



Creating Competing Constructions by Reanalysing Qualitative Data

Author(s): Jochen Gläser and Grit Laudel

Source: *Historical Social Research / Historische Sozialforschung*, Vol. 33, No. 3 (125), Focus: Secondary Analysis of Qualitative Data / Sekundäranalyse qualitative Daten (2008), pp. 115-147

Published by: [GESIS - Leibniz-Institute for the Social Sciences, Center for Historical Social Research](#)

Stable URL: <http://www.jstor.org/stable/20762304>

Accessed: 30/01/2014 13:26

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



GESIS - Leibniz-Institute for the Social Sciences, Center for Historical Social Research is collaborating with JSTOR to digitize, preserve and extend access to *Historical Social Research / Historische Sozialforschung*.

<http://www.jstor.org>

Creating Competing Constructions by Reanalysing Qualitative Data

Jochen Gläser & Grit Laudel *

Abstract: »Re-Analyse von qualitativen Daten als Vergleich von Konstruktionsleistungen«. Secondary analyses are methodologically interesting because they enable comparisons between constructions using the same data. This comparison is even more focused in the case of a reanalysis that uses a primary study's data for constructing a new answer to the original research question. In this article, we describe a reanalysis of semi-structured interviews that were archived and subsequently made available to us. We conducted a qualitative content analysis of the interviews in order to find out how well one of the conclusions of the primary study was grounded in the empirical data. A comparison of the reanalysis to the primary study revealed critical decisions that are usually made implicitly and surface only if contradictions between results must be explained. The comparison highlighted the problems arising from gaps in empirical data. Primary studies, which can actually fail by not producing interesting results, are liable to 'compulsive *Gestalt* completion'. Gaps might be filled by 'plausible assumptions' and unsuitable data used to guarantee success.

Keywords: Reanalysis, Secondary Analysis, Qualitative Content Analysis, Qualitative Methodology

1. The methodological challenges of secondary analyses

One of the basic assumptions of qualitative methodology is that social research is a construction process whose interpretations and conclusions are actively produced rather than merely uncovered by a researcher who acts as a neutral medium (MEINEFELD 1995, PICKERING 1995). In this perspective, secondary analyses are special constructions (MOORE 2007, paragraph 2.3) which enable interesting insights into the methodology of qualitative social research. Since secondary analyses spatially, temporally and personally decouple data collection from data analysis, they enable and often force discussions about the factors influencing the construction processes embedded in social research. Secondary analyses presume that the data collected for answering a specific

* Address all communications to: Grit Laudel, Rathenau Institute, P.O. Box 95366, 2509 CJ The Hague, The Netherlands; e-mail: g.laudel@rathenau.nl; Jochen Gläser, e-mail: jochen.glaser@fu-berlin.de.

This article is an abridged and revised version of an article that has been published (in German) in: *FQS – Forum Qualitative Sozialforschung / Forum: Qualitative Social Research [On-line Journal]*, 1(3), Art.25. Available at: <<http://nbn-resolving.de/urn:nbn:de:0114-fqs0003257>>.

question can be archived and later analysed in different contexts and for different aims. To justify this premise, we need to know how the question underlying the primary study together with any assumptions about the object of study or the research process have shaped the collection of data and the data itself. Furthermore, the decontextualisation of data that inevitably occurs in the process of archiving and re-use has consequences for secondary analysis. When we use data that we collected ourselves in our own projects, our research benefits from the extensive contextual knowledge we acquired before and during data collection. A secondary analysis on the basis of archived data does not have this advantage because it can only use information that could be verbalised, has actually been written down, and has been included in the archive. Thus, loss of information occurs at three levels:

- a) The researchers' tacit knowledge and knowledge that could be communicated but has not been recorded are separated from the archived data and are therefore not available to anybody else using the archived data.
- b) The explicit knowledge is reduced to what was actually archived. Part of the explicit knowledge (e.g. some documents collected during research) are likely to be excluded from the archive.
- c) Due to the necessary protection of an interviewee's privacy, part of the information will be removed from archived interviews.

Finally, a secondary analysis of archived data raises questions about the relationship between the two constructions. Even if a secondary analysis pursues a different aim, the constructions are likely to touch upon each other because—apart from the above mentioned differences—the same data are being interpreted.

In the case of a reanalysis, the relationship between primary and secondary constructions is especially close. We define a reanalysis as the special type of secondary analysis which consists of an *analysis of the original data for answering the original question*. The primary study and the reanalysis can confirm or contradict each other. In the latter case, the problem of competing claims of validity can only be resolved by reference to the data that form the base of both studies or to the practice of data analysis. This situation is an interesting resource for methodological research, which in our opinion has not yet been sufficiently applied. By inevitably leading to a comparison of the construction processes woven in the analysis of data, reanalyses force us to make explicit and to discuss these construction processes, thereby ultimately enabling their better understanding.

In this article, we would like to demonstrate this methodological potential. The reanalysis described in this article emerged accidentally from a tutorial that was part of a course on qualitative content analysis at the Free University of Berlin in 1999/2000. For this tutorial we used interviews conducted in a project on vocational training. The project was part of the Collaborative Research Centre 186 'Status passages and risk situations in the life course' at the Univer-

sity of Bremen, and the interviews were archived in a project that was also part of the Collaborative Research Centre (see KLUGE & OPITZ 2000).¹ The interviews, which we received as files on a CD-ROM, were encrypted, and any information that could make the interviewee identifiable had been removed. The archived interviews were supplemented by a detailed description of the project in which they were originally conducted. In the tutorial, the students used qualitative content analysis to analyse two interviews with vocational trainers. We later completed the reanalysis by analysing all archived interviews with vocational trainers. Thus, this article is based on our analysis of all relevant interviews.

Our reanalysis has produced results that differ from those of the primary study, which enables us to discuss some methodological problems of primary studies and reanalyses of qualitative data. In the following two sections we describe the primary study (2.) and the methodology of the reanalysis (3.). Next, we compare our results to those of the primary study in order to explain the differences (4.). The comparison refers to methodical and methodological problems that are the result of the constructive character of qualitative data analysis (5.).

2. The primary study

The primary study to which our reanalysis refers was concerned with problems of vocational training and has been published as a book titled “On the construction of the orderly person: Standardization in vocational training and occupation” (our translation, MARIK & KLUGE 1998). The general subject of the primary study is the relationship between selection processes in vocational training and deviant behaviour of the trainees. The following questions are listed as the ‘main levels of the analysis’:

- a) “Which implicit everyday theories guide the instructors in vocational schools and companies in the selection process? How significant are considerations about the advancement of juveniles, in particular those with educational deficiencies?
- b) What are the interests of the institutions ‘vocational school’ and ‘enterprise’ with regard to deviant behaviour of applicants and vocational trainees in everyday practice?
- c) To what extent do the authorities of vocational training collaborate with the official social control authorities (youth welfare office, police, and the courts)? Which shape do these information networks take in the everyday practice of vocational training?” (ibid., p.27, our translation)

¹ The interviews are now archived in the Archive for Life Course Research (ALLF) at the University of Bremen.

These three main topics were investigated with regard to three distinctive phases of vocational training, namely application and entrance into vocational training, vocational training itself, and transition to regular employment and entrance into the vocation (ibid. p.27-28).

According to this account, the primary investigation is concerned with the subjective theories of vocational trainers ("pragmatic theories of deviance", "patterns of assessment", "patterns of argumentation", "patterns of opinions") as well as the actual actions by vocational trainers ("patterns of responses", "recruitment", "performance appraisal", "selection"). The aim of the investigation is obviously to clarify the relationship between the subjective theories of the vocational trainers and their selection decisions (question a), the two other questions can be subsumed among this general question.

In order to answer these questions, 40 semi-structured interviews were conducted, among them 21 with vocational trainers in companies, 13 with teachers of vocational education and six with vocational school teachers in institutions of preparatory vocational training.

The analysis of interview transcripts combined several techniques (ibid. p.313-340). The first step was a computer-supported coding of the transcripts. The codes originated from the theoretical framework (which led to 6 main topics) and from the interview guides. They were supplemented by relevant topics from the interview material that were not foreseen and thus not addressed by the interview guides, but mentioned by the interviewees (ibid. p.317). The parts of the interviews that were coded as relevant for the main topics of the investigation were compiled and analysed with techniques of a qualitative content analysis proposed by MAYRING (2000), namely paraphrasing, explication, and structuration of the text by key categories. Unfortunately, this last step of the data analysis, which links data analysis and results, is not well described in the book. The authors mention the "structuration of the text by key categories" but don't explain what this entails, or how it led them to their conclusions.

We limit our presentation of the primary study's results to those our re-analysis is based on: the chapter on company-based trainers, i.e. to the conclusions about the importance of deviant behaviour on the vocational training in the companies (MARIK & KLUGE 1998, p.80-107). This part of the book contains results on

- the creation of company-specific norms of behaviour,
- deviant behaviour, its assessment by the vocational trainers and their responses,
- indications of pragmatic theories of deviance, and
- responses to deviant behaviour in the leisure time.

Examples, non-specific frequencies such as "often" or "rarely", and quotations from interviews are used to provide an overview of the empirical findings. For some topics the authors also present the breadth of empirical results

and discuss contradicting accounts. The presentation of the empirical findings is followed by a 'résumé' that provides a generalised description and an explanation of the vocational trainers' behaviour (ibid, p.101-107). Since we derived the question guiding our reanalysis from this résumé, we will provide the reader with a longer quotation from it. The underlined passages provide the specific material from which we derived a statement whose empirical grounding we checked in our reanalysis. Italic emphasises are retained from the original.

A further parallel to vocational school trainers results from the imperative to eliminate and to sanction deviant behaviour in order to enable a regulated and routinised work flow. The undisturbed realisation of the legally binding educational objectives is set against a trouble-free production process and/or service delivery. This business goal is given absolute priority. Accordingly, the responses to deviance are grave. Breaches of cardinal virtues of labour (e.g. absenteeism and lacking willingness to subordinate) are considered as severe as delinquency (e.g. theft, damage to property) within the company. It is worth discussing later that most of the interviewed vocational trainers regarded lacking virtues of labour as an indicator for delinquency per se. ...

Against the background of relevant legal requirements and personal discretion it is again the institutional criterion of eliminating misconduct by crisis management that determines evaluation and selection. ...

The responses of vocational trainers to deviance outside the work context were still initially determined by considerations whether an indirect damage to the company occurred or was to be expected. An example for this is the attitude to theft of the vocational training managers of department stores. Even an offense that occurred during the leisure time ruins their trust in the juveniles because it must be assumed that the offense is not limited to situations outside the company.

Besides the aim of protecting company interests remains the generally formulated educational notion, which the vocational trainers cast in the key phrase of 'Shaping an orderly person'.

This key phrase, which indicated the aim of a general moral socialisation, led us to assume that deviance was not only rejected and negatively sanctioned because of company interests. *In fact, there are hardly any statements that denounce deviance for other than work-related reasons*; these include the personal experience of being a victim of a crime and arguments against taking illegal drugs that follow public opinion. But especially with regard to leisure time activities, where one would have expected vocational trainers to denounce deviant behaviour on moral grounds that are decoupled from considerations of company management, this *happened only in exceptional cases* – despite the explicit emphasis laid on the aim of promoting the trainee's character development and avoiding moral endangerment in the context of the law governing vocational training. (MARIK & KLUGE 1998, p.101-102, our translation).

3. The reanalysis

3.1 The question

For our reanalysis we acuminated the primary study's results on the behaviour of vocational trainers by formulating them as the following statement results: *Vocational trainers perceive, assess and sanction deviant behaviour of trainees primarily from the perspective of securing trouble-free work routines.*

The lengthy quote in the previous section and specially the underlined sentences in that quote demonstrate that our statement summarises the results of the primary study on this specific topic without altering their content. This generalised account states that the aim to maintain trouble-free work routines dominates in both the pragmatic deviance theories and the actual behaviour of all vocational trainers. The 'Shaping of an orderly person' comes second.

This statement was the subject of our reanalysis. We analysed the interviews from which this conclusion was drawn in order to find out how well the statement was grounded in the empirical data. By doing so, we compare constructions. Our evaluation of the statement on the basis of a reanalysis is a construction, too. As did the colleagues who conducted the primary study, we must interpret the interview transcripts, relate our interpretation to the statement and develop and argument about its relationship to the empirical data, stating whether or not it explains the data. Although the reanalysis 'tests' an already known result, it nevertheless remains a construction process of interpreting empirical data. Thus, confirming, rejecting, or modifying the original statement means to compare two constructions.

How can we 'operationalise' the statement, i.e. translate it into questions put to the empirical material? If the statement is true, then the following descriptions should be found in the empirical material:

- 1) Deviant behaviour interfering with or endangering work routines will be sanctioned
 - in less serious cases;
 - more frequently; or
 - more harshly
 - than deviant behaviour from which no such interferences or dangers occur. Interferences or dangers can be expected from all actions that either take place within the company or have secondary effects in the company, such as reducing performance or leading to follow-up deviant behaviour with in the company.
- 2) The justifications of sanctions always or primarily refer to the dangers for work processes resulting from deviant behaviour.
- 3) The sanctions of deviant behaviour are chosen to make impossible any disturbances and threats to work processes. This includes prevention by

not recruiting juveniles who appear predisposed to deviant behaviour and strong sanctions, culminating in dismissal.

In other words, the empirical material must be investigated with regard to the perceptions, assessments and actions of the vocational trainers. We need to establish

- the behaviour of trainees that is perceived as deviant by vocational trainers,
- the evaluation by vocational trainers of behaviour that they perceive as deviant,
- the responses by vocational trainers to behaviour that they perceive as deviant, and
- the reasons they have for these responses.

Just like the primary study, the reanalysis was conducted as a comparative analysis of cases. Cases exist as 'nested cases' (PATTON 2002) at two levels. First, the question of the reanalysis refers to the relationship between vocational trainers' everyday theories and their attitude to deviant behaviour. Thus, each trainer with his or her strategy of dealing with deviance constitutes a case. Second, it must be determined which patterns of perception, assessment, and behaviour guide a trainer's actions. Therefore, the perception, assessment and sanctioning of individual occurrences of deviant behaviour constitutes a second level of cases. The reanalysis included both levels.

3.2 Empirical base and method

From the total of 21 interviews with company-based vocational trainers 17 were sent to us by the data archive of the collaborative research centre. For reasons of data protection, the remaining four interviews could not be given to a third party because there was a high risk that interviewees could be identified. Two of the interviews we received could not be included in the analysis because the transcripts contained too many gaps of unknown length, which apparently were due to the low quality of the tape recordings. We don't know how these two interviews were handled in the primary study.

The identifying data were removed from the interviews by a standardised procedure that removed or altered the names of persons, locations, positions in companies or other organisations, and other information that could lead to the identification of interviewees (KLUGE & OPITZ 1999, p.55-58). For the reanalysis, the removal of numbers was especially relevant. Numbers in the interviews were replaced by the letter X where X stands for a single-digit number, XX for a two-digit number etc. This method was also used for dates where the last digit of a year was replaced by an X.

We analysed the interviews using a method of qualitative content analysis that extracts information from texts by assigning it to multidimensional categories (GLÄSER & LAUDEL 2006). Our method is similar to some of the tech-

niques proposed by Mayring (2000) but differs from them in several respects (KOHLBACHER 2006).

The basic idea of our version of qualitative content analysis is to extract relevant information from texts for further analysis. In this, qualitative content analysis differs from coding, which adds codes to parts of texts that indicate the presence of information on a specific topic in these parts. In the case of coding, an index that says what is talked about in which part is added to the text. The indexed text and the index (codes) are the subject of further data analysis. Qualitative content analysis means identifying relevant information, interpreting it, subsuming it to the appropriate categories in the form of short statements, and accumulating it in separate documents for each category.

The system of categories is derived from theoretical ex-ante considerations but remains open in two important respects. Firstly, the categories don't have a predefined closed set of 'values' to which the information is subsumed. 'Values' are verbal descriptions of social phenomena that are subsumed to the category as they are found in the text. This means that the information found in the text is standardised only to very limited extent during extraction. Secondly, the system of categories itself can be adjusted to the information in the text by adding new categories, or changing existing ones.

We based our construction of categories for the quantitative content analysis on the question formulated in the previous section and on the theoretical considerations derived from that question. A first category encompasses personal traits of actors including 'age', 'professional experience' and 'experience in vocational training'. A second category characterises the work environment of vocational trainers and trainees in the dimensions 'industry/service branch', 'size of the company' and 'number of trainees in the company'. The third category was used for the extraction of information about behavioural norms. This category has the dimensions *content* (extracting information about the kind of behaviour that is expected) and *scope* (extracting information about the actors and situations to which the norm refers). The category 'perceptions of deviant behaviour by vocational trainers' has the dimensions *kind of deviance*, *extent of deviance* and *social context* (referring to the context in which the deviant behaviour occurred, e.g. school, company, or leisure time). A further category extracts information on the 'evaluation of the deviant behaviour by vocational trainers'. It includes the dimensions *subject of the evaluation* (the deviant behaviour itself, its consequences for the company, its consequences for the trainees ...) and *content of the evaluation*. The category 'responses by vocational trainers to perceived deviant behaviour' includes dimensions *subject of the response* (what the vocational trainer responds to), *content of the response* (what is done) and *aim of the response*. In addition to the dimensions listed above, all categories have a time dimension that records the time or period for which the phenomena were reported. Furthermore, all categories also have causal 'dimensions' that record causal relationships reported in the interviews,

one for *causes* and one for *effects*. These dimensions enable the extraction of all information on what interviewees believe to be the causes and effects of the phenomena we are interested in. They thus also provide an opportunity to record connections between categories, for example when an interviewee reported that a certain evaluation of consequences of deviant behaviour motivated the response to that behaviour. The dimension *causes* also enables the extraction of unanticipated influences on the phenomena we are interested in, which is an additional way of keeping the extraction open for unanticipated information.

The categories listed above were constructed *ex ante* on the basis of the considerations described in 3.1. They had to be changed in the course of the extraction for two reasons. Firstly, a wide range of information on companies and vocational trainers was provided in some but not all interviews. Since it was impossible to ascertain which of this information might be relevant for the interpretation of data, a dimension *other information* was added to both the 'company' and the 'vocational trainer' categories. Secondly, it turned out during the extraction of the interviews that the kinds of perceptions and responses reported in the interviews considerably vary. Therefore we added new dimensions to several categories, namely:

- the dimension *source of information* (e.g. own perception, rumour ..) to the category 'perceptions';
- the dimension *type of the situation* (hypothetical, regular, concrete single event ..) to the category 'evaluations'; and
- the dimension *type of response* (hypothetical, regular, concrete single event ...), to the category 'responses'.

The (computer-supported) extraction produces tables which contain the information which has been extracted from an interview transcript with each of the categories (an example can be found in Appendix Part I). In a subsequent step, the extracted raw data are refined. Refinement includes the aggregation of identical information and the check for errors. After the refinement we have a structured information base that is structured by the categories and summarises the empirical information on each case. The subsequent analysis of this information base consists of a reconstruction of all cases and of the search for the causal relationships and mechanisms we are interested in.

3.3 Overview of the empirical findings

It is always very difficult to present empirical data from qualitative analyses in a way that enables the reader to retrace the steps that led the investigators/authors to their conclusions. Since this is especially important in the case of a reanalysis, we provide a table containing the information we extracted from the interviews in a highly compressed and abstracted form (Appendix Part II). In this overview we included only those kinds of deviant behaviour

which all vocational trainers were asked about. A lack of subordination was mentioned in some interviews but omitted here because it was a minor and infrequent form of deviant behaviour. Another relevant question asked in all interviews concerned contacts with the police. All interviewees said that it had never happened that the police came to the company and inquired about a trainee.

In the table, four types of experiences are distinguished. A first type is the experience of concrete single events of deviant behaviour and a response by the interviewee to such an event (white table cell). A second type is a repeated experience, i.e. repeatedly occurring situations of deviant behaviour to which interviewees respond routinely in a certain manner (table cell shaded in light grey). A third type is the absence of a certain experience with deviant behaviour, which includes all instances where interviewees declared that they have never experienced this kind of behaviour (hatched table cell with text). The fourth type is a hypothetical situation of deviant behaviour and corresponding hypothetical responses (table cell shaded in dark grey). These were obtained from interview responses to hypothetical questions of the type "What would you do if ...?" The interviewees tried to imagine a situation and explained how they would react in such a situation. Hatched cells without text refer to lacking information due to questions not asked or answers that were not sufficiently complete or clear to be analysed.

The table shows that the experiences of vocational trainers are quite unevenly distributed. Only in case 1 does the interviewee have type one or type two experiences with all forms of deviant behaviour, while in the cases 12 and 14 such concrete experiences are barely mentioned. The material is also very heterogeneous with regard to the types of experiences discussed in the interviews. In the primary study, the 'pragmatic deviance theories' of the vocational trainers as well as their actual behaviour was to be derived from this material. For this purpose, the discussion of hypothetical situations is as valuable as is the discussion of real events. However, for the results concerning the actual behaviour of vocational trainers, which were stated in the quote we provided at the end of section 2 and from which we derived the statement guiding our investigation, the three types of experience are not equally useful. Our statement for the reanalysis referred to the practical treatment of deviant behaviour, i.e. the reported responses to single or repeatedly occurring situations. We therefore need to take into account that the data on some forms of deviant behaviour are dominated by descriptions of hypothetical situations and responses. These experiences would be usable for our analysis only if we could draw conclusions about actual behaviour from accounts of hypothetical behaviour. We don't think this is possible in our case. The authors of the primary study obviously used the hypothetical accounts in the same way as the accounts of actual behaviour. Since they did not justify this approach, we have no information about the theoretical positions their decision is based on. Owing to its large

share in the empirical data, the treatment of hypothetical accounts material is central to the whole data analysis. Therefore, we state here the reasons why we did not include the hypothetical answers as data supporting any conclusion about actual behaviour.

We think it is problematic to draw conclusions about actions in real situations from statements about hypothetical actions in hypothetical situations in this specific investigation. Quantitative studies have struggled with the link between attitudes and behaviour for a long time, but have arrived at the conclusion that there is a correlation between the two (e.g. LÜDEMANN 1993, DIEKMANN & PREISENDÖRFER 1993). However, the statistical finding that people tend to behave according to their attitude cannot be transferred to a qualitative study of a few cases on the micro-level.² In order to infer from hypothetical behaviour to real behaviour, we already would need to know *under which conditions* behaviour corresponds to attitudes or hypothetical behaviour, and whether these conditions are given in our 17 cases. As long as this is not known, the selective inclusion of cases which meet the specified conditions is impossible, which leaves three options. The first option, which was obviously chosen in the primary study, is to include all the hypothetical situations and accounts of behaviour without reflection, i.e. without coding and discussing the distinction 'hypothetical/ real'.³ This option equalises hypothetical and actual behaviour. The second option would have been to treat hypothetical behaviour as a valid but weaker form of evidence. If this option is chosen, the strength of the evidence provided by hypothetical accounts must be evaluated and accounts of different strengths must be synthesised in the data analysis. This might be a valid approach in some cases, even though severe methodological problems are likely to occur. For example this approach presupposes extensive information on attitudes, subjective theories, and hypothetical behaviour.⁴ The third option is to exclude hypothetical accounts altogether.

Since the data on hypothetical behaviour were of questionable validity and completeness, and since there was no satisfying solution for using the hypothetical statements in the analysis, we were forced to choose the third option and to exclude those data from our reanalysis. Of course, one could take a more optimistic theoretical position on the relationship between everyday theories

² The interesting general problem encountered here concerns the conditions under which theoretical findings based on statistical analysis and probability statements can be integrated into qualitative studies in the first place.

³ The author's description of the coding process demonstrates that the difference hypothetical/real has indeed not been coded (MARIK and KLUGE 1998: 341-349).

⁴ Another problem is that the inference from reported hypothetical behaviour to everyday theories is questionable. Furthermore, data on everyday theories are collected with very sophisticated methods in both quantitative (e.g. SEIPEL 2000, p.407), and qualitative studies (e.g. ULLRICH 1999). In the interviews of the primary study only quite simple hypothetical questions were used (an example is given in the quotation on page 129).

and actual behaviour and include hypothetical behaviour on that basis. If this decision is made, the empirical data suddenly look different, namely rich and unproblematic. From our perspective, however, the picture is different. The information on the behaviour of vocational trainers, i.e. on their perception and evaluation of trainees' deviant behaviour as well as on their responses is very patchy. The topics 'theft in the company' and 'illegal work' are predominantly covered by hypothetical material, i.e. by statements by vocational trainers as to how they *would* react if they *were to* perceive such behaviour. For the topics 'alcohol at the workplace' and 'trainees going off the right track', the share of hypothetical situations is also considerable. The problem becomes even more serious due to the lack of information from the interviews (indicated by the white cells in the table) and the interviewees' general lack of experiences with deviant behaviour. These information gaps were probably due to the case selection, in which the occurrence of deviant behaviour was only one of five selection criteria (MARIK & KLUGE, p. 30).

4. Same data, different answer

4.1 Categorisation of deviant behaviour

Based on the theoretical considerations in section 3.1, we analysed the cases at both levels (individual instances of deviant behaviour and vocational trainers' patterns of behaviour) in order to establish whether the responses and the reasons given for them correspond to the model 'avoidance of disturbances'. This required a categorisation of deviant behaviour. Deviant behaviour that disturbs or is expected to disturb work processes must be compared to forms of non-disturbance or where disturbances are not expected (table 2).⁵ For the reanalysis we defined 'work processes' as production processes and related routines of the company which conducted the vocational training. Behaviour at the vocational school, in the family, during leisure time and in other contexts was regarded as occurring outside the company and its work processes.

Tardiness, alcohol consumption within the company, and theft within the company can clearly be categorised as having a disturbing influence on work processes. Illegal work, absenteeism from the vocational school and delinquency during leisure time were categorised as deviance that does not disturb work processes. Alcohol consumption in the company, delinquency during leisure time and illegal work cannot be unambiguously categorised because their impact on work processes depends on the seriousness of the behaviour. Minor instances of alcohol consumption might not affect some work processes, while serious cases of illegal work or of delinquency during leisure time may.

⁵ We didn't find such an explicit differentiation in the primary study.

For these variants of deviant behaviour each individual case must be checked to establish whether it belongs to the disturbing or non-disturbing form.

Table 2: Deviant behaviour and its influence on work routines: disturbing and non-disturbing forms

Forms of deviant behaviour that	
disturb the work routines	don't disturb the work routines
Tardiness in the company	(Illegal work)
(Alcohol consumption in the company)	Absenteeism from the vocational school
Theft in the company	(Delinquency during leisure time)

We stated earlier that the empirical data must be analysed at the two levels of the vocational trainers' patterns of behaviour and of individual instances of deviant behaviour. In the following, we will examine for both levels how the empirical data support the statement derived from the primary study. Our discussion uses the information provided in Appendix Part II.

4.2 Behavioural patterns of vocational trainers

At the level of the vocational trainers, a case equals a specific pattern of perception and evaluation as well as responses to deviant behaviour. According to our statement, the vocational trainers should perceive, evaluate and sanction deviant behaviour from the perspective of actual and possible disturbances of work processes. The existence of such a pattern can only be established if sufficient information about his or her responses to deviant behaviour of both categories is available. Furthermore, the notion of a pattern suggests that more than one instance and especially more than one kind of each the disturbing and the non-disturbing categories of deviant behaviour must be analysed. Only the cases 1, 7 and 16 fulfil these criteria.

Case 1 clearly supports our statement. The vocational trainer has experienced several instances of deviant behaviour. The sanctioning of tardiness, alcohol consumption at the workplace and theft is each time justified with the subsequent threat to work processes (there is no such justification for 'illegal work'). The data also contain some evidence that can be interpreted as contradicting the statement. Absenteeism from the vocational school was also severely sanctioned (by deduction of leave) although no disturbances of work processes occurred.

The data also contain hints at a second motive for this vocational trainer's responses, namely the wish to facilitate successful graduation from vocational training. This motive became explicit in a case of delinquency during leisure time where considerably more was invested than avoiding disturbances of work

processes would have required. A trainee who was arrested by the police due to delinquency in his leisure time was 'bailed out' from custody.

Case 7 also offers a consistent picture. However, this picture clearly contradicts the statement. The dominant motive for both vocational trainers (the interview was conducted with two persons) is 'not to spoil the future' of the trainees. The primary aim of both interviewees was to facilitate graduation from the vocational training and passing the skilled craft examination. This motive played a crucial role when the two vocational trainers had to respond to thefts by two trainees. Instead of terminating the vocational training of the two trainees who were caught stealing, the vocational trainers endured a considerably strained work climate in order to make it possible for the two trainees to graduate (both had only three months training left). In the case of the alcoholic whose contract was terminated, it was not clear from the interview whether he was a vocational trainee or not.

Case 16 shows no clearer picture, as no reasoning is given for the sanctioning of tardiness and theft. Evidence against the statement is that a case of delinquency during leisure time (drug taking) was not sanctioned, even though it might constitute a severe case with ramifications for work processes. The vocational trainer just contacted the parents in order to help this trainee.

4.3 Perception, evaluation, and sanctioning of individual instances of deviant behaviour

The analysis of lower-level cases can draw on more empirical material because we can include information from the cases that had to be excluded from the previous analysis because they did not by themselves provide the 'critical mass' to be treated as cases of vocational trainers' behavioural patterns. As could be expected from the discussion of the three cases in the previous section, the lower-level cases do not provide an unambiguous picture that supports our statement.

The most frequent form of really occurring deviant behaviour is *absenteeism from the vocational school*. This behaviour is sanctioned by vocational trainers in several ways, including deduction of leave, reduction of the apprentice allowance, admonitions and written warnings. These sanctions were predominantly seen as being successful. As a reason for these sanctions the trainers usually stated that the time spent at the vocational school is work time and that the trainee is paid for this time. Absenteeism from the vocational school does not disturb work processes, hence only the impression of general virtues of work can be considered, and was indeed communicated, as a motive for sanctions. A second motive for the vocational trainers' actions is to secure successful graduation from vocational training. This motive is mentioned twice in the

primary study (MARIK & KLUGE 1998, p.91), e.g. when a trainee was allowed to continue his education until the examination despite receiving three written warnings for absenteeism, which would enable termination of the contract by the company.

There is rich information, too, about *delinquency during leisure time*. However, caution is called for because communication problems occurred in several interviews: While the interviewer referred to delinquency during leisure time with the standard phrase 'the trainee lost the right track', some of the interviewed vocational trainers interpreted this phrase in a way that included everything that affected the trainees' performance at the company or at the vocational school, as shown in the following passage:

I: Uhm, what can you as a vocational trainer actually do to get a young person back on the right track? Are there any opportunities at all – how do you see this?

A: Yeah, well, if you find out that there is something going on, then you can only talk to him, that is trying with fine words to teach him something. You can't do more.

I: Uhm, how do you notice that there is a kind of critical development under way?

A: Well, this is ..., this shows in that he suddenly walks around depressed and is late and lethargic, and above all is very concerned with getting plenty of leave and this on certain days, and then they constantly have requests: can I get leave at this time, at that time. Then you realise that there is something: *Either it means a new girlfriend or he has a new acquaintance.*" (Case 16, our translation and our emphasis)

Several vocational trainers reported that trainees' moving out of their parents' home, the receipt of a driver's licence or finding a new boyfriend/ girlfriend led to considerable changes of leisure activities that had secondary effects in the company (tardiness, disinterest, lethargy, etc.). Since the behaviour within the company was often the only indicator for behavioural changes during leisure time, it is quite plausible that the interviewees subsumed *all* changes outside the company that led to deviance within the company under 'getting off the right track'. Thus, the only descriptions which can be included in the analysis are those where the perceptions and responses of vocational trainers unambiguously refer to delinquency during leisure time. All non-delinquent forms of 'getting off the right track' are not analysed as such but only with regard to their secondary effects (such as tardiness) were perceived as deviant and were sanctioned accordingly.

Especially the concrete cases of delinquency during leisure time challenge the statement derived from the primary study. According to this statement, delinquency during leisure time that causes or may lead to disturbances of the work routine should have triggered severe sanctions, including the termination of one trainee's vocational training. This did not happen. Why are trainees who

consume illegal drugs not immediately removed from the company? In our sample, there were four cases of illegal drug consumption (table 3).

Table 3: Perception of illegal drug consumption and responses by vocational trainers

Case	Perceived behaviour	Response	Reasons given
11	Heroin addiction	Talked to the parent, argued against sending him back to (country of origin), organised counselling and therapy, trainee continued apprenticeship after the therapy	enable graduation from vocational training
13a	Drug addiction of a vocational trainee	“Tried to cover it, and to tolerate it during work time” for a long time. When the trainee ended up in the youth custody centre, “he obviously had to be removed”	None
13b	Drug addiction of a shop-assistant who had just graduated from her vocational training	Didn’t do wrong in the company, left on her own accord, because she was physically no longer able to do the work	None
16	Cannabis consumption	Talked to the mother, sent the trainee to the doctor	Did not see any course of action other than talking to the parents

In all four cases the vocational trainers bore additional burdens (the trainee’s temporarily diminished capability to work in case 11) or risked such burdens (the possible physical inability to work in case 13b) rather than ‘quickly and efficiently’ removing the cause of the problem. This is also true for responses to other forms of delinquency during leisure time, such as standing bail for a trainee (case 1, see previous section) or the acceptance of a trainee’s six-week prison term without terminating the contract (case 18). In yet another case of delinquency during leisure time in which the trainer “could not cope anymore” with the trainee, the apprenticeship was not just terminated but a new company was found so the trainee could graduate. All these cases contradict the statement which claims the priority of securing trouble-free work routines. In fact, the examples reveal that the motive ‘secure graduation from the vocational training’ dominates the treatment of delinquency during leisure time.

A third frequently occurring experience of deviant behaviour is *tardiness in the company*. Here, perception and sanctions reveal a relatively consistent picture: the vocational trainers admonish, contact the parents, and provide written warnings. These measures are also described as being successful. Although tardiness is often mentioned as a problem and is sanctioned, the distur-

bance of the work processes didn't play a role as a motive for sanctions in most of the interviews. In the cases 1, 5, 7, 8, 10, 16, 18 and 19, no reason for sanctioning tardiness is given (in case 1 only a timely apology is demanded to fulfil a general norm of politeness). A disturbance of work processes by tardiness is only brought up in the cases 17 and 21.

In six interviews *thefts within the company* were reported. Table 4 provides an overview of these cases. In one case (21), it is not clear whether the thief is a vocational trainee. Overall, this form of delinquency shows particularly clearly that the motive of avoiding disturbances of work processes is neither the only nor even the dominant one. In two of the three concrete cases of theft that unambiguously refer to trainees, the trainees were not dismissed because they were to be given the opportunity to graduate. The two other cases support our statement. In case 1, a trainee was dismissed after a grave theft because his bad example was seen as a threat to the company's work processes. In case 21 (where we don't know whether the thief was a trainee), no reason for the dismissal is given. However, the motive of avoiding disadvantages for the company is highly plausible.

Table 4: Perception of theft within the company and responses by vocational trainers

Case	Perceived behaviour	Response	Reasons given
1	Grave theft of work material	Dismissal	Provides a bad example to other workers
7a	unspecified thefts	Allowed to continue	Was approaching the skilled craft examination
7b	unspecified thefts	Allowed to continue	Was approaching the skilled craft examination
12	minor theft	Allowed to continue	Would not have got another apprenticeship after the dismissal
16	No concrete case: described as regular practice, but could also be hypothetical	In minor cases admonition, in grave or repeated cases dismissal	None
21	Grave theft (of the company's takings) by a worker (possibly a trainee)	Dismissal	None

As with theft, there are only few actual cases of alcohol consumption within the company and of illegal work; hypothetical situations and the response 'does not occur here' dominate the empirical data. The only dismissal due to *alcohol consumption at the workplace* does not refer unambiguously to a trainee. As for *illegal work*, in one case the parents were informed; two other vocational train-

ers tolerated minor forms it; and in one case severe forms of illegal work were punished with dismissal but no reason was given.

4.4 Conclusions from the empirical findings

When we sum up these results it becomes clear that the empirical findings do not support the statement that keeping work processes free from disturbances has priority for the vocational trainers. Although avoiding disturbances of work processes does play a role in vocational trainers' motivations and responses, this behavioural pattern cannot be characterised as the only one, or even as the dominant one. In fact, the empirical material supports another statement equally well:

Deviant behaviour of the vocational trainees is perceived, evaluated and sanctioned by the vocational trainers primarily with the aim of 'educating properly skilled workers' by a socialisation in work morale and the facilitation of a successful apprenticeship. Disturbances of work processes are tolerated as long as a certain limit (that varies by sector, company and the vocational trainer's personality) is not exceeded.

This new statement contradicts the old one insofar as it claims another leading motive for the actions of vocational trainers: 'Securing a successful apprenticeship' rather than 'avoidance of disturbances of work processes'.

In the light of the reanalysis the scope of the statement that was derived from the primary study must be considerably reduced. Contrary to quantitative studies, qualitative research cannot be content with a percentage of explained variance, but must provide explanations that apply to all empirical findings within the claimed range of validity. Our results show that the statement we derived from the primary study does not meet this requirement. It characterises a causal mechanism that indeed operates in some cases described by the empirical data, but is not applicable to all vocational trainers in the sample and is not unrivalled. An alternative mechanism can be derived from the data. In other words (and to put it bluntly) the interpretation of their data published by MARIAK and KLUGE does not follow from the empirical data that was available to us.

5. Discussion: Comparison of two constructions

5.1 Comparing the approaches of the primary study and of the reanalysis

Any reanalysis whose conclusions contradict those of the primary study triggers a conflict: Who is right? This conflict can be methodologically fruitful if it contrasts the respective analytical strategies, showing how different actions

have led the investigators to different results. We would like to focus on this aspect and postpone the issue of the relative merits of the two constructions.

Table 5 summarises the most important differences between the two studies. The comparison focuses on the methodology rather than content and outcome of the studies. The most important commonality of the two studies is that they both construct interpretations of social actions from (mostly identical) data. This is true for both the primary study and the reanalysis. Verifying a construction by establishing its links to the empirical data in a reanalysis means to select and interpret the data in very much the same way. There is no difference between the construction processes in the search for patterns and interpretations in the primary study and the constructions in the search for empirical confirmation or disconfirmation of a statement in the reanalysis. We will now compare the two constructions and demonstrate how the different aims, approaches and conditions for research of both studies shaped the resulting constructs. This is, of course, not purely a methodological question, as the interpretation of the material is influenced by the theoretical perspectives, too. This is why we begin by discussing the role of different interpretations by analysts in the primary study and the reanalysis. Thereafter we contrast the two studies and point to general methodological problems of primary studies and reanalyses.

Table 5: Comparison between primary study and reanalysis

Dimension	Primary study	Reanalysis
Aim	Construction of an interpretation of the empirical material	Construction of a confirmation or disconfirmation of a primary study's finding
Strategy	Search for general patterns in the empirical material	Search for empirical support for a general pattern in the material
Empirical material	21 interview transcripts	17 interviews with some non-essential information removed, two of them unsuitable
Method(s)	Coding according to grounded theory; some techniques of qualitative content analysis according to MAYRING	Different procedure of qualitative content analysis: extraction of information by using complex categories
Context knowledge	From thematically related studies; from conducting the interviews	Only from the publication of the primary study
Result	An explanation of vocational trainers' responses to deviant behaviour	A competing explanation and the assertion that the empirical material is not sufficient to answer the question

5.2 Differences between interpretations

The reanalysis revealed several key steps in the analysis where the interpretations of investigators have far-reaching consequences for the results.⁶ Let us recapitulate these steps:

- 1) An important difference between primary study and reanalysis is their treatment of answers to hypothetical questions. In section 3.3 we explained why we excluded these answers from our analysis. In doing so, we used an empirical material that is more homogenous and easier to interpret but also very patchy. Analysts who take a more 'liberal' theoretical and methodological position and are willing to include inferences from hypothetical accounts can work with more but also more heterogeneous data, which are more difficult to interpret. The latter strategy might of course lead to different results.⁷ The analysts' implicit and explicit theories, which tell them what are 'good' data (valid, relevant, reliably interpretable data) and 'bad' data may obviously steer the process of data analysis in quite different directions.
- 2) Since our research question referred to work processes within a company, we needed a definition that enabled a distinction between work processes and other social contexts. Any change of this definition inevitably changes the categorisation of deviant behaviour as 'disturbing work processes' and 'not disturbing work processes'. This is especially true for categorising absenteeism from the vocational school. We decided here that although attending the vocational school is part of the vocational training and understood by vocational trainers as part of the trainee's work, it is nevertheless work conducted outside the company. Taking on this perspective, we distinguished between participating in *the company's* work processes and attending the vocational school. In the primary study it is not explained what is understood under 'work processes in the company'. If the authors' understanding is different from ours, this may again have contributed to the differences between the outcomes of the two studies. The same is true for the interpretation of 'disturbances of work processes'.

⁶ These key steps were not only revealed by our reanalysis. Equally important was the critical discussion of a draft of the German article by Diane Opitz and Susann Kluge. We are grateful for their critical questions, which helped us to clarify our thoughts and to improve this section.

⁷ However, since the inclusion of hypothetical accounts does not take away the counterevidence, it cannot lead to the statement derived from the primary study. This is even more so because the hypothetical accounts do not consistently support this statement but also contain counterevidence. It is therefore likely that the methodologically controlled inclusion of hypothetical accounts would lead to yet another interpretation of the data.

- 3) The primary interpretive steps, i.e. creation of meanings to clauses, sentences, or paragraphs of the interview transcripts, are not comparable between the two studies because they have not been sufficiently documented in either study. For example, the interview transcripts contain statements that could not unambiguously be interpreted as constituting either regular or hypothetical accounts. We introduced a categorisation as 'hypothetical or regular' in order to mark this ambiguity during the extraction process. In the analysis of the data we resolved the ambiguity by always using this information in the 'stronger' sense, i.e. as describing regular behaviour. Other analysts may have made different decisions. This small but possibly consequential example indicates a difficult problem of qualitative data analysis: The primary interpretive steps can only be documented together with the interpreted material. However, the large amount of text that exists at this stage makes it impossible to publish this documentation.

The comparison of both analyses stresses the importance of explicating the basic assumptions of researchers (see MEINEFELD 1997). When reading the primary study we noticed neither the equal treatment of hypothetical and real behaviour nor the missing definition of 'work routines within the company'. Our own understanding of these constructs automatically took the place of the non-reported constructs of the authors. Only the necessity to explain the differences in the results between the primary study and the reanalysis forced us to explicate our own understanding and revealed the absence of these explications in the primary study.

5.3 Possible influences of missing contextual knowledge

The different outcomes of primary study and reanalysis might also be due to the inevitable differences in the contextual knowledge on which the analysts can draw. Contextual knowledge that could have influenced the interpretation of empirical data exists at the level of the individual interview and at the level of the research project:

- An interviewer always obtains additional information on the interviewees' behaviour. Important sources of this information are the communications when organising the interview, conversations immediately before and after the interview, and observations of the environment in which the interview takes place (here: the company where the interview took place). All this information impacts the interpretation of the relevance and credibility of the interviewee's statements, and partly does so at a subconscious level which the researcher is not aware of. We are unable to assess how the lack of this knowledge affected our reanalysis. Reanalyses provide an interesting tool for studying the role of this kind of contextual knowledge in the interpretation of data.

- The primary study created a theoretical context for data collection and data analysis that was much more extensive than that of our relatively narrow reanalysis. Moreover, the primary study was embedded in a whole research programme that included other investigations of deviant behaviour of vocational trainees. These theoretical considerations and the results of the other investigations were available to the colleagues who conducted the primary study. This contextual knowledge was available to us to the extent in which it was published. Assuming that the relevant theoretical context would be provided in the publication of the primary study, we focused on this publication. If a wider theoretical context was drawn on in the analysis of empirical data, it would not have been available to us.

We don't think that in our case the difference between the outcomes of primary study and re-analysis can be explained by the different approaches, interpretations, or contextual knowledge. However, the comparison of primary study and reanalysis demonstrates the methodological potential of reanalyses. If the paths from data to interpretations in both studies are compared in detail, these comparisons can contribute to the understanding and assessment of strategies and methods of qualitative data analysis. In our reanalysis, we could do this only to a limited extent because the publication of the primary study did not document all steps that led from the empirical data to the results.

6. Conclusion: The social practices of qualitative data analysis

When they produce a conflict with the primary study, secondary analyses in general and reanalyses in particular force us to make public what is often a private and even a secret process, namely our handling of qualitative data. Many qualitative research projects are conducted by an individual researcher, who cannot and does not have to discuss the data analysis with anybody. Publications of qualitative research are often very short and vague on methods of data analysis. Peer review does not seem to make a difference here. Up to now, qualitative research has no standards for reporting methods of data collection and analysis. Reanalyses explicitly ask the question what happens when somebody else uses the same data to answer the same question, thereby addressing not only the role of methodology but also the role of our practices of doing research.

As a conclusion to our article, we would like to raise one question concerning these practices. What do qualitative researchers do when they face incomplete or contradictory data? This question was triggered by the difficulties we encountered when analysing the data for this study. Both the primary study and the reanalysis were affected by significant gaps in the empirical data. We think it is important for qualitative researchers to begin a discussion about the handling of 'missing values', i.e. information about a social phenomenon that is

necessary for answering the research question but is not there because the interviewees did not provide it, for whatever reason. . If these 'missing values' are important, they force the researcher to either abandon the case or close the information gap by making 'plausible assumptions'. Closing gaps by plausible assumptions is a part of qualitative data analysis. It is principally different from the interpretation of existing data because the researcher makes *assumptions about what happened* rather than *assumptions about the meaning of the interviewees' accounts of what happened*. We believe that this kind of gap-filling speculation occurs in many research processes, and that it is important to acknowledge and discuss it.

Our reanalysis also alerted us to a second level of enforced closure. The research situation of the primary study was entirely different from that of our reanalysis because the primary study *could fail*. The minimal expectation concerning a primary study is that it makes sense of large amounts of data by identifying non-trivial patterns, ideally by identifying causal mechanisms in the social world it studies. If no such patterns are found, the study fails. The reanalysis used a result that had already been determined by the primary analysis. It could not fail because both a positive outcome (the confirmation of original findings by applying a different method) and a negative outcome like ours (obtaining contradictory findings by applying a different method) are interesting and valuable results. We would venture the hypothesis that the possibility of failure creates enormous pressure in qualitative studies and may lead to compulsive *Gestalt* completion.⁸ Giving in to this pressure may result in problems akin to 'implicit coding', namely to the spontaneous emergence of explanatory patterns early in data analysis, which then focus the attention on information supporting this pattern (HOPF 1982, p. 316).⁹ This is why it is so important to systematically discuss empirical evidence that contradicts one's favourite interpretation.

Our reanalysis has identified two tasks for the methodology of qualitative research. Firstly, our difficulties in explaining the different results of the primary study and our reanalysis indicate that we urgently need a discussion about the ways in which qualitative methods are reported in publications. We need standards for the description of qualitative methods in publications that enable an understanding of the steps undertaken and of the major decisions made in data collection and data analysis.

⁸ The pressure to produce positive results also exists in quantitative social studies and even in the natural sciences, albeit to a lesser extent. If research tests theories, confirmation and disconfirmation should be equally interesting results. However, scientific communities are biased against quantitative studies not reporting any statistically significant association and against reports of failed experiment because these results are *less useful* for the readers' own research.

⁹ The primary study might have been affected by this problem. The strongest empirical evidence for the general account in the publication was found in the very first interview.

Secondly we need to begin a discussion about the practice of qualitative research (as opposed to the methodological prescription). Sociology of science has taught us the difference between abstract methodological prescriptions and local practices of 'applying' these descriptions. Qualitative social research is no different. We should face this fact and start discussing what we actually do when we apply qualitative methods.

References

- Diekmann, Andreas & Peter Preisendörfer (1993). Zur Anwendung der Theorie rationalen Handelns in der Umweltforschung. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 45, 125-134.
- Gläser, Jochen & Laudel, Grit (2006). Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Hopf, Christel (1982). Norm und Interpretation. Einige methodische und theoretische Probleme der Erhebung und Analyse subjektiver Interpretationen in qualitativen Untersuchungen. *Zeitschrift für Soziologie*, 11, 307-329.
- Kluge, Susann & Opitz, Diane (1999): Die Archivierung qualitativer Interviewdaten. Forschungsethik und Datenschutz als Barrieren für Sekundäranalysen? *Soziologie*, 4/99, 48-63.
- Kluge, Susann & Opitz, Diane (2000). Computer-aided Archiving of Qualitative Data with the Database System "QbiQ". *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [Online Journal], 1(3). Available at: <http://www.qualitative-research.net/fqs-texte/3-00/3-00klugeopitz-e.htm> [accessed 29/8/2008].
- Kohlbacher, Florian (2005). The Use of Qualitative Content Analysis in Case Study Research [89 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 7(1), Art. 21, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0601211> [accessed 5. 8. 2008].
- Lüdemann, Christian (1993). Diskrepanzen zwischen theoretischem Anspruch und forschungspraktischer Wirklichkeit. Eine Kritik der Untersuchung über „Persönliches Umweltverhalten: Diskrepanzen zwischen Anspruch und Wirklichkeit“ von Andreas Diekmann und Peter Preisendörfer. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 45, 116-124.
- Mariak, Volker & Kluge, Susann (1998). *Zur Konstruktion des ordentlichen Menschen: Normierungen in Ausbildung und Beruf*. Frankfurt a.M.: Verlag der Gesellschaft zur Förderung arbeitsorientierter Forschung und Bildung.
- Mayring, Philipp, 2000. Qualitative Content Analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* [On-line Journal] 1(2). Available at: <http://217.160.35.246/fqs-texte/2-00/2-00mayring-e.htm> [accessed 29/8/2008].
- Meinefeld, Werner (1995). Realität und Konstruktion: Erkenntnistheoretische Grundlagen einer Methodologie der empirischen Sozialforschung. Opladen: Leske+Budrich.

- Moore, Niamh, 2007. (Re)using qualitative data? *Sociological Review Online* 12 (3). Available at: <http://www.socresonline.org.uk/12/3/1.html> [accessed 29/8/2008].
- Patton, Michael Quinn (2002). *Qualitative Research and Evaluation Research Methods*. Newbury Park: Sage.
- Pickering, Andrew (1995). *The Mangle of Practice. Time, Agency and Science*. Chicago and London: The University of Chicago Press.
- Seipel, Christian (2000). Ein empirischer Vergleich zwischen der Theorie geplanten Verhaltens von Icek Ajzen und der Allgemeinen Theorie der Kriminalität von Michael R. Gottfredson und Travis Hirschi. *Zeitschrift für Soziologie*, 29, 397-410.
- Ullrich, Carsten G. (1999). Deutungsmusteranalyse und diskursives Interview. *Zeitschrift für Soziologie*, 28, 429-447.

Appendix

Part I: Results of the extraction from interview 17

Category 'work environment'

<i>time</i>	<i>industrial sector</i>	<i>company size</i>	<i>number of trainees</i>	<i>other information</i>	<i>effects</i>	<i>source</i>
time of the interview		small company				A17-17
time of the interview			1 trainee, 1 just graduated			A17-17
	craftman's business					A17-19
time of the interview		small company				A17-43
since working as voc. trainer			few trainees			A17-111

Category 'vocational trainer'

<i>time</i>	<i>age</i>	<i>experience in vocational teaching'</i>	<i>other information</i>	<i>effects</i>	<i>source</i>
for 2-11 years		2-9 trainees			A17-7
time of interview			qualified banking professional		A17-11

Category "perceptions of trainees' deviant behaviour on part of the vocational trainer"

<i>time</i>	<i>kind of deviance</i>	<i>sphere of action</i>	<i>extent of deviance</i>	<i>information source</i>	<i>effects</i>	<i>source</i>
in the past [case 1]	tardiness/ absenteeism	company			[Category responses]	A17-28
in last time [case 2]	absenteeism? (often sick on Mondays)	company		own perception	[Category responses]	A17-28
in the past [case 1]	absenteeism	vocational school	frequently	vocational school teacher		A17-30
in the past [case 1?]	problems (not specified)	leisure time + company		own perception		A17-72
in the past [case 1?]	committed crime	leisure time		rumour		A17-74

Category "evaluations"

<i>time</i>	<i>type of situation</i>	<i>subject of assessment</i>	<i>content of assessment</i>	<i>causes</i>	<i>effects</i>	<i>source</i>
time of interview	regularly	"irregularities"	difficult to judge whether the beginning of a negative development	at that age this happens out of being unreasonable	observe over longer time and try to influence positively	A17-109

Category "norms"

<i>time</i>	<i>content of the norm</i>	<i>scope</i>	<i>source</i>
time of int.	independent working	all employees	A17-24
time of int.	politeness in dealing with customers	all employees	A17-24
time of int.	interest in the work	all employees	A17-36
time of int.	reliability	all employees	A17-49
time of int.	keep appointments	all employees	A17-58
time of int.	ban on alcohol	all employees	A17-99
time of int.	prohibition to work more than 10 hours	all employees	A17-103

Category "responses"

time	type of response	subject of the response	content of the response	aim of the response	cause	effects	source
in the past [case 1]	concrete single case	tardiness/ absenteeism	termination of apprenticeship or no transfer to regular employment after graduation				A17-28 A17-30
time of int. [case 2]	concrete single case	absenteeism? (on Mondays often sick)	In the beginning just observe				A17-28
in the past [case 1]	concrete single case	absenteeism from vocational school / from work	inquiry at the Chamber of Commerce	informing about the procedure (warning, dismissal)			A17-34
in the past [case 1]	concrete single case	absenteeism from vocational school / from work	talked about it	change trainee's behaviour		no success	A17-34
in the past [case 1]	concrete single case	absenteeism from vocational school / from work	written warning		oral cautions didn't help		A17-34
in the past [case 1]	concrete single case	absenteeism from vocational school / from work	termination of apprenticeship		oral cautions + written warnings didn't help		A17-34

time	type of response	subject of the response	content of the response	aim of the response	cause	effects	source
in the past [case 1]	concrete single case	tardiness/ unreliability in the company	contacted the vocational school teacher	inform about the trainee's behaviour at school/ get over-all picture of trainee			A17-47
time of interview	regularly	tardiness/ unreliability in the company	appeal				A17-58
in the past [case 1?]	concrete single case	tardiness	gave an alarm-clock as a gift	change trainee's behaviour		no success	A17-58 A17-60
time of interview	hypothetical	behaved wrongly to customer	talk				A17-64
time of interv.	hypothetical	committed crime	talk				A17-81
time of interview	hypothetical	committed crime	not immediately inform vocational school	avoid miss-interpretation of the behaviour	cannot yet judge situation		A17-83
time of interview	hypothetical	committed crime und is still underage	talk to parents		talk to police		A17-85
time of employment	hypothetical	a juvenile applies who had repeatedly contact to the police	unspecified	depends on situation of applicant and from job interview			A17-87

time	type of response	subject of the response	content of the response	aim of the response	cause	effects	source
during apprenticeship	hypothetical	theft in company	warning				A17-91
during apprenticeship	hypothetical	theft in company (valuable machines or stealing from colleagues)	maybe press charges				A17-93
during apprenticeship	hypothetical	Alcohol consumption at workplace	warning				A17-99 A17-101
during apprenticeship	hypothetical	illegal work to a small extent (not interfering with work performance)	could possibly be tolerated				A17-103
during apprenticeship	hypothetical	illegal work over longer time	would not be tolerated		fear of deteriorating performance		A17-105
before time of interview	regularly	got off the right track	dispassionately talked to trainee			influence is rather small	A17-107

Part II: Overview of the empirical findings (hatched without text: no information; hatched with text: does not occur; light gray: regularly behaviour; dark gray: description of hypothetical behaviour; white: description of concrete cases)

Case	tardiness in the company		alcohol in the company		theft in the company		illegal work		absenteeism vocational school		delinquency in leisure time	
	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor	grave	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly
1	caution	termination after probation dismissal	serious caution/ warning	dismissal	tolerated	dismissal	tolerated	warnings, dismissal	deduction of leave		caution	talk to parents, dismissal
5	caution, talk to parents	warning	tolerated	caution	tolerated	unspecified	caution	caution	talk to parents	threat of dismissal	caution, talk to parents	
7	warning	does not occur	caution, talk to parents, no dismissal	warning	“hard response”	caution	caution	caution	caution	caution	no reaction, because one can do nothing	
											no reaction, because one can do nothing	
8	make up for lost hours, refusal of desired leave	talk to parents	caution, talk to parents	dismissal	dismissal	dismissal	tolerated	dismissal	caution	warning, “transferred” to another company	caution	

Case	tardiness in the company		alcohol in the company		theft in the company		illegal work		absenteeism vocational school		delinquency in leisure time	
	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor	grave	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly
10	tolerated	caution			tolerated	dismissal	tolerated		deduction from wages		caution, talk to parents	
11			tolerated	unspecified		dismissal	tolerated	unspecified	visited trainee and parents at home			caution, dismissal
12	does not occur	deduction of leave	does not occur		warning	dismissal					caution, talk to parents	no dismissal
13		does not occur	does not occur			dismissal					caution	(drug scene): dismissal
				unspecified	caution							dismissal
14			does not occur	warning			caution		deduction of leave			
15	does not occur	"hard response"	tolerated	caution, dismissal	pay damages, warning	dismissal	tolerated	"stop it"	caution	deduction of leave	caution, parents	

Case	tardiness in the company		alcohol in the company		theft in the company		illegal work		absenteeism vocational school		delinquency in leisure time	
	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor	grave	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly	minor/ first time	grave/ repeatedly
16	caution	warning, parents/ dismissal			caution, warning	dismissal		unspecified		deduction from wages	caution	caution
17	caution	dismissal (unauthorised absence)	warning		warning		tolerated			dismissal		caution
18		grave case of absenteeism: dismissal			does not occur		tolerated		caution, warning, make up the hours, deduction of leave, deduction of subsidy		6 weeks in jail: sacrifice leave, no dismissal	
19		caution	does not occur	warning, dismissal	does not occur	warning, dismissal	stop it		three warnings, no dismissal		caution	
21	tolerated	warning	does not occur			dismissal	tolerated		deduction of leave	warning		