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Writing of a problem statement based on “the five-question-pie chart”

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Introduction

A proper problem statement forms the backbone of every scholarly paper. In principle each problem statement originates from asking a specific question about a certain phenomenon or process in reality and an idea of what the answer to your question could be, a hypothesis. Your interest in the phenomenon, the formulation of the research question and the hypothesis form the starting point for developing a scholarly problem statement. Therefore, it is advisable to write down your provisional research question and hypothesis at the beginning of your research process, and after that you further refine your problem statement using the “five-question pie chart”. You will be answering the following five questions in this process.

- **What** exactly are you going to research? What is the specific *phenomenon* of which you want to broaden your perception? By means of which specific *case* are you going to proceed?
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- **Why** do you want to conduct this research? What is your *motivation*? What will be the contribution of your research to existing scholarly perceptions and what is the social significance of your research, in short: what is the *scholarly* and *social relevance* of the research?
- **Within** which framework do you want to perform your research? From which perspective will you approach the phenomenon, which scholarly *theories* or *models* will you choose as the base for your research, helping you to describe, analyse, interpret and explain the phenomenon?

¹ The original Dutch version of this text is published on

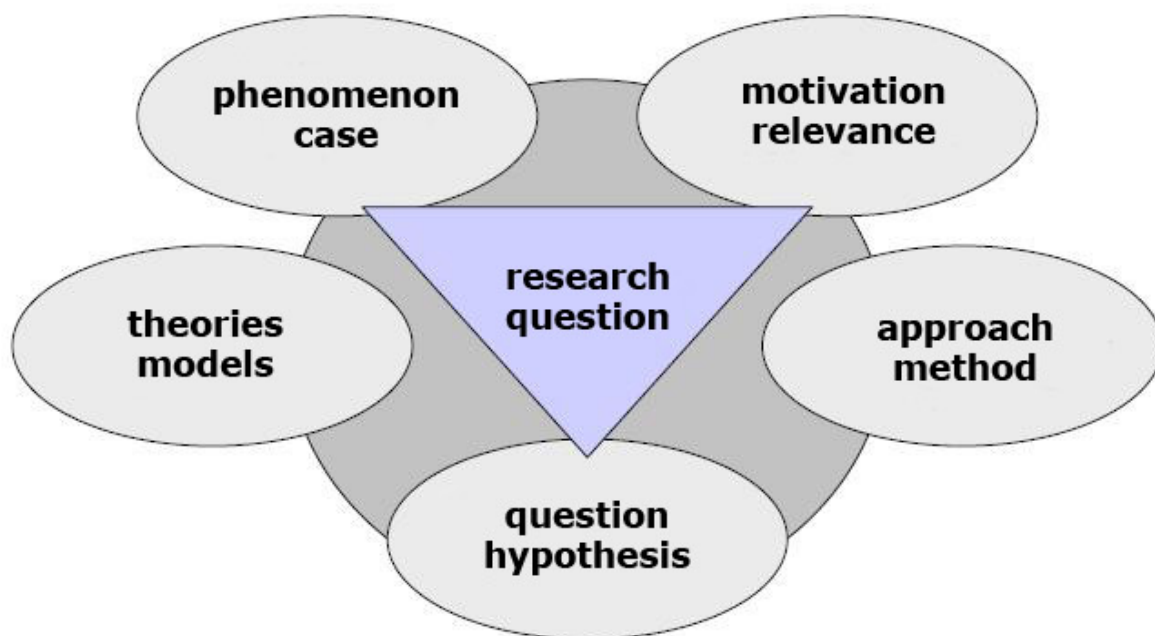
https://dspace.library.uu.nl/bitstream/handle/1874/309230/MUELLER_2005_schijfvanvijf2005.pdf?sequence=2.

The English translation can be retrieved from <https://www.uu.nl/staff/EMuller/Publications>.

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- **How** will you proceed? What is the *approach*, how do you, by means of a scholarly controlled *method*, generate data and how will you analyse and interpret these in order to get an answer to your research question and to test your hypothesis?
- **Which** specific *question* do you put forward? And what expectations form the guideline of your research? Which answer do you think you can give by means of your research to your specific research question? What are the expectations with regard to the research results which you will formulate as *hypothesis*?

Problem statement based on “the five-question-pie chart”



1. Phenomenon | case: *What exactly are you going to research?*

The motivation to do research is related to a *phenomenon* you think it is striking, astonishing and of social value and about which you would like to know more. Which connections between media and cultural or social phenomena are most interesting to you? Do media technologies or media products play a specific part in this? Which links are not yet common knowledge? What could be the social relevance in order to gain a better perception? To what extent could these connections provide links to central theoretical debates in media studies? Formulate several options in a brainstorming session. Some examples are stated below:

- “Retro-programmes on TV and cultural memory”;
- “Action films and views on masculinity”;
- “Mobile phones and relation management”;
- “Football fans and internet communities”.

It is important that you ask yourself each time what the specific *case* could be of the research to be able to perform research into that phenomenon. Therefore, define your research material properly. Which retro-programmes on TV or actions films are you referring to, which group and which geographic location will you examine the use of mobile phones, which fan club of which football-club are you investigating using which internet-site?

Suppose that when drawing up a list of possible subjects you indeed come across so-called “retro-programmes” such as *I love the 80’s* or *I love the 90’s*. You have the impression that more and more programmes of this kind are broadcast on television. What is the reason for this and what kind of cultural phenomenon is it? You believe that there is something interesting to mention about this – something that you will not be able to take in by just reading an article in a newspaper, by searching for a definition, or by thinking hard about it. What relation could there be between the increase, the content, and the form of such programmes and the historical notion of the public of these programmes? Can the increase in number of these programmes be considered a purely commercial strategy in order to seize upon the changing way in which certain target groups think about the recent past? Is it a more or less coincidental format created with low production costs in mind that turns out to be successful and suddenly emerges everywhere? For example, you continue as follows: my parents enjoy watching these programmes, and I do too, but I believe for a different reason. To whom does it appeal? Why is it successful with different groups? What impression is given of the 1980’s or 1990’s? To what extent does this differ from other recordings of the recent past? To what extent would these programmes be able to change the outlook on the recent past? You believe no serious research has been conducted into these programmes, so far. You also think that in general little research has been carried out regarding the relationship between contemporary television and cultural memory. You also gather that on the basis of this subject you could possibly contribute to general insights into the relationship between media, culture, and society; you want to make connections between the economics/production of these types of programmes, their content, form, and their reception. By doing so you can come to a subject in which the phenomenon and a well-defined specific case are mentioned: “The relation between retro-programmes on Dutch television and the cultural memory: a discourse analytical study into the interpretation of the recent past in *I love the 80’s*.”

So, proper scholarly research in general tries to establish a certain *connection* between a *case* (events, media products, media technologies, etc.) and a cultural or social *phenomenon*. You will develop the objective in your problem definition, partly by specifying what type of problem statement you focus on: is it describing, explanatory, comparative, assessing, advisory, contesting, or hypothesis-testing research? (see also point 5)

2. Motivation | relevance: *Why do you do want to conduct this research?*

The motivation to do research originates from social and scholarly questions. You can base your *scholarly motivation* by putting your research into a specific tradition. You try to find a connection to an earlier line of investigation within your discipline. In this manner, you can for example continue an inspiring study by adding questions or by setting up a similar examination but this time centred on another programme, medium, country, or another target group. But you can also question the validity of existing studies or insights and demonstrate, by means of your own research, that a more convincing interpretation or declaration for the specific phenomenon can be found. You can also highlight gaps in scholarly knowledge, so-called “desiderata”, blind spots on the scholarly map, for example because hardly any research has been done into a certain phenomenon whereas the newspapers continuously voice their opinion about it. The *scholarly motivation* of a paper therefore assumes a certain overview of the scholarly field: You position your planned research within the context of existing research and academic debates and explicate the specific - connecting or differing - question or approach with respect to previous research.

Suppose that research into the phenomenon of retro-programmes on television has already been performed by a media-economist. In this research the phenomenon is purely explained by the fact that the broadcasting companies and channels have access to cheap or free archive material and are therefore able to produce low-cost programmes by recycling the archived material. Although this is an interesting conclusion, you do not find this outcome satisfactory, as cheap production in itself is no explanation for the success of the programmes. In contrast, you argue that cultural factors play a role and therefore, your research refers to a cultural explanation of the phenomenon. You believe that these types of programmes have something to do with enjoying nostalgic feelings, a sort of “longing” for the recent past. You try to find examples of similar research to find a basis for your own set-up.

The *social relevance* of research in the field of media studies is sometimes hard to specify. It is often aimed at obtaining better insights into recent cultural or social developments in which the media play a certain role. Or it concerns the question as to how and why certain media structures arise and how and why these structures change. If for example a study into retro-programmes and the cultural memory in the Netherlands shows that these programmes indicate a specific interpretation of the recent past, you will be able to place the results of this research within the context of the debate on Dutch identity.

Your aim will always be to obtain more insight into the cultural meaning of a certain media-related phenomenon that occurs in society. Of course, there are application-oriented issues within the media and communication sciences such as, for example, research into the value of “language programmes” on local television channels for the benefit of the integration process of newly arrived immigrants. These insights can sometimes be converted to policies or marketing strategies, but this is not a requirement for every scholarly paper in media studies.

3. Theories | models: *Within which are you going to research the phenomenon?*

According to Abraham Kaplan (3) nothing is more practical than a proper theory. A theory is a tool in the research process. You can see a theory as ‘putting on a specific set of glasses’ to see or understand certain aspects of the phenomenon and the case more clearly. In a certain way, theories first of all help you ‘to construct’ the subject of your research: you can understand a theory *as a coherent and consistent set of judgements concerning the essence of a certain subject*. By means of this set of judgements concerning the subject of your research you define what is happening (or not). As such, philosopher Karl R. Popper speaks of theories as “searchlights” (346): they help you to discover what is interesting, how you can understand it more accurately and how to focus the research question. For this reason, it is useful to see your theoretical framework as ‘the theoretical basis’ of your research.

If, for example, you question the imaginary media-economic study into retro-programmes on TV, you assume that you must consider this phenomenon in a different way, so from another tradition in the field of media studies. You argue that factors which have been left aside in the economic research must be examined to gain better insight into the phenomenon. By doing so you in essence implicitly already advocate for a different view on or another ‘model’ of the phenomenon. For example, in your research you want to highlight the cultural aspects of the phenomenon: why are retro-programmes popular now? What is their reception? Which discourse on the past is constructed in these programmes?

A theory is therefore nothing more (and nothing less) than a basis for formulating expectations about the structure of what you want to research but of which you not yet know fits together. Try to find theoretical concepts which can be related to your phenomenon and the case of your research, your observations, and especially your research question. Using theoretical perspectives, try to get hold of the most interesting aspects of your research subject. Always begin with the subject which you mentioned as the first basic indication of your phenomenon and the case of your research such as “retro-programmes and *cultural memory* in the Netherlands.” When we take retro-programmes as an example, these aspects could be, amongst others, the following:

- media-economy, multiple exploitation, industrial culture, marketing;
- cultural memory, canonisation, media as an audio-visual archive;
- amusement, nostalgia, alienation, “camp”;
- media and identity, taste, “fandom”.

Always use the terminology customary in the field but be creative in looking for theoretical frameworks! In the end carefully thought-out theoretical choices will enable you to focus your research and especially align research question, the theory, and the method. When you stipulate the theoretical basis of your research, you make a specific choice which you justify clearly: which theoretical basis are you choosing and why?

As a first step, you will often primarily position your research in a certain theoretical tradition which you find stimulating and promising for your research. However, it will not be enough to simply mention disciplinary denominations like *sociological*, *psychological*, and/or

culturally critical, as each disciplinary denomination itself consists of different theoretical mainstreams. Even when you choose ‘the’ *ideology critical* approach or ‘the’ *cultural studies* approach, you will have to position your research specifically within these approaches. You aim to specify your theoretical basis by means of authors and texts in which the theory is explained in more detail.

A theory never formulates an eternal truth but forms a so called heuristic model of that which you are about to study, a tool to get hold of a certain phenomenon in a scholarly manner. Therefore, a theory is always subject to discussion during the research process. In short: theories help you orientate but are not sacrosanct. If, for instance, you have the feeling that retro-programmes have something to do with the enjoyment of nostalgic sensations, it will not be sufficient to simply refer to a theory on nostalgia and to subsequently test the characteristics of retro-programmes on a set of coherent and consistent judgements concerning nostalgia. Rather, you take the theory on nostalgia as a basis to be able to ask your questions in a more targeted manner.

4. Approach | method: *How do you set to work?*

Whereas the theory determines within which framework or from which perspective you will be looking at the phenomenon, approach and method define *how* you actually set to work. The choice of your method ensues from the phenomenon, the theoretical basis, and of course your specific presentation of the research question. You choose an approach and a method which – with regard to the theoretical basis – are set up to generate an answer to your research question.

The specific research method defines how you collect information, data, and sources in a systematic and controlled manner and how you also analyse and interpret these in a systematic and transparent manner to be able to give a scholarly basis to your research question. As such, you will ask yourself what specific action you are going to undertake in which order to be able to conduct your research, and how you can justify this methodically. In the first place, you can define your approach by aiming at aspects of:

- a) production and production conditions,
- b) media products and programmes, or
- c) reception and claims on media products

Often, you will be conducting research investigating the link between two of these three aspects. In general, you will already have decided on a certain direction after defining the phenomenon and the case of your research and by outlining the theoretical basis. However, make sure that the approach of your research fits the chosen phenomenon and especially the case.

In media studies, there are research traditions where theory and method go hand. The *discourse analysis* for example not only implies a distinctive “technical” approach and execution of the research, but also originates from certain theoretical assumptions on the social function of social discourses, i.e. the assumption that these determine our view of the

world (see Philips/Hardy 3-11). But often the relation between the theoretical basis and the specific methods is not as straightforward in the sense that the theoretical framework by definition determines only one research method. When you perform reception-research you can do so, as shown in the overview below, in several ways. Thus, from a certain theoretical basis you can often use several methods, certainly also in combination with each other. However, within a certain theoretical framework you will discover that some methods are more suitable than others and that some simply are inapt. For example, you cannot perform observational (“ethnographical”) research into media texts, but you can study reception processes and even production processes. You may perform a discourse analysis into political legislation and especially into a certain selection i.e. a “corpus” of medium texts, but this approach as well as the quantitative content analysis does not correspond with the “active audience” approach. But yet you can support an “active audience” approach and exclusively perform textual analysis when you assume that, on the contrary, the polysemy of media texts evoke divergent interpretations by various (groups of) recipients.

The following list shows a general orientation on several research approaches and different methods which are further explained in various handbooks concerning media research and communication studies research (see bibliography):

- a) focus on production and production conditions of media and media texts:
 - analysis of the media system
 - political-administrative analysis of political legislation
 - analysis of media organisations and companies
 - analysis of production processes

- b) focus on media texts:
 - textual analysis (aesthetic/dramaturgy, ideology-critical, discourse-analytical)
 - content analysis (quantitative or qualitative)

- c) focus on reception processes:
 - qualitative reception analysis (focus groups; in-depth interviews; participant observation)
 - quantitative reception analysis (survey/questionnaire with open or closed questions)

Ask yourself which method is most appropriate for your theoretical basis and your research question. Which sources, information, and data have you already found (media texts, policies, research reports, ego documents such as homepages or weblogs on the Internet, etc.) or will look for your sources and data as a first step of your research? If so, how will you do this, by means of group discussions, interviews, participant observation, content analysis or questionnaires? How will you collect the data, what do you need it for and how will you analyse and interpret it? What data do you need exactly in order to be able to answer your question: complete texts, how many of them, or fragments from texts, and what is your selection procedure? Or in case you wish to do research into reception: how do you gather

respondents or groups of respondents for your research, how do you justify your selection, how many groups or respondents are you going to approach?

Moreover, you also make a well-considered decision on whether you want to perform a more small-scale *explorative* research into a new or not yet in detail studied phenomenon or that you want to conduct a more large-scale *representative* survey. In media and communication science there are many preconceptions on the advantages and disadvantages of these approaches, and often the distinction between empirical and hermeneutic-analytical, quantitative and qualitative, representative and explorative approaches and methods is denoted as the difference between objective scholarly methods and purely subjective considerations. This idea is just as persistent as it is nonsensical: both approaches demand a systematic and controlled method during the research process, and both at times contain empirical, creative as well as interpretative steps (see Deacon et al. 1-13). However, it has been mentioned that qualitative or hermeneutic-analytical research is in the first place more interested in cultural significance, the differentiated, frequently critical analysis of processes with the aim of improved understanding. On the other hand, quantitative research is more interested in representative or experimentally founded judgements and rules with the aim of being able to predict, influence, or guide cultural and social processes (such as significance). However, do be aware of the fact that the difference between empirical and hermeneutic-analytical methods is not the same as the difference between quantitative and qualitative methods. For instance, a small-scale observational study of the reception of retro-programmes by immigrant families – so a qualitative approach – is empirical by nature: you collect the data which you will process eventually in a hermeneutic-analytical manner, through accurate observation of processes in reality. However, the quantitative content analysis of a corpus of media texts, for example research into the representation of the protest generation in retro-programmes, is also empirical by nature, even if only exclusively media texts form the basis and material of the research.

You will constantly be occupied with these types of questions during your academic career. It is important that you make a substantiated methodical choice which fits research question, the phenomenon, as well as the theoretical basis. Not one methodical approach is more objective or more subjective by advance than the other. Scholarly 'objectivity' only exists by approximation and assumes a systematic, controlled, transparent, and methodically as well as theoretically sound method during the research process (see Silverman, 1-13). You determine the specific manner of performing research through the substantiation of your research method.

5. Research question | hypothesis: *Which specific question will you put forward?*

The definitive formulation of the research question is the test: from the perspective of the other four aspects of the problem statement the research question shows the specific research interest by means of the phenomenon, the case, the motivation and the relevance, the theoretical basis, and the choice of the specific research method. There are several types of research questions:

1. a *descriptive* research question is suitable when you are dealing with a new phenomenon for which it is important first explore the phenomenon;
2. a *comparative* research question is suitable when you want to get more insight into the specific character of a certain phenomenon by means of the comparing similar phenomena;
3. an *explanatory* research question aims to find (causal) links between several phenomena and cultural or social developments;
4. an *evaluative* research question is suitable when you want to arrive at evaluative statements about concerning phenomena or measures;
5. a *advisory* research question aims to provide advice on cultural or social issues on the basis of the research;
6. a *contesting* research question aims to develop a better theoretical explanation or methodical approach in order to develop a certain phenomenon;
7. a *hypothesis-testing* research question aims at empirically testing a clearly formulated hypothesis by means of experimental research.

In general, a proper research question prompts the researcher to write an *argument* about phenomena, which step-by-step provides *insight* into links *between* phenomena, events, developments, factors etc., rather than writing a pure *description* of a certain phenomenon in the field of media, culture and society.

However, the exact formulation of a proper research question is a skill in itself. At the start of the research process, research questions are generally far too broadly formulated. A question like: "What is the influence of the media on society?" cannot be put into practice in a scholarly paper. The same goes for a research question such as: "What has new media meant for the construction of the identity of young Dutch people since 1995?" as it is still far too wide-ranging. After all, which new media, which aspects of identity construction and/or which groups of young Dutch people are you referring to? As a rule of thumb for formulating your research question follow advice of David Silverman, author of a handbook about qualitative socio-scientific research: "say 'a lot about a little (problem). This means avoiding the temptation to say 'a little about a lot'". (64).

Furthermore, so-called 'closed' questions as a rule put you on the wrong track. Definition questions such as "Is Steven Spielberg's E.T. a thriller?" do not yield interesting research, as the answer can only be *yes* and *no*. Moreover, even if you would prove that it is a thriller or not, what in fact would you have actually said? Even so, a research question such as "Do retro-programmes play a role in the integration of immigrant men above 50 in the Netherlands since 2000?" can also be answered with a simple *yes* and *no*. This specific formulation of the research question does not force you to explain *how* retro-programmes

played a role in integration processes, which role they played and *to what extent* we can consider that role as positive or negative, nor does it answer the *why*. The added value of your research can lie in answering just these types of questions.

For this reason, always formulate your research question in the form of an “open”, but nevertheless goal-oriented question. Often the words “how”, “in which manner”, “to what extent”, “which”, “why” are sufficient to transform a closed question into an open question. However, there is a catch: research questions that start off with “how” can put you on the right track and force you to gain *insight* into something, but they can also push you in the direction of a purely descriptive narrative. The question “How did X develop itself?” can lead to a purely descriptive account: “At first there was this and then came that, and then, and then...” Other words which may be useful for you when writing an essay are: “interpret”, “consider as” (“how can we interpret X in relation to Y?”; “to what extent can we consider Y as being Z?”) To raise a corner of the veil when writing an essay on links between developments, it is advisable to use words as “link”, “proportion”, “relation”, “cause”, “effect”, “interaction”, “role”, “meaning”, “in which proportion”, “interaction to what extent” and “what role played?” when formulating your research question. Moreover, it is advisable to give an indication in your research question of your interpretive framework by which you define by your theoretical basis.

Eventually, aim to ask only one question. When you are asking several questions, stipulate which question is the main question and which questions are the sub-questions used to obtain an answer to your main question.

Each problem statement not only originates from a research question which you can put forward regarding a certain phenomenon but is generally also postulated from an intuitive expectation or preconceived idea on what the answer to your research question could be. By explicating and defining the motivation and relevance of your research, the theoretical basis, and the research methods you can eventually define this as the *hypothesis* of your research. Even if you do not do hypothesis-testing research in the narrow sense of the word, you try to explicate this expectation. Of course, you are not supposed to try to prove this expectation or hypothesis by means of your research recklessly. That would be short-sighted. Rather, by explicating your expectation or hypothesis, you give an account of implicit presuppositions and convictions which will always play a role when defining a problem statement or in research. Explicating expectations or hypotheses can help you to work purposefully *and* to look critically at your own implicit presuppositions. So, do not hesitate to set aside your hypothesis if your research results appear to indicate a different direction. Formulating a research question and hypothesis is a *dynamic* process.

“The five-question-pie chart” – not just ticking the boxes

Developing a problem statement is both a creative and a formal process. You make intuitive, associative links between phenomena, cases, theories, research methods, and questions which you may have while doing so; and at the same time you strive to substantiate these links using scholarly conventions in a scientifically convincing manner.

In practice, you will notice that during several phases of the research you will have to adjust and reformulate certain aspects of your problem statement. During the first stage of the research, you will continuously have to finetune your research question by studying existing studies and relevant theoretical literature as well as developing your research method before you will be able to present a definitive, practical research question. While collecting and studying your source material and literature you will frequently have to refine your hypothesis and probably even have to adapt your research method. Sometimes at this stage of your research you might still have to further restrict your subject and research question - for example because of a lack or even because of an excess of sources. When interpreting your results you might also have to alter your provisional position within your theoretical framework. And when writing the definitive essay or research article you might decide that on the basis of your findings you might have to shift the emphasis of the social and scholarly relevance of your research. "The five-question-pie chart" is a circle which you complete several times when developing a problem statement, and in which all aspects influence and dictate each other reciprocally.

"The five-question-pie chart" offers you a model to develop and review your problem statement systematically. However, be conscious of the fact that "the five-question-pie chart" is a tool to focus on the most important aspects of a problem statement, it is not a blueprint and it is by no means a matter of simply ticking the boxes!

Bibliography | Handbooks on research methods

- Baarda, D. B., en M. P. M. de Goede. *Methoden en technieken. Praktische handleiding voor het opzetten en uitvoeren van onderzoek*. Houten: Stenfert Kroese, 1997.
- Berger, A. *Media and Communication Research Methods. An Introduction to Qualitative and Quantitative Approaches*. London: Sage, 2000.
- Deacon, D., et al. *Researching Communications. A Practical Guide to Methods in Media and Cultural Analysis*. London/New York: Arnold, 1999.
- Gray, A. *Research Practice for Cultural Studies*. London: Sage, 2003.
- Jensen, K.B. *A Handbook of Media and Communication Research. Quantitative and Qualitative methods*. London/New York: Routledge, 2002.
- Kaplan, A. *Conduct of Inquiry: Methodology for Behavioural Science*. San Francisco: Chandler, 1964.
- Phillips, N, en C. Hardy. *Discourse Analysis. Investigating Processes of Social Construction*. Thousand Oaks/London/New Delhi: Sage, 2002.
- Popper, K.R. *Objective Knowledge: An Evolutionary Approach*. Oxford: Clarendon, 1974.
- Silverman, D. *Doing Qualitative Research. A Practical Handbook*. London: Sage, 2000.