propositions
- Appeal to possibilities (what can others in a similar situation, as described, do?)

1.4.2.2 Choosing a case in terms of theory

- Setting: where to study - you can choose a case on theoretical grounds
- Research focus: what do you want to follow (elements, process, phenomena)?
- Further generalizations: develop further theoretical propositions

1.4.2.3 Characteristics

- a) Each case has boundaries which must be identified at an early stage of the research (e.g. if you are studying a school, does this include classroom behaviour, staff meetings, parent-teacher meetings, etc?)
- b) Each case will be a case of something in which the researcher is interested. So the unit of analysis must be defined at the outset in order to clarify the research strategy.
- c) Case studies seek to preserve the wholeness and integrity of the case. However, in order to achieve some focus, a limited research problem must be established geared to specific features of the case. [Silverman 2005] p. 127.

1.4.3 Ethnography

Ethnographic research comes from the discipline of social and cultural anthropology where an ethnographer is required to spend a significant amount of time in the field. Ethnographers immerse themselves in the lives of the people they study (Lewis 1985, p. 380) and seek to place the phenomena studied in their social and cultural context.

Social and cultural anthropology

- Explicit interest in understanding social practices and interactions in diverse communities as they unfold in everyday life.
- It’s an analytical endeavor.
- It seeks descriptions in terms relevant and meaningful to the people studied
- It seeks descriptions of what people do rather than what they ought to do (Blomberg et al. 1993)

“Behavioral and organizational patterns [do not] exist “out there” in the world. […] Patters of human thought and action are no more visible than the diagnosis of an individual’s illness” (Forsythe, 1999:132)

- Ethnographers immerse themselves in the world / lives of the people they study
• Basic resource: participant observation (interview, note taking, photo, drawings, documents, (objects, artifacts))
• Researcher’s positioning, descriptive, reflexivity, longitudinal studies, study natural settings / ‘real world’, description (vis-à-vis prescription), from the members point-of-view, holism.

Proceeding in feedback in relation to readings:
• Learning to do ethnography involves leering to see social situations in a way that problematizes certain phenomena (Forsythe 1999:129)
• The resultant "insider ethnography" takes local meanings at face value overlooking tacit assumptions rather than questioning them" (Ibid.:138)
• Anthropologists are trained to be reflexive; that is, to attempt to identify and evaluate their own research assumptions as well as those of their respondents” (Ibid.:141)
• Behavioral and organizational patterns exist “out there” in the world […] [NO] Patters of human thought and action are no more visible than the diagnosis of an individual’s illness (Ibid.:132)

1.4.4 Grounded theory (GT)

Grounded theory is a research method that seeks to develop theory that is grounded in data systematically gathered and analyzed. According to Martin and Turner (1986), grounded theory is “an inductive, theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data.” The major difference between grounded theory and other methods is its specific approach to theory development - grounded theory suggests that there should be a continuous interplay between data collection and analysis.

Grounded theory approaches are becoming increasingly common in the IS research literature because the method is extremely useful in developing context-based, process-oriented descriptions and explanations of the phenomenon (see, for example, Orlkowksi, 1993).

Developed by the sociologists Glaser and Strauss (1967)
• Theory should be grounded - to take an existing (....) theory or a set of pre-defined concepts as point of departure (...) is a risky endeavor. It means that an external structure is imposed on the data. [Thoresen 1999]
• To develop theory that is grounded in data
• Special emphasis on continuous interplay between data collection and analysis
• “Grounded theorists give priority to developing rather than verifying analytical propositions” (Emerson, Fretz, Shaw, 1995:143)

1.4.4.1 Techniques of grounded theory
• Asking questions aimed at exploring properties, connections, similarities and dissimilarities.
• Open coding (process of analysis - breaking down, examining, comparing, conceptualizing, categorizing data) reading data carefully to identify and form ideas, themes, or issues provided by the data - generation of analytical categories
• Axial coding (process analysis - focus on the phenomena’s relationship to the context in which they occur + their relationship to each other) - relate the (above separate) pieces of data
• Code notes (memos - writing / forming theoretical propositions - focus on phenomena - breaking down, examining, comparing, conceptualizing and putting together data in new ways) - locating series of phenomena, topic or categories
• Open and axial coding serves to make complexity visible and systematic [Thoresen 1999].

1.4.4.2 Critique of grounded theory
• Theory (model) and the generation of data can’t be separated
• We bring theory to the field
• A systematic analysis of data does not bring about a theory
1.4.5 Other methodologies

1.4.5.1 Ethno-methodology

Ethno-methodology (literally, ‘the study of a people’s (folk) methods’) is a sociological discipline which examines the ways in which people make sense of their world, display this understanding to others, and produce the mutually shared social order in which they live.

The study of people’s everyday ways of producing orderly social interaction - How do people give sense to and accomplish their daily actions (communicating, making decisions, reasoning)? Attention on details of talk-in-interaction - Observable and reportable (speech and face-to-face behavior).

The term was initially coined by Harold Garfinkel in the 1960s.

Two central differences between traditional sociology and ethno-methodology are:

- (1) While traditional sociology usually offers an analysis of society which takes the facticity of the social order for granted, Ethno-methodology is concerned with the "how" (the methods) by which that social order is produced, and shared.
- (2) While traditional sociology usually provides descriptions of social settings which compete with the actual descriptions offered by the individuals who are party to those settings, Ethno-methodology seeks to describe the practices (the methods) these individuals use in their actual descriptions of those settings.

1.4.5.2 Conversation analysis (CA)

A qualitative approach based on an attempt to describe people’s methods for producing orderly talk-in-interaction. CA generally attempts to describe the orderliness, structure and sequential patterns of interaction, whether this is institutional (in the school, doctor's surgery, courts or elsewhere) or casual conversation.

Conversation analysis is central for ethnomethodologists (e.g. Suchman and Trigg (and Silverman)) Inspired by ethno-methodology, it was developed in the late 1960s and early 1970s principally by the sociologist Harvey Sacks (1992).

- Focus on the sequential and structural organization of talk. How participants structure their talk, how they use various resources.
- Conversation analysis goes beyond a grammatical analysis of statements. Relies on detailed transcripts of conversation (naturally occurring or interviews).

Some basic concepts / focus within CA:

- General rule regulating turn-taking: at least one and not more than one at a time
- Utterances or turns as basic unit of analysis
- Conversation openings
- Adjacency pairs (e.g. greeting-greeting, question-answer, complaining-apology/justification). (Phone greetings are differently structured than everyday greetings).
- Fillers (‘um, er, y’know’).
- Where do interruptions occur?
- How repairs are done. (to clear up misunderstandings, resolve disagreement etc).
- The role of silences.

1.4.5.3 Discourse analysis (DA)

The study of ‘the way versions of the world of society, events, and inner psychological worlds are produced in discourse’. (J. Potter 2004:202).

- Analysis of texts, talk (interviews (observation)).
- Discourse: is a kind of language that forms knowledge and shapes our understanding of objects and phenomena (e.g. Foucault 1972 for a definition of discourse).
Concerned with what is performed in talk or writing, with the rhetorical and argumentative organization of talk and texts, how text and talk is part of social practices

Compared with CA, DA is often more concerned with more conventional sociological topics like e.g. gender, identity, etc.

Examples of focus in DA studies:
- How are ‘versions of the world’ produced in discourse?
- How are claims and versions constructed?
- How are alternatives undermined?
- How are each participants constructions accomplished and/or undermined?

Can CA/DA be used within studies and/or design of information systems and IT?
- Learn about how people work around IT technologies
- Learn about how two people work together using IT as a medium

1.4.6 Differences

1.4.6.1 Action research vs. grounded theory
- Action research
  - Researches diagnoses and bring their own categories
- Grounded theory
  - The people diagnose themselves

1.4.6.2 Participant observer vs. action research
- Difference in objective
  - Action research: Purpose of helping, intervening with feedback
  - Participant observer: Not intervening, but playing a part in order to understand context better
- Intention does not play a game
  - You don’t know as a researcher how you intervene/influence
2 Research skills

2.1 Exam guide

- For various types of empirical material (interviews, observations, texts, video, conversations) you should know how to collect and how to approach it (suitable techniques for organising, handling and analysing).
- You should also be able to describe and discuss the status or role you assign to the data collected in various ways, as well as discuss how you can generalize from data in sensible ways.
- You should also be able to reflect on issues of quality, both with regard to reliability of the material and validity of analysis and interpretation (in general and with respect to concrete data collection methods).
- You should be able to reflect on your own positioning / agenda and how it shapes your study.
  - Which challenges (practical, methodical, ethical) may you encounter if you gather your empirical material from digital media/online communities/Internet newsgroups, forums or blogs?
  - What are relevant regulatory (legal) and ethical factors to consider when collecting data?
  - What does Norwegian legislation say related to collection of personal information and of sensitive information?

2.2 Data collection methods

Methods for data collection: Interviews, observations (passive, participant), audio recording, video recording, text analysis, content analysis from media.

- Observation (passive, participant): objects, people, events, place (naturally occurring)
- Text and document analysis (e.g. screen dumps, newspapers, letters, agreements, brochures, etc.)
- Interviews: open-ended, structured, semi-structured (not naturally occurring settings)
- Video / audio -> “tapes are a public record; they can be replayed and transcripts improved; and they preserve sequences of talk” (Silverman from ‘Naturally Occurring Talk’, p. 189)
- Focus groups -> group discussions usually based upon stimuli (topics, visual aids) provided by the researcher (Silverman 2005)
- Note taking (describe what you observe / encounter. Remember: date, time, place, persons present (roles, occupation, affiliation). Video, photos, tape recordings serve as good memorable-tones, but remember to ‘log’ them. (Blomberg et al. 1993)

2.2.1 Note-taking

- Describe what you observe/encounter
- Remember: date, time, place, persons present (roles, occupation, affiliation)
- Video, photos, tape recordings serve as good memorable-tones, but remember to ‘log’ them.

2.2.2 Observations

Qualitative researchers usually observe phenomenon by immersing themselves in the natural setting and allow themselves to be struck with certain peculiarities or interesting happenings or actions that may emerge from the group. Quite often when you interview someone, there is the tendency for the subject to tell you something that he or she does but in reality does not do so. So, the observation method allows the researcher to confirm whether the subject does what he/she claims to do.

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4 Remember to think through strengths / weaknesses of the methods chosen (and keep evaluating if they are suitable for your study (e.g. the example in Silverman with the study of the Lues (2005, Chap. 15). Also, take into consideration how they support each other? See e.g. Blomberg et al. 1993 + Forsythe 1999 for accounts on interviews and observation. For pitfalls when conducting only interviews, see e.g. Silverman 2005 p. 239.
- Passive observation
- Participative observations
  - Focus of observation: event, person, place, objects
  - What people say they do and what they do are not the same (ideal and manifest behavior).
- “Shadowing”
  - “Shadowing” someone in their routine practices (this requires permission from the person you want to follow – this is a way of “seeing the world through someone’s eyes”; by quietly following someone as he/she carries out the work as normally done).

2.2.3 Interviews

The interview is used to obtain information relating to biographical information (background) of the subjects, their beliefs about certain phenomenon, feelings, motives, present and past behaviour and conscious reasons for actions or feelings (Catherine Wojck, 2002). The interviews are open-ended or semi-structured, perhaps revolving around a few central questions or issues. The unstructured nature of the interview can yield information the researcher did not expect to obtain, because the interview may proceed in different directions for different people. It is quite impossible to predict all the possible responses and so the open-ended question allows for unplanned or unexpected responses. However, the disadvantage is that the researcher may have difficulty making comparisons because different information was gathered from a variety of individuals.

- Types
  - open-ended
  - semi-structured
  - structured
- Strengths
  - Discover knowledge, emotions
  - Actual knowledge
- Weaknesses
  - Truthfulness
  - Do they say something other than they actually do

2.2.4 Triangulation (multiple methods)

Triangulation (multiple methods)

- You can examine where the different data intersect
- but then again, if you’re a constructionist (working over different contexts) it might be difficult to find a phenomena represented in all you data
- be careful about assuming that you can aggregate your data and arrive at an overall truth or whole picture

Discussion... How can that be?

2.3 Data analysis

2.3.1 Modes of analysis

Although a clear distinction between data gathering and data analysis is commonly made in quantitative research, such a distinction is problematic for many qualitative researchers. For example, from a hermeneutic perspective it is assumed that the researcher’s presuppositions affect the gathering of the data - the questions posed to informants largely determine what you are going to find out. The analysis affects the data and the data affect the analysis in significant ways. Therefore it is perhaps more accurate to speak of "modes of analysis" rather than "data analysis" in qualitative research. These modes of analysis are different
approaches to gathering, analyzing and interpreting qualitative data. The common thread is that all qualitative modes of analysis are concerned primarily with textual analysis (whether verbal or written).

- **Hermeneutics** is primarily concerned with the meaning of a text or text-analogue (an example of a text-analogue is an organization, which the researcher comes to understand through oral or written text). The basic question in hermeneutics is: what is the meaning of this text?

- **Semiotics** is primarily concerned with the meaning of signs and symbols in language. The essential idea is that words/signs can be assigned to primary conceptual categories, and these categories represent important aspects of the theory to be tested. The importance of an idea is revealed in the frequency with which it appears in the text.
  - One form of semiotics is "content analysis." Krippendorf (1980) defines content analysis as "a research technique for making replicable and valid references from data to their contexts." The researcher searches for structures and patterned regularities in the text and makes inferences on the basis of these regularities.
  - Another form of semiotics is "conversation analysis." In conversation analysis, it is assumed that the meanings are shaped in the context of the exchange (Wynn, 1979). The researcher immerses himself/herself in the situation to reveal the background of practices.
  - A third form of semiotics is "discourse analysis." Discourse analysis builds on both content analysis and conversation analysis but focuses on "language games." A language game refers to a well-defined unit of interaction consisting of a sequence of verbal moves in which turns of phrases, the use of metaphor and allegory all play an important part.

- **Narrative and metaphor:** tale, story, recital of facts, especially story told in the first person.

### 2.3.2 Analysis of different data

#### 2.3.2.1 Analyze data already in the public sphere
- Newspapers
- Libraries
- Local / state archives
- TV, radio, internet (Oct 19th, Gisle talks about internet)

#### 2.3.2.2 Borrow other people’s data
- Some might already have gathered material, BUT
- Data might not be resent
- Personal accounts
- How were the data collected / generated?
  - (See Forsythe 1999 for a critique on sharing data (intellectual property))
- Situation when data is shared (workgroups etc.)

#### 2.3.2.3 Ask for advice
- Somebody who can get you started by asking into your work after having seen you material

#### 2.3.2.4 Analyzing interviews
- Is your aim to describe reality of people’s lives (realism) or to access the stories or narratives through which people describe their worlds (constructionism)?

#### 2.3.2.5 Analyzing field notes
- It’s not simply recording data, it’s analysis. Take into account:
  - What can you see and hear
  - How are you behaving / being treated
2.3.2.6 Analyzing text and visual material (photos, videos, street signs, advertisements, etc.)

- Is your goal precise content analysis (establish a set of categories and then count the number of instances that fall into each category)?
- Or is it to understand the participants categories and to see how these are used in concrete activities like telling stories, assembling files or taking photographs?

2.3.2.7 Analyzing transcripts

- The analysis of tapes and transcripts depends upon the generation of some research problem out of a particular theoretical orientation.
- When there is more than one researcher, debate about what you’re seeing and hearing is never about collecting data - it is data analysis.

2.3.3 Developing data analysis

2.3.3.1 Functions of detailed field notes

- To identify and follow processes in witnessed events.
- To understand how members themselves characterize and describe particular activities, events, groups.
- To convey members’ explanations for when, why or how particular things happen and, hereby, to elicit members’ theories of the causes of particular happenings.
- To identify the practical concerns, conditions and constraints that people confront and deal with in their everyday lives and actions.

2.3.3.2 Six groups of questions for field note analysis

- What are people doing? What are they trying to accomplish?
- How, exactly, do they do this? What specific means and/or strategies do they use?
- How do members talk about, characterize, and understand what is going on?
- What assumptions are they making?
- What do I see going on here? What did I learn from these notes?
- Why did I include them? (Emerson et al. 1995:146 + Silverman 2005, Chap. 12)

2.3.3.3 Developing analysis of field data

- Data reduction involves making decisions about which data chunks will provide your initial focus.
- Data display involves assembling your data into displays such as matrices, graphs, networks, charts, which clarify the main direction (and missing links) of your analysis.
- Conclusion drawing ‘beginning to decide what things mean, noting regularities, patterns, explanations,’ etc.
- Verification means testing the provisional conclusions for ‘their plausibility, sturdiness’...

2.3.4 Analytic memos

An analytic memo will be a summary with selected excerpts and beginning analysis of your field notes.

- What themes do you perceive?
- What anomalies leap out at you?
- Are there turns of phrase or vivid metaphors that are important to the people you have talked with?
- Did you have certain metaphors before the field research?
- Have your metaphors and themes changed, and how so?
- What overall impressions do you have?
You may also wish to ‘map’ the information you have or otherwise include graphical representation(s).

You can write one long memo with separate sections, or a series of separate memos, addressing your

- observations (substantive, themes, meaning, questions explored and generated)
- reflections on methods (your experiences, processes, interactions with people in the field site)
- thoughts and questions generated for research design (what you take from the field research experience towards research design, methods, and research question formulation for your masters or doctoral thesis, your ongoing research)
- theoretical questions and concerns (e.g. what is required to verify or to generalize from qualitative research findings?)

This will get you started making sense of the data you have collected, and to begin to grapple with the structuring of qualitative data. Try to make your descriptions to be as thick as possible, with lots of details. When in doubt, aim for the “how” questions.

### 2.4 Quality in research

1. Are the methods of research appropriate to the nature of the questions being asked?
2. Is the connection to an existing body of knowledge or theory clear?
3. Are there clear accounts of the criteria used for the selection of cases for study, and of the data collection and analysis?
4. Does the sensitivity of the methods match the needs of the research question?
5. Is reference made to accepted procedures for analysis?
6. How systematic is the analysis?
7. Is there adequate discussion of how themes, concepts and categories were derived from the data?
8. Is there adequate discussion of the evidence for and against the researcher’s arguments?
9. Is a clear distinction made between data and its interpretation?

[Silverman 2005] p. 228

Examples:

- Building theories -> anomaly animals
- Self-critical approach -> talkative managers
- Appropriate methods -> maybe interview isn’t the ideal approach (where are the Lues)
- Practice contribution -> Suchman

[Silverman 2005] chap. 15

### 2.4.1 Generalisations

In what way are generalisations important?

- Interpretations (not truth or false)
- Generate theoretical propositions
- Transforming one single case to generalisations
- Important for success criteria
- Important for validity
- Need to provide some guidelines

How can it be that so many of the texts we have been reading are concerned with generalizations (from the qualitative studies)?
In what way are generalizations important - for whom and for what?

What can be said (without turning to generalizations) from, say, an ethnographic study?

What about the particular?

How can it be that discussions about methods are so extended – what do you think about methods? In what way are qualitative methods interesting / important to you?

What do you bring to the classroom?

External validity (the extent to which the results of the study can be generalised to another setting or group of people) is an important issue in quantitative research. How about qualitative research? In principle, generalizability is the purpose of quantitative, not qualitative research. However, there are qualitative researchers who argue that some attempt should be made to generalise the findings. The in-depth description of phenomenon is sufficiently comprehensive to allow the qualitative researcher to generalise to each and every member of the population.

- a) Applicability: Can this research be applied to other samples? It should be remembered that there is no test of significance and one cannot make "sample-to-population" statements. The deep description of the characteristics of the subject/sample being studied may allow one to conclude the extent to which it is comparable to other subjects/samples. If the subjects/sample are comparable, then one would be more comfortable to make generalisations.

- b) Context Limited: Do the findings of the research hold up in other settings or situations? If it can be argued that what is being observed is not dependent on the context, (i.e. it is not "context limited") and may be transferred to other contexts; then the findings may be generalised.

- c) Replicability: What is the likelihood that a given outcome or event will happen again if given the same circumstances? To replicate the study is the most difficult to accomplish because we are dealing with the natural setting which will invariably change. Unless there is data to show these changes, it will advisable to be cautious when claiming that the study can be replicated.

2.4.2 Validity

- Validity
  - By validity is meant 'truth': interpreted as the extend to which an account represents the social phenomena to which it refers

- Reliability
  - Refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions

Analysis is interpretation whether data is collected quantitatively or qualitatively (+ you might add that methods are chosen (they high-light different aspects of the world studied - e.g. questions asked, answers replied.

- Pay notice to this and have awareness about ‘posed’ objectivity. There are no innocent positions.

But how then to ensure validity in qualitative research?

- No golden rule... and be careful of not falling into anecdotalism (when research appear to tell entertaining stories or anecdotes but fail to convince the reader of their scientific credibility)

- Answers to the complaint on anecdotalism in qualitative research found in.....

- Triangulation (multi ways of investigating situations or finding)
  - Pitfall: ambitious for the student researcher, requires time, personnel resources

- Verification from participants
  - Pitfall: they might not be the best to comment on their own actions (discussion: in what way is good to have the participants verify transcripts, data?)

2.4.3 The refutability principle

The refutability principle (refute assumed relations between phenomena) - how to obtain this:

- The Comparative method:
• Find another case to test out a temporary hypothesis; or
• Inspect and compare all data fragments that arise from one case for same instance e.g. advice resistance

• Comprehensive data treatment
• Inspect and compare all data till your generalization is able to apply to every single gobbet of relevant data you collected

• Deviant-case analysis
• Comprehensive data treatment implies actively seeking out and addressing anomalies or deviant cases (e.g. moral adequacy in rel. to ‘relatives dying alone’)
  ▪ Rather than treating deviant cases as (statistically) uninteresting / insignificant go into detail to see if your overall argument e.g. needs modification or if it holds. As such, validity is about showing examples from dif. angles, also deviant cases

• Using appropriate tabulations
• Quantification in qualitative research, e.g. counting members own categories to test or revise your generalizations.

2.4.4 Reliability
In obtaining reliability (degree of consistency) seek:

• Low-inference descriptors (recording observations ‘in terms that are as concrete as possible, including verbatim accounts of what people say, for example, rather than researchers’ reconstructions of the general sense of what a person said, which would allow researchers’ personal perspectives to influence the reporting; and

• The coding of data analysis was done ‘blind’ - both the coding and the analysts of the data ‘conducted their research without knowledge of (the) expectations or hypotheses of the project directors

• The computer-assisted recording and analysis of the data meant that one could be more confident that the patterns reported actually existed throughout the data rather than in favorable examples

2.4.5 Evaluating qualitative data
Good-quality research satisfies the following:

• It thinks theoretically through and with data
• It develops empirically sound, reliable and valid findings
• It uses methods which are demonstrably appropriate to the research problem
• Where possible, it contributes to practice and policy

Criteria for the evaluation of research

• Are the methods of research appropriate to the nature of the questions being asked?
• Is the connection to an existing body of knowledge or theory clear?
• Are there clear accounts of the criteria used for the selection of cases for study, and of the data collection and analysis?
• Does the sensitivity of the methods match the needs of the research question?
• Is reference made to accepted procedures for analysis?
• How systematic is the analysis?
• Is there adequate discussion of how themes, concepts and categories were derived from the data?
• Is there adequate discussion of the evidence for an against the researcher’s arguments?
• Is a clear distinction made between data and its interpretation

Four quality criteria:
• **Building useful theories:** one case about a cultural category (of anomaly animal) and social organization forms a social theory on ‘anomalous’.

• **Self-critical approach:** rather than taking at face value the stories by a group of talkative manager, reflection on motive for being talkative -> motivated theoretical contribution on how cliques work within management

• **Appropriate research methods:** Think critically about status of your data, maybe asking questions, receiving answers (interview) isn’t the ideal approach for getting to know the other: observation, audio recordings worked better for Moerman in his study on ‘where are the Lue?’

• **Practice contribution:** Suchman’s ethnomethodological study on human-machine interaction (copier) brings focus on users’ troubles in systems design.

What do Klein and Myers say about evaluation of (interpretive) empirical studies?

### 2.5 Relations in the field

• What is involved in obtaining access to a field site?
  - Closed/private settings + Open/public settings - examples?
  - Covert (subjects do not know) / Overt (agreed) - examples?

• What ethical issues lie in wait?
  - Clarify your intentions while you formulate your research (what is the purpose; whom are you writing for; who might be interested in or affected by your research; access, implications of your research; consent from the research subjects*) - why is this important?

• Is feedback to research subjects necessary and/or useful?
  - Go back to the subject with tentative results and refine them in light of subjects’ reactions (see table 17.3)

• What can you learn from relations in the field?
  - Think through how your identity was view by the participants
  - Gender
  - Maintain good relationships with informants

• Giving information about the research which is relevant to subjects’ decisions about whether to participate

• Making sure that subjects understand that information (e.g. By providing information sheets written in subjects’ language)

• Ensuring that participation is voluntary (e.g. By requiring written consent)

• Where subjects are not competent to agree (e.g. small children), obtaining consent by proxy (e.g. from their parents)

### 2.6 Internet field work

Internet field work is research into the social, cultural, political, economic, ethical, technical and aesthetic aspects of the Internet that involves observation of ongoing online events or accumulating qualitative or quantitative data from the online environments (e.g. email, web pages, discussion groups, virtual communities and/or archives) on the Internet for examination and analysis.

Examples of Internet field work are:

• Analyzing online archives
• Conversations on boards and chat channels
• Ethnographic research into virtual communities
• Analyzing Internet pages as media expressions
• Using robots to collect and analyze online data (also quantitative)
Special challenges:

- **Method**
  - How to locate, select, verify and document data.

- **Ethics**
  - Conducting research enframed in a set of sound ethical guidelines

- **Person or persona**
  - In many online environments (e.g. “home” pages, real and faked web media pages, discussion forums, chat rooms, MUDs and MOOs), expression of identity (including multiple selves, avatars and other forms of intentional identity-games) is often constituted through the construction and reception of texts and (sometimes) imagery.
  - To a researcher, what is identity in such contexts? Do we need to separate between the “real” (whatever that is) person and the projected “online” persona?

Summary of difficulties in Internet field work:

1. Difficulty in obtaining informed consent from online subjects. For form-based data collection leave the consent part to the end. Also include statement about use of the data.
2. Difficulty of ascertaining subjects’ identity because of use of pseudonyms, identity-games, etc.
3. Difficulty in discerning correct approaches because of a greater diversity of research venues (email, chat rooms, web pages, etc.)
4. Difficulty of discerning correct approaches because of the global reach of CMC (engaging people from multiple cultural settings).
5. Difficulties posed by covert research (observing subjects that do not know that their behaviours and communications are being observed and recorded) – simply because of the easy access there is to online material ready to capture.

Major ethical problems:

- **Covert research**
  - Online research poses in general a risk to individual privacy and confidentiality because of greater accessibility of information about individuals, groups, and their communications – in ways that would prevent subjects from knowing that their behaviours and communications are being observed and recorded (e.g.: a large-scale analysis of postings and exchanges in a USENET newsgroup archive, in a chat room, etc.).

- **Informed consent**
  - Privacy is considered widely as a crucial norm in ethical research […] Data arising from research should ordinarily be considered confidential and may not be shared with others without the consent of the researched.

- **Protecting anonymity**
  - Researchers must take care where the alteration of contexts may reveal the identity of data sets hitherto protected. Particular care should be taken with data that arises from covert […] research methods […]

- **Raw data**
  - Good research practice means that the raw data (for aggregated, pseudonymized or anonymized data that is published) must be available for scrutiny.
  - Solution(?): Retain the raw data, but pseudonymize records by using numbers instead of real IDs. Make access to RAW data very restricted (locked down - analogous to storage of sensitive data accumulated in epidemiology)

- **Public or private**
  - A number of the ethical issues of covert online research disappear if online utterances are regarded as public (i.e. like books or newspaper articles) instead of private communications. What precedent (legal or otherwise) are there?
• Institutional setting
  o In clinical medical research, the institutional setting (i.e. the research clinic) usually have well
developed procedures and mechanisms for handling, anonymizing and protecting patient
data. This is taken as given both by the researcher and also by the research subjects (i.e.
the patients).
  o In online research, no similar setting exists and has to be constructed by the researcher as
part of his/her research framework.

2.7 Legal requirements in Norway

The legal requirements for doing research that where personal data about individuals are collected and
processed are specified in Personopplysningsloven (POL):

• Main requirement: All such research need to be reported on a special form to Personvernombudet
for forskning (Privacy ombudsman for research).

POL report form compulsory if:
• Recording or processing of information about individuals by electronic means.
• A manual archive containing sensitive personal data will be created.

POL permit compulsory if:
• Sensitive personal data is recorded.
• Sensitive personal data is data that reveals:
  o Racial or ethnic background
  o Political, philosophical or religious opinion
  o Criminal record
  o Health related information
  o Sexual relations
  o Membership to trade unions

POL permit not compulsory if:
• First time contact to selection of respondents is based upon, either:
  o publicly available data;
  o a responsible person at the instution where the respondent is registered;
  o initiative from the respondent.
• The respondent has given informed consent to all parts of the research.
• The project is terminated at the time agreed upon.
• All material collected is destroyed or anonymized when the project is terminated.
• The project is not joining data from more than one register or data base.
3 Research design

3.1 Exam guide

- You should know what elements a research proposal should contain, and you should be able to write one.

- Given a case description and a research question, you should be able to choose, describe and justify how you would approach the study, including the specific method(s) you will employ. The kinds of material you will collect (or construct), and the object, sample, population, and/or site of study should also be sensibly chosen and argued for.

- You should be able to describe/evaluate another research study, how it is motivated, whether the chosen approach is well linked to the research question, whether the empirical material is well suited to address the research question, etc.

3.2 Research proposal

3.2.1 Structure of research proposal

1. Title
2. Summary/abstract (1 page)
3. Acknowledgement
4. Table of contents
5. Introduction: Give the reader a SHORT PRECISE presentation of the content of your report, including the motivation for your study: what are you inquiring (object/subject of investigation) – how and in what way is it important for a broader audience? In what way is your study relevant? Research questions.
6. Literature review: Related research, if any, positioning vis-á-vis the research literature. This chapter may be combined with the first. Survey of litterature relevant to your research questions. Conclude with what you want to develop further. Argumentation of your work.
7. Theoretical chapter: Description of the theory you have chosen to work with and/or the concepts you have chosen from the theoretical framework. Keep it short and focus on methodology.
8. Presentation of setting: Presentation of setting/case/field/object of study. Provide an overall impression of the place. Background information. Could be from your own empirical work, or from other’s descriptions (research, documents, etc.) Not always a separate chapter (could be part of introduction or method chapter).
9. Method chapter: A discussion of what you have chosen to do and how (in what way) this choice is relevant. Choice of methods between alternatives. Research questions and methods. Interview (what kind, who, how long, where). Observation (what kind, who, where, how long, how come). Generation of data via documents. Strengths and weaknesses of methods. A detailed report of the fieldwork that was actually carried out.
   a. Subjects/objects studied
   b. How did you generate data
   c. In what way were different methods used
   d. How did you work with your data
   e. Challenges you encountered
10. Analytical/empirical chapter: An empirical chapter describing the fieldwork you have conducted + reporting the outcome in a form and structure that has emerged from the group's analytical work. Report use of theory. Coding (GT), writing memos (DA). Memory support (diary, photos, drawings, taped comments, field notes.)
11. Interpretation/discussion: What do your outcome tell? What did you learn from you studies. Analysis and discussion can be combined/divided, but is important to link. Generalize (is it a criteria). Verify your statements.
12. **Conclusion:** Sum up + cementation of the outcome of your fieldwork. Summary of findings, main problems and conclusions. Future directions: Comparison with literature. Contributions and implications.

13. **Bibliography:** Alphabetically listings of all the texts referred\(^5\) to or cited\(^6\)

14. **Appendix:** Log of group work, work distribution. Other appendices: E.g. interview guide, photos (or a visual description like a drawing of the field site and/or the relations of material immaterial members), log of activities in the field (date/time; activities (observation, interview, attending meetings, phone, email, online visits)

### 3.2.2 Summary/abstract

The proposal shall tell the reader:

- What kind of knowledge do you seek?
- Which strategies will you employ?

When evaluating the proposal I will ask:

- How good is the argumentation on each of these two elements, and how strong is the link between them?
- Research design and research methods: What will you do? What kind of data? How? Where (which setting)? When/how long?
- As far as possible: How will you work with (analyze) the data? (analytic concepts, core theories you will use)
- Are you aware of any ethical considerations and practicalities you need to think through?

### 3.2.3 Introduction

- Setting the stage, provide the readers knowledge about the content and answer the question: “What is this piece of work about?”
- Present:
  - The area of your research (problem domain / topic)
  - Your main motivation for conducting your study (explain in what way your study is important?) Why is this study important? Possible replies:
    - 'This is a new phenomenon'
    - 'This is under-researched'
    - 'Previous research is ambiguous'
    - 'We don’t know enough about it'
  - Purpose of your research, incl. your research question(s)
  - What do you aim at contributing
  - A brief description of how you attempt to find out (methods/theory)
- You could also try to answer:
  - What is the target audience?
  - What is your personal motivation for this study

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\(^{5}\) When you refer to a text you use your own words to describe something (a concept, a statement, an utterance, a theory etc.), which has been uttered by somebody else. If and when you refer, you have to make it clear to the reader by putting in a reference to the text in which the concept, a statement, an utterance, a theory etc. appears e.g.: In this hand-out Finken wishes the students of INF5220 Fall 2007 all the best in the process of getting the grasp on the conduct of fieldwork and in writing up their material (Finken, 2007:1).

\(^{6}\) When you cite a text you use the exact same words (as appearing in a given texts) to describe something. It is important to cite correctly and it is important to highlight that you are using somebody else’s words to describe something. You can highlight citations by using quotation marks + reference to the author(s), e.g.: “all the best in the process of getting the grasp” (Finken, 2007:1)
• Sketch the structure (content in each chapter) of the thesis

### 3.2.3.1 The purpose statement

Whereas the introduction focuses on the problem leading to the study, the purpose statement establishes the direction for the research.

The purpose statement tells why you want to do the study and what you intend to accomplish. (The central, controlling idea of the study). Be clear: "The purpose (intent, objective) of this study is (was, will be)…" Try to make a single sentence or a paragraph: Take the "elevator test" (you should be able to explain to someone what you are doing before you go out again from the evaluator…).

Focus on a single phenomenon, concept or idea that you will explore. (Not about ‘relationships’ between two or more variables, or ‘comparisons’ between two or more groups). Use non-directional language and neutral words, explain how you use terms: ("A tentative definition at this time for XYZ is…") (From Creswell)

A purpose statement could for example look like this:

The purpose of this _____ (fill in: strategy of inquiry, such as ethnography, case study or other) study is (or will be) to _____ (understand? describe? develop? discover?) the ________ (central phenomenon being studied) for _____ (the participants, such as the individual, groups, organization) at _____ (research site). At this stage in the research, the _____ (central phenomenon to be studied) will be generally defined as ____ (provide a general definition). (From John W. Creswell (2003): Research Design. Qualitative, Quantitative and Mixed Methods Approaches, 2nd ed., SAGE Publications, London)

### 3.2.3.2 Research question

From the broad, general purpose statement, you narrow the focus to specific questions to be answered. For qualitative studies: "Research questions" is more appropriate than "objective" (specific goals) or "hypothesis" (predictions that involve variables and statistical tests).

The research questions should guide data gathering, i.e. serve as "working guidelines" – key questions that the researcher will ask her/himself in the observational procedure or during open-ended interviews (Not the same as you will ask your interviewees!).

Central question plus sub-questions (for example 1 central question followed by 3 sub-questions). Use ‘what’ or ‘how’ questions. (‘Why’ suggests cause and effect, -> quantitative). Expect research questions to evolve and change during your work

Research questions are important, they:

• Organize the project, provide direction and coherence
• Narrow down the project, show its boundaries
• Keep the researcher focuse
• Provide a framework when you write up your research
• Point to the methods and data that will be needed (see Silverman p. 77)

### 3.2.4 Literature review

• A survey of literature (journals, conferences, books) on the areas relevant to your research question(s). Learn strategies from published research papers, and do a sound literature review:
  - Identify keywords (varies between databases)
  - Skim abstracts and use the relevant new keywords
  - Use the available facilities for tracing forward citations

• Are you new to the field? Start with encyclopedia articles, reviews, tutorials. Make short summaries of central articles (problem area, focus of study, case, conclusion). Use a referencing tool (e.g. EndNote).

• Conclude the chapter / each section with summarizing what you want to develop further (vis-à-vis the exciting literature) or what you see as a challenge. A summery could be presented in a list, model, etc. Each issue could correspond to your analytical chapters - but they should definitely be discussed in the discussion / conclusion of your thesis.
Silverman p. 295:
- What do you already know about the topic?
- What do you have to say critically about what is already known?
- Has anyone else ever done anything exactly the same?
- Has anyone else ever done anything that is related?
- Where does your work fit in with what has gone before?
- Why is your research worth doing in the light of what has already been done?

The chapter should end with an argumentation of your work (e.g. the literature on the area is ambiguous, or e.g. does not look at the topic from this particular theoretical standpoint, which will shed light on xxx in a novel way).

3.2.5 Theory chapter
Description of the theory you have chosen to work with (and/or the concepts you have chosen from the theoretical framework)
- In what way has the theory been fruitful when engaging with your material? Both in the field, when analyzing and writing up?
- Avoid the temptation to explain and illustrate the theoretical concepts with examples from your work - (save that for later in your analyses)

If your motivation is to develop theory, your chapter should be structured in a way that leads up to your motivation (e.g. argument such as: the theory needs elaboration in this and this way, which will provide insight on xxx)

3.2.5.1 Three research ‘tendencies’
- Simplistic inductivism (naturalism, the field will reveal aspects important. Ignores the theory-saturated nature of any observation). To diminish SI:
  - Use concepts as sensitizing resources (historical evidence, political situatedness, contextual awareness)
  - Follow up findings from other studies - what have other researchers done, can it be modified into a new study?
  - Introduce a third variable (e.g. exploring the identity of teenagers, you might pose it as a question of relation to parents, school or where, how, when.
- Kitchen-sinkers (broad scope rather than deep and focused). To diminish KS:
  - Draw a flow chart (visual outline of key concepts and how they relate)
  - Find a puzzle - what am I really trying to solve, what interest me? - how can it be that mobile phones are talked about in terms of identity among young people?
  - Look though a zoom lens (narrowing down by scaling in - later you can scale out – the point is to get you focused, not to fall into reductionism)
- Grand Theorists (detached form the (empirical) subject studied). To diminish GT:
  - Ignore fashions. Stick to you work and do not let the pitfall of distraction of shiny novelties get you - read up when you’re about to done with your work and use the readings to reflect on the implications and limitations of your position
  - Find some data (observe, conduct interviews).

3.2.5.2 Strategies for all researchers
- Find a workable (not just narrow) research topic
- Recognizing ‘feedback loops’ between topic(s) and data analysis
- Understand that your categories (or variables) are always theoretically saturated
3.2.6 **Presentation of setting**

- Provide an overall impression of the ‘place’ your research unfolded -> the background information, which for is necessary (helpful) for understanding your “case”; but which is not the kind of information you want to delineate within your analyses (rich descriptions of e.g. a company, its products (services), customers, the people who crossed your path during field work, their inter-reations, work task, etc.)
- Could be from your own empirical work, or from other’s descriptions (research, documents, etc.)
- Not always a separate chapter. You could present this information in the introduction or in the methodology chapter (in a section devoted describing the case / the setting / object(s) of study).

3.2.7 **Method chapter**

- Subjects / objects studied (intro to place, people, setting, work tools, technology, etc. weave it into your description of your methodology - NB: you might have a chap. devoted to describing the setting).
- A choice of methods between alternatives -> justify. You should demonstrate that your are aware of strengths and weakness of your strategy, design and methods.
  - In what way were different methods used, how do they support each other?* (did you e.g. use triangulation (comparison of different kinds of data and different methods to see if they support one another?))
- A detailed report of the fieldwork that was carried out:
  - What did you do, how did you do it, why did you what you did? Some of these activities can be summarized in an appendix outlining your activities in the field + e.g. your interview guide
  - How did you generate your data (interview, observation, photo(s), notes, recordings, texts, images (e.g. screen dumps), etc.)
- How did you work with your data (organize by indexing in themes, coding/memos?)
- Challenges you encountered during generation of data (access, change of method, some transcripts not verified by participants, limited time, etc.)
- Any sensitive data - how did you related to it -> before, in the process of generating material, when writing it up, after the study was completed? -> her you make use of Gisle’s lecture

3.2.7.1 **Make an early decision about which methods to use**

- No prior instrumentalization: you, as a fieldworker, must be open to unsuspected phenomena = think about how we have talked about apriori. Be open, do not take things for granted. Open questions
- Considerable prior instrumentalization: you need to be focused - what are you studying (questions from p. 140)
- An open question: we do need strict guidance when conducting an exploratory study
- Understanding the link between methods, methodologies and society... What does this mean (discussion)?

<table>
<thead>
<tr>
<th>Method</th>
<th>Quantitative research</th>
<th>Qualitative research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe Preliminary work</td>
<td>Observe Preliminary work</td>
<td>Observe Preliminary work</td>
</tr>
<tr>
<td>Fundamental to understanding</td>
<td>Fundamental to understanding</td>
<td>Fundamental to understanding</td>
</tr>
<tr>
<td>Textual</td>
<td>Content analysis, researchers categories</td>
<td>Understanding participants categories</td>
</tr>
<tr>
<td>Interv</td>
<td>Surveys, fixed questions</td>
<td>Open-ended</td>
</tr>
<tr>
<td>Transcr</td>
<td>To check accuracy of records</td>
<td>Used to understand how participants organize their talk and body environment</td>
</tr>
</tbody>
</table>
3.2.7.2 Appreciate how models shape the meaning and use of different methods

- Silverman suggests that ‘deeper’ understandings of phenomena (often claimed to arise from qualitative studies) are connected with the applied model (of how social reality works). Research activities, as such, are not neutral.
- Silverman sketches four models or idioms......
  - Naturalism (behavior, beliefs, values):
  - Emotional (experience):
  - Ethnomethodology (how people make sense, interaction):
  - Post-modernisme (deconstruction, sign systems):

- Model = An overall framework for looking at reality, could be:
  - Ethnomethodology: Concerned about how people make sense of their social world(s).
    Rather than assuming the social as orderly ethnomethodology rests on the assumption that
    the social is dynamic and unpredictable - within this unpredictability, social order is
    established by continual “repairs” in accordance with the ongoing activities. (e.g. Suchman &
    Trigg 1991)
  - Phenomenology: Concerned with understanding phenomena from the perspective of the
    participants (in a society/culture) and describe the environment (surrounding world) as it is
    experienced by the participants. Focus on the knowledges and meanings of the participants
    (e.g. Thoresen 1999)
  - Hermeneutic: Concerned with interpretation and the hidden or deeper meaning of texts
    (culture can be read as texts). The relationship between researcher and texts is a dialog in
    which the researcher seeks the meaning communicated by the texts. Phenomena can be
    read in different ways (e.g. Geertz 1972)

- HOW WOULD YOU CATEGORIZE THE ABOVE IN TERMS OF SILVERMAN’S FOUR IDOMS:
  - Naturalism (behavior, beliefs, values):
  - Emotional (experience): phenomenology, hermeneutic
  - Ethnomethodology (how people make sense, interaction): ethnomethodology
  - Post-modernisme (deconstruction, sign systems): hermeneutics

3.2.7.3 Choosing method(s) appropriate to your research topic

How would you describe your study?

- Naturalism (behavior, beliefs, values): choice on observation
- Emotional (experience): choice on interviews
- Ethnomethodology (how people make sense, interaction): choice on notes, audio / video recordings
- Post-modernisme (deconstruction, sign systems): choice on texts

3.2.7.4 Naturally occurring data (vs. artificial research environments like interviews, focus groups, experiments, survey questionnaires)

- Study what people are up to without being asked by a researcher
- Can show us things we could never imagine

But also remember that

- Naturally occurring data are also coined by what you want to do with them
- No data can be ‘untouched be human hands’
- The difference between what is natural and non-natural should be investigated rather than used as a tactic research resource.
3.2.7.5 How to document your research transparently

- Give an honest account of the conduct of the research
- Provide full descriptions of what was done in regard to choosing your case(s) to study, choosing your method(s), collecting and analyzing data
- Explain and justify each of your decisions
- Discuss strengths and weaknesses of what you did
- Be open about what helped you and what held you back
- Write out your theoretical assumptions
- Write out the factors that made you choose to work with your particular data
- Explain how you can generalize from your analysis

3.2.7.6 Questions for a qualitative methods chapter

- How did you go about your research?
- What overall strategy did you adopt and why?
- What design and techniques did you use?
- Why these and not others?

When you answer these questions you’ll describe the following....

- The data you have studied
- How did you obtain that data (e.g. issues of access or content)
- What claims you are making about the data (e.g. as representative of some population or as a single case study?)
- The methods you have used to gather the data
- How you have analyzed your data
- The advantages and limitations of using your method of data analysis

Discussion: HOW ARE WE TO TURN AROUND THESE POINTS IN TERMS OF WHERE YOU ARE (NOW) IN THE PROCESS OF GENERATING DATA?

3.2.8 Analytical/empirical chapter

- One or several - how do they relate to each other?
- Theory/concepts are briefly re-introduced and applied.
- Analysis and discussion can be integrated, or discussion can be provided in a separate chapter. The discussion should link up to the issues discussed in chapter two and/or three.

3.2.8.1 Data - assuming it’s an empirically based study

- You cannot begin too early with analyzing your data
- When writing up your data, you need to develop the skills to present your analysis clearly to your readers
  - What to say first?
  - Where to place things
  - How to introduce samples (extracts)
  - What to say in relation to them
  - How to draw conclusions

<table>
<thead>
<tr>
<th>Macro structure</th>
<th>Micro structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work out what main message and findings you</td>
<td>An intro, in which you explain what you are</td>
</tr>
</tbody>
</table>
want your data chapter to contain
- Ensure that the structure of your thesis underlines that message
- Strip out or minimize drafts chapters that are peripheral to your argument

going to do in advance
- The main section, in which you work through your data in terms of what you have already said
- A conclusion, in which you summarize what you have shown and connect to the next chapter
- Think about your readers

3.2.8.2 When writing data chapters, it is wise to:
- Make one point at a time
- Context each data extract in your argument
- Show you understand the limitations of your analysis
- Always number your data extracts
- Realize that the reader will need to be convinced and that what is obvious to you will not always be so clear to others

3.2.9 Conclusion
- Summary of findings, main problems and your conclusions
- Present your research question(s) once more
  - What did they lead to?
  - The relation between work done, the original research questions,
- Comparisons with literature in chapter two - how does your findings fit in?
  - Previous work discussed in the literature review chapter and any new work appearing since the study began
- Showing how theories have helped you think through your data
- What are the contributions and implications (practical, theoretical and/or methodological)?
  - Any implications for policy and practice?
- Possible directions for further research
  - Further research that might follow from your findings, methods or concepts used?
- Some answers to the classic examiner’s question: ‘if you were doing this study all over again is there anything you would do differently? Why so?; that is, the lessons to be learned from the conduct of the study
  - The limitations of your study
- Addressing each of the audiences who might be interested in your work
4 Analysis of papers

4.1 An introduction to Qualitative Research in Information Systems [Myers and Avison 2002]
- IS scope of field
  - Expanded to include issues such as communications and collaboration between people and organizations, inter-organizational systems, electronic commerce and the Internet
- Diversity in the research methods and approaches used to study IS phenomena
- Qualitative research in informations systems: http://www.qual.auckland.ac.nz/

4.2 Power, Politics, and MIS Implementation [Markus 1983]
- Better theories of resistance will lead to better implementation strategies and hopefully to better outcomes for the organisations
- Theories of resistance
  - Rational, structural, human relations, interactionist, organizational politics and class politics
- Assumptions about organizational context of use
  - Structure: functional, divisional, matrix, centralized, decentralized
  - Culture: power-oriented, cooperative, Theory Z
  - Employment contracts: professional, bureaucratic, semiprofessional
- Theories of resistance
  - People-determined
    - Cognitive style, personality traits, human nature
  - System-determined
    - Lack of user-friendliness, poor human factors, inadequate technical design or implementation
  - Interaction theory
    - Interaction of system and context of use (sociotechnical and political variant)

4.3 Interpretive Case Studies in IS Research: Nature and Method [Walsham 2002]

4.3.1 Overview and purpose
- Increased focus of social issues related to computer-based information systems (IS)
- Development of the "interpretive" empirical school in IS research
  - Focus particularly on human interpretations concerning computer-based IS
  - In-depth case study
- Interpretive case studies in the IS field
  - Philosophical and theoretical issues
  - Methodological issues of conducting and reporting
- Controversy between interpretive and positivist approaches, or their combination
  - Case studies help answer "how" and "why" questions
  - More explicit about research goals and methods
- Many interpretive studies have been performed, but few concerning the approach itself.
4.3.2 Philosophical basis

- Ethnographic tradition in anthropology is a good starting point.
- Data are researchers’ interpretation of subjects’ actions (Geertz, 1973)
  - First-order and second-order concepts (Van Maanen, 1979)
    - First-order data: Interviewee’s constructions
    - Second-order concepts: Researcher’s constructions
  - Ethnographic approach does not guarantee valuable data, regardless of time spent collecting
  - Second-order concepts rely on good theory and insightful analysis – mere data collection is not enough.
- “Thick description” (Geertz, 1973)
  - Example 1: Jews, Berbers, French in Morocco 1912
    - Cultural differences and differing frameworks lead French to wrongly imprison Jew for theft.
  - Example 2: Isolation of system designer (Boland and Day, 1989)
    - Initial helper turned out to isolate the system designer for his own political interests
  - Complex and intertwined conceptual frameworks must be understood.
    - Complex computer-based information systems involving managers, users and designers
- Goal to make interpretations available in the “consultable record”
- Not to generate truths or social laws (as opposed to positivist approach)

4.3.3 Interpretive and positivist research

- Positivist research
  - Assume that reality is objectively given and can be described by measurable properties which are independent of the observer (researcher) and his or her instruments.
  - Positivist studies generally attempt to test theory.
- Interpretive research
  - Assume that access to reality is only through social constructions such as langue, consciousness and shared meaning.
  - Understand phenomena through meanings that people assign to them.
  - Interpretive research methods in IS are aimed at understanding the context of the information system.
- Difference between interpretive and positivist approaches
  - Epistemological (nature of knowledge) stance
  - Ontological (nature of reality) stance
**Epistemology (Archer, 1988)**

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positivism</td>
<td>Facts and values are distinct and scientific knowledge consists only of facts</td>
</tr>
<tr>
<td>Non-positivism</td>
<td>Facts and values are intertwined; both are involved in scientific knowledge</td>
</tr>
<tr>
<td>Normativism</td>
<td>Scientific knowledge is ideological and inevitably conducive to particular sets of social ends</td>
</tr>
</tbody>
</table>

**Ontology (Archer, 1988)**

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External realism</td>
<td>Reality exists independently of our construction of it</td>
</tr>
<tr>
<td>Internal realism</td>
<td>Reality-for-us is an inter-subjective construction of the shared human cognitive apparatus</td>
</tr>
<tr>
<td>Subjective idealism</td>
<td>Each person constructs his or her own reality</td>
</tr>
</tbody>
</table>

![Figure 1: Epistemology vs. ontology](image)

### 4.3.4 Use of theory in interpretive studies

- Three distinct uses of theory (Eisenhardt, 1989)
  1. Initial guide to design and data collection
     - Create initial theoretical framework to consolidate and inform about early empirical work
     - Example: Contextualism (Pettigrew, 1987; 1990) regarding organizational change and business strategy
     - Danger: Restricted by what the theory suggests, or being trapped by overly extensive initial literature review.
  2. Part of an iterative process of data collection and analysis
     - Openness and willingness to modify initial assumptions
     - Example: Scaffolding in putting up a building
  3. Final product of research
     - Conceptual framework, propositions or mid-range theory
     - Example: Theory on how organizational consequences of IT are viewed as products of both material and social dimensions (Orlikowsky and Robey, 1991)

- The combination of the three approaches can be compared to "grounded theory" (Glaser and Strauss, 1967)
  - Focuses on discovery of theory directly from field data (2, 3)
  - Opinions about use of initial theory (1) (Walsham) (Layder, 1993)

### 4.3.5 Conduct of empirical work

- Role of the researcher
  - Accessing other people's interpretations
    - Filtering through own conceptual apparatus
  - Need to have a view on their own role
    - Outside observer vs. involved observer
    - Subjective
  - The double hermeneutic (Giddens, 1984)
Outside observer
- Researchers do not have a personal stake
- Advantage: Personnel will be relatively frank (if trust is established)
- Disadvantage:
  - Not present on many occasions
  - Not get able to a direct sense of the field
  - May be debarred (due to confidentiality and/or sensitivity)

Involved observer (participant observer or action researcher)
- Researcher being a member of the group/organization
- Advantage: Inside view
- Disadvantage:
  - Viewed as having a direct personal stake, so people may be more guarded
  - Problem of reporting the part that one has played

Evidence from interviews
- Interviews are the primary source for interpretive case studies
  - Best access the interpretations

Interviewing style
- Vary between individuals
- Balance between excessive passivity and over-direction
- Important to show interest (and competence) and get rich descriptions
- Requires good social skills and personal sensitivity

Recording medium
- Audio-recording
  - Provides full description but some people may be cautious
  - Time-consuming to transcribe
- Extensive notes or combination of both

Reporting methods
- Reporting interpretations of other people's interpretations - not facts
- Important to establish credibility – describe your data collection
  - Research sites chosen and why
  - Number of people, their professional/hierarchical positions
  - Other data sources
  - Time period

4.3.6 Generalisation from interpretive research
- How do you generalize from a single case study?
  - Case studies are generalizable to theoretical propositions
- Three phases in the scientific process in natural sciences (Bhaskar, 1979)
  - Phenomena are identified
  - Explanations for the phenomena are constructed and empirically tested
  - Generative mechanisms at work are described
Human and social sciences can be tackled using a similar methodology
  o Generative mechanisms identified in the social sciences should be viewed as "tendencies"
  o Valuable in explanations of past data but are not wholly predictive for future situations
Four types of generalization from interpretive case studies
  o Development of concepts
    ▪ Example: "Informate" concept (Zuboff, 1988) – activities, events and objects are translated and made "visible" by IT
  o Generation of theory
    ▪ Example: Theory of organizational consequences of IT (Orlikowski and Robey, 1991) (Jones and Nandhakumar, 1993)
  o Drawing of specific implications
    ▪ Example: Relationship between design and development and business strategy (Walsham and Waema, 1994)
  o Contributing of rich insight
    ▪ Example: Limits of machine intelligences; differences between plans and practical actions; need for more thoughtful machine design (Suchman, 1987)

4.3.7 Concluding remarks
  • Assumptions, arguments
    o Interpretive case studies can make a valuable contribution to Information System (IS) theory and practice
    o Volume and range of such studies are limited (2002)
    o Need for more interpretive stances in the future in the IS field
      ▪ Human interpretations concerning computer-based IS are important to the practice of IS and thus to investigations carried out by IS researchers
  • Contributions
    o Provide discussion and guidance related to
      ▪ Philosophical and theoretical nature
      ▪ Methods of conducting and reporting
    o for the future development of interpretive studies in IS research

4.4 Qualitative research: meaning or practices [Silverman 1998]
  • Introduction
    o Qualitative research is best viewed not as a set of free-standing techniques but as based on some analytically defined perspective.
    o The particular strength of qualitative research, for both researchers and practitioners, is its ability to focus on actual practice in situ, looking at how organizations are routinely enacted.
    o Prefers to focus instead on how people ‘do things’ rather than how they ‘see things’.
  • Comparison of positivistic science with action research
    o Positivism
      ▪ Scope dynamic: Context-free
      ▪ Methods: Cause-effect relationships
      ▪ Role of researcher: Detached observer
      ▪ Goals: Set by researcher and selected participants
4.5 Understanding Practice: Video as a Medium for Reflection and Design [Suchman and Trigg 1991]

- Work as situated activity
- Designing for practice
- Analysis of video
  - Rough content log
    - Observed events, indexes chronologically
  - Issue-based logging
    - Searching for specific instances
  - Interaction analysis is time-consuming
- Three perspectives
  - Research – design – practice
    - Practitioners reflect on their current practices.
    - Practitioners envision future work practices and new technologies.
    - Researchers gains insights that only confrontation with reality can provide.
    - Researchers bring an action-oriented involvement to their traditional analytic work practice.
    - Designers working with users better understand the implications of prototypes and scenarios for new designs.
    - Designers gain new insights from observing current practice so as to respect the present when designing for the future.

4.6 Moving Out from the Control Room: Ethnography in System Design [Hughes, et al. 1994]

- Requirements elicitation
- Plausibility that many systems fail is due to insufficient attention to the social context of work
- Emergence of low-cost technology, networked and distributed computing, pose new problems for design, collaborative character of work
- Understanding real world important factor in software design and development
- Ethnography produce detailed descriptions of workaday activities
  - However ethnography design options not clearly stated for engineering needs
  - Traditional methods of system design owe far too much needs on engineering, crucial aspect “real world” obscured
  - Collaborative – large scale system development
  - Ethnography confined to small scale and confined environments
  - Ethnography prolonged activity
Communicating ethnographic findings to designers
- Non-disruptive, non-interventionist
- Motivation for IT is to reorganize work, displace labour
- Fieldworkers require access, need acceptance

Propose different uses of ethnography within the design process
- Concurrent ethnography
  - Design is influenced by an ongoing ethnographic study taking place at the same time as systems development
- Quick and dirty ethnography
  - Brief ethnographic studies are undertaken to provide a general but informed sense of the setting for designers.
- Evaluative ethnography
  - Ethnographic study is undertaken to verify or validate a set of already formulated design decisions.
- Re-examination of previous studies
  - Previous studies are re-examined to inform initial design thinking.

Summary and lessons learned
- Important that designers understand the work context
- A variety of roles for ethnography in design
- Responding to the pressure of time and budget
- The importance of focus
- The importance of previous studies
- System design is work design

4.7 Mobility Work: The Spatial Dimension of Collaboration at a Hospital [Bardram and Bossen 2005]

Four aspects of mobility work
- Places
- Knowledge
- Resources
- Persons

Mobility work and its challenges
- Moving resources, persons and knowledge
- Locating resources, persons and knowledge

Conclusion
- See mobility work as the attempt to accomplish tasks and work within a setting where everything is distributed, some things are stationary and many other things move around.
- Trade-offs to be made between availability and seclusion; mobility and localisation; and orderliness and flexibility.
4.8 Ethnographic Field Methods and Their Relation to Design [Blomberg, et al. 1993]

4.8.1 Introduction

- Goal of the paper
  - Exploring relationship between:
    - developing a descriptive understanding of human behaviour and
    - designing artifacts which support them
- Challenge of linking ethnographic field methods and design
  - Ethnographer’s interest is understanding human behaviour
  - Designer’s interest is designing artifacts
- 1980s designers refocused interest & realization of inappropriateness of methods used

4.8.2 Ethnographic approach

- Requires and includes:
  - involved field work
  - description of activities and practices
  - Interpretation of activities studied
- On-going relation with users
- Incorporates users perspectives
- Relation between tech & work understood
- Provides a context to evolve mutual understanding
- Has Four main Guiding Principles:
  - Natural settings
  - Holism
  - Descriptive
  - Members’ point of view

4.8.2.1 Holistic

- **Holistic:** Particular behaviour understood in relation to how they are embedded in the social and historical fabric of everyday life. Focus on relationship between the parts.
- **Natural laboratory:** Learn about a world you don’t understand by encountering it first hand. Focus on naturally occurring, everyday talk and action.
4.8.2.2 Descriptive

Figure 2: Two principles of ethnography

4.8.2.3 Member’s point of view

Understand other people’s behaviour from their point of view.

Figure 3: Contrast between descriptive and prescriptive characterisation of activity

Figure 4: Descriptive categories are those of the community of practice
4.8.3 Ethnographic field methods

- Requirements when doing field work:
  - Personal involvement of investigator
  - Willingness to be in situations out of control
  - An abandonment of strict “scientific control”
- The methods include:
  - Observation
    - Why observe?
    - How should observation be done?
    - What should the focus of the observation be?
  - Note taking
    - Very individual activity
    - Useful to evoke memories of experienced events
    - Videotaped records as notes
  - Interviewing
    - Observations coupled with interviews
    - Start with unstructured & open-ended questions
    - Then conduct more structured & systematic interviews
    - Should be done in local setting
    - Can be combined with observation
    - Carefully plan who to interview
    - Rules of thumb in interviewing
  - Video Analysis
    - Used as supplements of substitutes to field notes
• Can be viewed and analyzed by a wide range of people (researchers, designers…)
• Caution needs to be taken as:
  • video taping generate large quantity of tape
  • time consuming to analyze
  • some human activities are difficult to record

### 4.8.4 Ethnography and design

- When using ethno in design, the human behaviour needs to be understood as a mechanism for change
- Individuals for whom a system is being designed must come first
- There are Participations and Expectations
  - Involving those studied, one gains new understandings
  - Interests of those studied should be respected
  - Early involvement of users crucial
  - Issues of access & reciprocity must be confronted
    - Access the settings without promises
- Why ethnography is relevant to design?
  - Designers to understand the settings
  - Not to impose designers’ view on users
  - Helps explain uses of the tech designed
  - Users gain broader perspective on tech
  - Gives good understanding of users work
  - reduces focusing on single task
- How can ethnography and design be linked?
  - Ethno study work practices & transfer insights to designers
  - Team of ethno & designers undertake the study together
  - Team of ethno, designers & users
  - Success depends on how well tech supported the work activities

### 4.9 It’s Just a Matter of Common Sense: Ethnography as Invisible Work [Forsythe 1999]

- Some aspects of ethnographic fieldwork are invisible to the untrained eye
  - Invisible work
- Work settings, work-related problems, real-world work processes
- Ethnography three elements in combination
  - Ethnographic data-gathering methods, observation, interviewing, documentation
  - Methods are grounded in theory
  - Apply methods in context of a distinctive philosophical stance
- Ethnography produces
  - In-depth understanding, real-world social processes
  - Concepts and premises – what people do – often unaware of
  - Fieldwork is the research instrument
• Training, practice
• Careful data-collection and analysis to produce reliable results
• People trained in different disciplinary traditions may view the same phenomena in very different ways
  o Anthropologists are trained to be reflexive
  • Identify and evaluate their own research assumptions and their respondents
  o “pseudowork”

4.10 Here and there: Doing transnational fieldwork [Knowles 2000]

• Objective
  o Relationship between “home” and “field”
  o Researcher’s intellectual, political and transnational autobiography
• Positions in the field
  o Intellectual
  o Political
  o Social relationships
  o Choice of locale
• Problems with multi-locality
  o Theoretical problems, e.g. “blackness” in UK vs. Quebec
  o Practical problems, e.g. funding
  o Lack of reflexivity, e.g. British vs. Canadian
• Fieldwork mechanism
  o Autobiography vs. fieldwork
  o Interconnected vs. adjunct
• Being a “stranger”
  o Outsider – more “objective” stance


4.11.1 Introduction

• System suited for Information Systems research
• Merges research and praxis thus producing exceedingly relevant research findings.
• Not popular (in North American IS research) despite its overwhelming acceptance in organizational development. Most popular in Northern Europe, England and Australia.
• Involves the close collaboration of both researchers and practitioners
• Interests in Action Research (and other research methods such as grounded theory and deconstruction) grew inside Information Systems research because of some inadequacy in IS research before. Such inadequacy were:
  o Lack in task and validity in IS research
  o IS survey research suffered from poor instruments and lack of control
  o General lack of statistical power in IS research
The need for it also came from the growing concerns of scientists in IS with the social and psychological aspects of the introduction of technology into human workplace, rather than concentrating only on the technical aspects.

Development of the method started after the 2nd world war firstly by Kurt Lewin.

### 4.11.2 2 stage process (Blum 1955)

- **Diagnostic stage**
  - Involves a collaborative analysis of the social situation by the researcher and the subject of the research
- **Therapeutic stage**
  - Involves collaborative analysis of the social situation concerning the nature of the research domain

### 4.11.3 Cyclical 5 phase process (Susman & Evered 1978)

- **Cyclical 5 phase process**
  - "Ideal" formulation of action research
- Requires the establishment of client-system infrastructure
- Five identifiable phases are iterated
- Practitioner as part of a set of actors
  - Oriented to solution of practical problems

![Figure 6: The action research cycle](image)

- Attempts to link
  - Theory and practice
  - Thinking and doing
  - Practical and research objectives
- Dealing with reality is more desirable than a representation of reality

### 4.11.4 Domain of ideal usage

- Understanding of complex human process (rather than a universal truth)
  - Communication in "Kitchen Stories"?
- Checkland:
  - Cycle of continuous inquiry: theory interacts with practice
- If research is most focused on the techniques, then tautological…
4.12 Appendix D: Grounded Theory [Thoresen 1999]

4.12.1 Silverman emphasizes that it’s important to:
- recognize the ‘feedback loops’ between topic(s) and data analysis - how does this relate to GT?
- understand that your categories (or variables) are always theoretically saturated – how does this relate to GT?

4.12.2 What is GT? (discussion)
- data collection, analysis, and theory stand in reciprocal relationship with each other. One does not begin with a theory, then proves it. Rather, one begins with area of study and what is relevant to that area is allowed to emerge” (Strauss & Corbin 1990, in Thoresen).
- “Grounded theorists gives priority to developing rather than verifying analytical propositions” (Emerson, Fretz, Shaw, 1995:143)
- Theory should be grounded - to take an existing (...) theory or a set of pre-defined concepts as point of departure (...) is a risky endeavor. It means that an external structure is imposed on the data.
- Within GT it’s important to generate grounded theory – how come?
- Difference between substantive (single context) and formal theory (similar phenomena occur in different context)

4.12.3 Techniques of grounded theory:
- Asking questions aimed at exploring properties, connections, similarities and dissimilarities.
- Open coding (process of analysis - breaking down, examining, comparing, conceptualizing, categorizing data) reading data carefully to identify and form ideas, themes, or issues provided by the data - generation of analytical categories
- Axial coding (process analysis - focus on the phenomena’s relationship to the context in which they occur + their relationship to each other) - relate the (above separate) pieces of data
- Code notes (memos - writing / forming theoretical propositions - focus on phenomena - breaking down, examining, comparing, conceptualizing and putting together data in new ways) - locating series of phenomena, topic or categories
- Open and axial coding serves to make complexity visible and systematic.

4.12.4 Critique of GT
- Theory (model) and the generation of data cant be separated.
- We bring theory to the field - data do not stand alone, analysis unfold in all phases of field research (observations, when recording fieldnotes, when coding the notes in analytical categoriesand Shaw (1995))
- A systematic coding of data does not (in itself) lead to theory - the bibliography of the researcher plays a role in the analysis - data do not talk and reveal (Thagaard (1998))

4.13 A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems [Klein and Myers 1999]

4.13.1 Standards, not rules
- For interpretive(and hermeneutic) field studies
- Principles are not a pre-defined set of criteria
- Improvement over status quo
- Hope to ignite some debate
- Bring on the principles!
4.13.2 The seven principles

- The Fundamental Principle of the Hermeneutic Circle
  - Iterating between fragments and the whole
  - Meaning must be found within context

- The Principle of Contextualization
  - Reflect on social and historical background of the research setting

- The Principle of Interaction Between the Research and the Subjects
  - How the researcher impacts the data

- The Principle of Abstraction and Generalization
  - Relate principles #1 and #2 to general concepts

- The Principle of Dialogical Reasoning
  - Contradictions between theory and data

- The Principle of Multiple Interpretations
  - One incident, 100 different stories

- The Principle of Suspicion
  - There may be biases and distortion

4.13.3 Conclusion

- No longer a need to justify by (inappropriate) positivist criteria

- Raise the standard
  - Considering applying these principles to your research

- The principles are a visible target
  - Bring on the debate
5 Bibliography