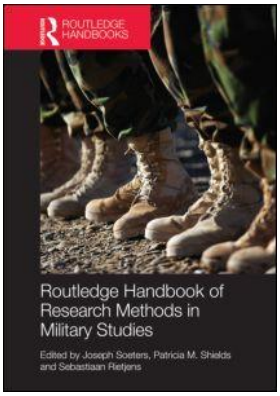

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QUALITATIVE DATA ANALYSIS

Seeing the patterns in the fog of civil–military interaction

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S.J.H. Rietjens (2008) 'Managing civil–military cooperation: Experiences from the Dutch Provincial Reconstruction Team in Afghanistan', *Armed Forces & Society* 34: 173–207.

This study focuses on the cooperation process between civilian actors and the Dutch Provincial Reconstruction Team (PRT) in Baghlan, a northern province of Afghanistan. The problem is that most civil–military cooperation processes are improvisational and *ad hoc*. This leads to inefficient use of limited aid resources, inconsistency between rotations, and conflicting objectives in the (post-)conflict environment. Although there is no single solution to improve civil–military cooperation, the logic of structured cooperation should lead to efficiency gains and greater respect for the comparative advantages of civilian and military actors. The objective of this study is to diagnose civil–military cooperation processes using a model that was earlier developed. In the end this model should enable the development of checklists, an increased understanding of (potential) conflicts in the cooperation process, and procedures to increase the performance of the cooperation.

To meet this objective, the study uses a case study design because of its emphasis on the overall picture (rather than a single element) and the inclusion of contextual conditions. The theoretical framework of the study outlines a model based on theories of interorganizational alliances. This model distinguishes six phases in the cooperation process and within each phase it identifies several key factors. The study subsequently applies the model to eight different cases, each representing a different civil–military cooperation process. These include police training courses with the highway and provincial police corps, removal of explosives and ammunition with the international non-governmental organization Halo Trust and the construction of schools, roads and bridges with the Aga Kahn Foundation.

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A data collection protocol was designed to guide the researcher in carrying out the case studies, organize the data collection, and ensure that the case studies and their results were verifiable. Data collection started with desk study and interviewing of redeployed personnel. Next, the researcher paid a four-week visit to Baghlan. During this visit semi-structured interviews were held with key personnel of the PRT, extensive observations were made and over 60 meetings were held with Afghan actors such as contractors, authorities and police commanders. In addition, many documents were studied, including daily situational reports, project information, meeting minutes and liaison reports.

This abundance of data was then reduced using a coding process. The theoretical model provided a structure. Codes were attached to the phases and key factors that were identified. These codes were then used to analyse the raw data. Subsequently, the researcher displayed the data through matrices. The rows of a matrix contained the phases and key factors, while the columns addressed the different actors that took part in the cooperation process. Having done this for each of the eight cases, the researcher was able to carry out a cross case analysis and compare the cases for similarities and differences. Again a matrix was used to display this. One of the main findings revealed that that cooperation was frequently supply based rather than demand-driven. Activities were selected and prioritized based on the capacity of the military force or humanitarian organization, rather than the needs of the local beneficiaries.

To facilitate the drawing and verifying of conclusions, members of the PRT's civil–military cooperation branch checked the results, personnel of the Dutch Defence Operation Centre reviewed the case study report and the researcher presented his findings at a conference on PRTs in Afghanistan.

Introduction

In recent years studying the interaction between military and civilian actors has become en vogue. There has been a tremendous increase in research focusing on concepts such as provincial reconstruction teams, comprehensive approach, civil–military cooperation and counter insurgency (see e.g. Hynek and Marton 2011; Rietjens and Bollen 2008; Pouligny 2006). Most of the researchers in this field carry out qualitative research. They conduct interviews with military, humanitarian or host nation actors, make detailed observations during field trips or study scores of meeting minutes and project data. Together these data provide a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts. Using such data enables researchers to unravel the chronological flow and see which events led to which consequences and derive fruitful explanations. In addition, it facilitates understanding of the context within which decisions and actions take place (Myers 2009). And, as Miles and Huberman (1994) argue, good qualitative data are more likely to lead to serendipitous findings and to new integrations.

Despite its great potential many authors have criticized the process of qualitative data analysis. Miles summarized this critique stating that:

> The most serious and central difficulty in the use of qualitative data is that methods of analysis are not well formulated. For quantitative data, there are clear

> conventions the researcher can use. But the analyst faced with a bank of qualitative data has very few guidelines for protection against self-delusion, let alone the presentation of unreliable or invalid conclusions to scientific or policy-making audiences. How can we be sure that an 'earthy', 'undeniable', 'serendipitous' finding is not in fact wrong?
>
> (Miles 1979: 590)

There have been many developments in qualitative data analysis since Miles expressed his critique, but researchers have still not come to grips with several main issues. These include the labor-intensiveness of data collection, the overload of data, the possibility of researcher bias, the time demands of processing data, the adequacy of sampling when only a few cases can be managed (for this topic see Ruffa and Soeters 2014, Chapter 19 this volume), the generalization of findings, the credibility of conclusions and their utility in the world of policy and action (Myers 2009; Flick 2009; Miles and Huberman 1994).

This chapter intends to clarify the process of qualitative data analysis and to suggest researchers, in particular those in the field of military and security studies, ways to deal with problems inherent to this research method. To do this, the next section starts by making some remarks on research design and data collection as these precede the actual data analysis. Following Miles and Huberman (1994) the subsequent sections address three steps in the data analysis process. Data reduction, the first step, refers to the process of selecting, focusing, simplifying, abstracting and transforming the data that appear in written-up field notes or transcriptions. The second step concerns data display. This helps researchers to organize and compress information. The third and final step of the data analysis process is drawing and verifying conclusions. The last section of this chapter reflects upon this process and draws conclusions.

Research design and data collection

The decisions that relate to research design can be seen as anticipatory data reduction as they constrain later analysis by ruling out certain variables and relationships and attending to others (Miles and Huberman 1994). They can be conceptual in nature or related to management issues. One of the first conceptual decisions to be made concerns the extent to which the conceptual framework should be made upfront (see e.g. Yin 2009) or should emerge from the field data itself (see e.g. Strauss and Corbin 1998). Many researchers consider civil–military interaction processes to be too complex to be approached with explicit conceptual frames or standard instruments. These researchers are often found within the domains of history (Brocades-Zaalberg 2005) or anthropology (Giustozzi 2009; Verweijen 2013). They prefer a more loosely structured, emergent, inductively grounded approach to gathering data. In this pre-eminently qualitative research approach, a theory or theoretical concept materializes slowly but surely in the course of a research project. Also, the important research questions will come clear only gradually, while instruments, if any, should be derived from the properties of the setting and its actors' views of them.

These 'loosely designed studies make good sense when experienced researchers have plenty of time and are exploring exotic cultures, understudied phenomena or very complex social phenomena' (Miles and Huberman 1994: 17). In the domain of civil–military interaction, Giustozzi's work on the Taliban is a prime example of this (see Maley 2014, Chapter 6 this volume, for an extensive discussion of this study). Spending years in Afghanistan he was able to

decode the structure and functioning of the Taliban to a large extent. It is unlikely that he would have succeeded with a detailed framework and instrumentarium that he made up front as this would have narrowed and biased him too much.

When the phenomenon a researcher investigates is better understood, it might, however, be a waste of time to use a loose and inductive design. There is a risk that, despite months of fieldwork, a researcher might only scratch the surface and come up with some clichés. There is merit in entering a research setting looking for questions as well as answers, but it is 'impossible to embark upon research without some idea of what one is looking for and foolish not to make that quest explicit' (Wolcott 1982: 157).

Miles and Huberman (1994) argue that tighter, more deductive research designs are preferable to researchers working with well-delineated constructs. In fact, they remind us that qualitative research can be outright 'confirmatory'. As such it can test or further explicate a conceptualization. Moreover, for beginning researchers tighter designs provide more clarity and focus (Shields and Rangarajan 2013).

Much qualitative research lies between these two extremes (pre-structured versus loose and emergent) and follows an intermediate approach. This is the case when some things are known conceptually about the phenomenon, but not enough to house a theory. Or when the researcher has an idea of the parts of the phenomenon that are not well understood and knows where to look for these things – in which settings, among which actors (Miles and Huberman 1994). Some researchers refer to this intermediate approach as abduction (Richardson and Kramer 2006). Introduced by the American philosopher Charles Sanders Peirce (1955), this concept stresses that practical scientific programs cannot be based on either pure deduction or pure induction. As such abduction is the inferential process that starts with an initial puzzling fact and finally leads to a theoretical hypothesis, which can explain it.

The example study on civil–military cooperation in Afghanistan presents a clear example of an intermediate approach. Bollen and Beeres (2002: 22) state 'by no means does civil-military cooperation constitute an exception with regard to other interorganizational alliances'. However, as a result of structural fundamental differences between the military and their civilian counterparts, alliances are bound to be fragile. Taken on their own, interdependencies generate too few safeguards to shield the collaborators from hidden agendas, self-interest, or from their partners' opportunistic behaviour. Rietjens (2008) therefore decided to use the rich body of knowledge on interorganizational alliances as a foundation to develop a conceptual framework for civil–military cooperation processes. Having applied the conceptual framework to cooperation processes in case studies as diverse as Kosovo, Iraq and the Kabul area, the conceptual framework became more constrained. It, however, left significant space to integrate the influences of new cultures and less known actors. This was when the framework was applied to civil–military cooperation in northern Afghanistan.

In addition to the conceptual framework, several other issues are important in the design phase (Miles and Huberman 1994). First, the research questions must be formulated. These may precede or follow the development of a conceptual framework and represent the elements of the empirical domain that the researcher wants to explore. Defining the case is a second design issue. Researchers often struggle with what exactly constitutes their case. Cases can be defined in various ways such as the nature and size of the unit of analysis; a case might be located spatially or it can be defined temporally. In the example study the case was defined as the cooperation process between the Dutch Provincial Reconstruction Team and at least one civilian actor in the Afghan province Baghlan during the period February and July 2005.

Selecting cases is closely linked to defining the case. There are several methods that enable the researcher to select cases. These methods include a random selection, selection based on practical reasons and selection on homogeneous or heterogeneous (in)dependent variables. Ruffa and Soeters (2014, Chapter 19 this volume) treat these methods in more detail.

The next design issue is the choice of instrumentation. This may mean little more than some shorthanded devices for observing and recording events. However, even when performing an open-ended interview some technical choices have to be made including deciding between taking notes or taping an interview (see e.g. Yin 2009). Additional issues that are relevant in the design phase include linking qualitative and quantitative data (Bryman 2008); selecting computer software to support the work (Flick 2009); and making agreements with the people being studied (Fine et al. 2000).

Having completed the research design, data collection is usually the next step in the qualitative research process. Although there are many different taxonomies on collecting data, researchers typically rely on four methods for data collection: (a) participating in the setting, (b) observing directly, (c) interviewing in depth, and (d) analysing documents and material (Marshall and Rossman 2006). An extensive treatment of these and other methods can be found in the many (hand)books on doing qualitative research (e.g. Marshall and Rossman 2006; Bernard and Ryan 2010). For now it suffices to say that most of the researchers studying civil–military interaction end up with a great amount of data, varying for example in size, form, content, background and reliability. In the example study the researcher obtained much data through interviews and observations. Moreover, he was given 19 gigabytes of data files. The number of files ran in the ten thousands and included operational orders, situation reports, minute notes, key leader engagement plans and photographs. The files were hardly structured and contained many different formats. To make sense of such an abundance of data turned out to be a challenging task. The next sections deal with this process of data reduction, data display and drawing and verifying conclusions, together labelled data analysis.

Data reduction

Coding is the process that qualitative researchers use to reduce and focus the great amount of raw data. A coding process moves in a stepwise fashion progressively from unsorted data to the development of more refined categories and concepts (Hahn 2008). Although qualitative researchers use many different types of coding, three main types can be identified: open coding, axial coding and selective coding. The main goal of open coding is to break down and understand data and to attach and develop categories and put them into an order in the course of time (Flick 2009). The result of open coding is often a list of the codes and categories that the researcher has attached to the text. In this context categories are seen as a collection of codes that have some sort of commonality. Following Dewey (1938), Shields and Rangarajan (2013) compare categories with the sorting of similar items into bins. Constructing the categories involves finding understandable and explicable uniformities between the coded items within the bin. Shields and Rangarajan (2013) use the example of a kitchen mess to illustrate this. The coded items that share certain commonalities are placed in the same bin. For example items such as knives, forks and spoons are brought together in the bin/category *eating utensils*. Figure 12.1 presents an example of an open coded text from the example study. The text illustrates a gate meeting between military of the Dutch PRT and a representative of the non-governmental organization Halo Trust. On the right side the codes and categories to which they belong are included.

Gate Meeting Military Observer and Liaison Team (MOLT) 1
May 9, 2005
District KHINJAN

Participants:*

- Lieutenant DENDERS (MOLT 1 representative)
- Warrant officer RIEBEEK (EOD advisor)
- Warrant officer JANSEN (CIMIC advisor)
- DR. KHAN (Representative of Halo Trust)

There was a short meeting with the representative of HALOTRUST, DR. KHAN. Before clearing the ammunition depots it is necessary to repair the bunker on the KARKAR barracks. According to Dr. KHAN, Mr. SAFI has approximately 20 truckloads of ammunition behind LIMAK. Each day four truck loads can be transported to the KARKAR barracks. This means that this operation takes 5 days. MOLT 1 will, together with warrant officer RIEBEEK, map the other locations of the ammunition depots. Subsequently, agreements will be made with SAFI and/or DELA about transporting the ammunition to the road or to a place that the truck of HALOTRUST can reach. The transportation costs are 1000 Afghani for each 7 kilograms of cargo. The number of kilograms to be transported have to be estimates. MOLT 1 will request SAFI on Wednesday (mission KHINJAN) to transport the less accessible ammunition to the road. The PRT is willing to pay the transportation costs.

Code 45: Ammunition removal (category: partnership implementation)

Code 33: Agreement (category: partnership design)

Figure 12.1 Example of an open coded text from the example study

*The names of the participants are fictitious for confidentiality reasons

After identifying a number of substantive categories, the next step is to refine and differentiate the categories resulting from open coding. Strauss and Corbin (1998) suggest doing a more formal coding for identifying and classifying links between these categories. They label this axial coding. When qualitative researchers code axially, they intend to answer questions such as why, where, when, how and with what results and in doing so they uncover relationships among categories.

Axial coding is sometimes criticized as forcing a structure on the data instead of discovering what emerges. For this reason Glaser (1978) suggested a list of basic codes as a step following open coding. He grouped these into coding families that can be used as tools for advancing an understanding of the material. Table 12.1 illustrates these coding families. The right column includes civil–military interaction examples.

The third main type of coding, selective coding, is the process of integrating and refining categories (Strauss and Corbin 1998). Here the researcher looks for further examples and evidence for relevant categories. Selective coding allocates specificities to the theory and enables the researcher to make use of explanatory statements such as 'under these conditions', 'then' and 'when this set of events occur' (Strauss and Corbin 1998). Finally, the theory is formulated in greater detail and again checked against the data. The procedure of interpreting

Table 12.1 Coding families applied to examples of civil–military interaction (adapted from Glaser 1978: 75–82; Flick 2009: 315)

Coding families	*Concepts*	*Examples*
Six Cs family	Causes, contexts, contingencies, consequences, covariances, conditions	Causes of civil–military interaction, operational context
Process family	Stages, phases, phasings, transitions, passages, careers, chains, sequences	Different phases in the civil–military interaction process such as partner selection or transfer
Degree family	Extent, level, intensity, range, amount, continuum, statistical average, standard deviation	Intensity of interaction
Type family	Types, classes, genres, prototypes, styles, kinds	Types of interaction (e.g. de-confliction or joint activities)
Strategy family	Strategies, tactics, techniques, mechanisms, management	Strategies for dealing with civil–military interaction
Interactive family	Interaction, mutual effects, interdependence, reciprocity, asymmetries, rituals	Dealing with asymmetric resources (e.g. the large numbers of military personnel versus low numbers of civilians)
Identity self-family	Identity, self-image, self-concept, self-evaluation, social worth, transformations of self	Different actor perspectives on interaction (e.g. local perspective versus military perspective)
Cutting point family	Boundary, critical juncture, cutting point, turning point, tolerance levels, point of no return	New level in the interaction e.g. due to increased resource allocation
Cultural family	Social norms, social values, social beliefs	Different social values between civil and military partners
Consensus family	Contracts, agreements, definitions of the situation, uniformity, conformity, conflict	Making of agreements between military and civilian actors

data, like the integration of additional material, ends at the point where saturation has been reached. This means that further coding or enrichment of categories no longer provides or promises new knowledge (Flick 2009). Yin (2009) refers to this as analytical saturation, which he contrasts with statistical generalization. Statistical generalization refers to inferences made about a population based on empirical data collected about a sample from that population. Analytical generalization uses a previously developed theory as a template to compare the empirical results.

Turning to the example study, a comparison of eight different processes enabled the researcher to carry out selective coding and to reach analytical saturation. It turned out that all civil–military cooperation processes went through six successive phases: (1) decision to cooperate, (2) partner selection, (3) design, (4) implementation, (5) transfer of tasks and responsibilities, and (6) evaluation. Moreover, the analysis showed that at strategic and operational levels, there was often no clear priority setting, demarcation of the activities, and formulation of end-states, making it difficult to determine when the objectives of the military force were met and redeployment could begin. NATO's doctrine proved to be unsuitable to facilitate this.

Data display

Data display is the next step in the data analysis process. Its goal is to systematically present information in a visual format. This should assist researchers to further organize and compress their information. For many qualitative researchers, however, the typical mode of display takes the form of extended, unreduced text, usually in the form of written-up field notes. Often this is a weak and cumbersome form of display (Miles and Huberman 1994) and hard on analysts because it is dispersed over many pages and is not easy to see as a whole. Moreover, displaying text in such a way makes it difficult to look at two or three variables at once.

This type of display does not fit Cleveland's (1985) definition of a good display, namely that it enables the researcher to absorb large amounts of information quickly. According to Miles and Huberman (1994) good displays can take various different forms, but generally fall into two major families: matrices and networks. A matrix is essentially the crossing of two lists, set up as rows and columns. Miles and Huberman (1994) distinguish a variety of different matrices. These include time-ordered matrices to display time-linked data and role-ordered matrices that sort data in rows and columns that have been gathered from or about a certain set of "role occupants" with data that reflect their views.

Within the realm of civil–military interaction data matrices are often used. The matrix that De Coning and Friis (2011) developed is a well-known example. It maps four levels of coherence (intra-agency coherence, whole of government coherence, inter-agency coherence, and international-local coherence) against six types of relationships varying from 'actors are united' to 'actors compete'. The matrix provides the reader with a great, easy to read overview as well as with conceptual strength, which enables understanding of the different civil–military relationships.

In the example study the researcher also made use of data matrices. For each of the eight civil–military partnerships studied the researcher drew a matrix. The rows of these matrices contained the phases and key factors, while the columns addressed the different actors that took part in the cooperation process. To facilitate comparison of these eight different civil–military partnerships again a matrix was used. In this matrix the rows contained the partnerships, while the columns included the different steps in the cooperation process. An excerpt of this matrix containing two civil–military partnerships is presented in Table 12.2.

Networks make up the second major family of displays. A network is a collection of nodes or points connected with lines and is generally helpful when a study focuses on more than a few variables at a time. A well-known type of network display includes context charts. These charts map in graphic form the interrelationships among the roles and actors that make up the context of individual behaviour. Also causal networks are very common. These network displays contain the most important independent and dependent variables and the relationships among them.

In their research on cultural understanding Rentsch et al. (2009) effectively use the network display to illustrate the attributes that are relevant to a soldier for understanding a foreign culture. Rentsch et al. (2009) extracted information and experiences from US Army soldiers who had deployed to many different countries. As a result they were able to determine what cultural attributes the soldiers considered most important, based on their experience. Figure 12.2 presents this network display. Items with the greatest number of links in this network are the most central concepts, as reflected in responses from their sample.

Table 12.2 Data matrix displaying the characteristics of the civil–military partnerships in Baghlan province (Rietjens 2008)

Partnerships	*Main Characteristics of Partnerships*					
	Step 1: Decision to Cooperate (Motive NL PRT)	*Step 2: Partner Selection*	*Step 3: Partnership Design*	*Step 4: Partnership Implementation (Main Activities)*	*Step 5: Transfer of Tasks and Responsibilities*	*Step 6: Partnership Evaluation*
Construction of microhydropower plants	Limited implementing capacity of NL PRT; increase local capacity	Contractor selection is based on added value for NL PRT, complementary resources, personal fit, and prior reputation. District governors are considered a given partner of the cooperation	Detailed written contracts between NL PRT and the contractor and between NL PRT and two (out of three) district governors	Assessment: NL PRT Construction power plant: Constructor Construction and financing transformation house, electrical wires and transmission: District governors and local population Financing power plants: NL PRT	Microhydropower plants were constructed, but responsibilities of the district governors were by far not fulfilled. It was not clear how the electricity was to be divided into the community	No evaluation
Police training courses	Contribution to SSR program	Police forces are considered a given partner of the cooperation	Detailed written contract between NL PRT and the police commanders	Preparing trainings program: NL PRT Selection trainees: Police commanders Training: NL PRT Delivery of truncheons: Trainees Financing: NL PRT	Little follow-up to train the trainers program since graduated trainees were not granted time to function as instructor and were not provided with sufficient means to do so	No evaluation

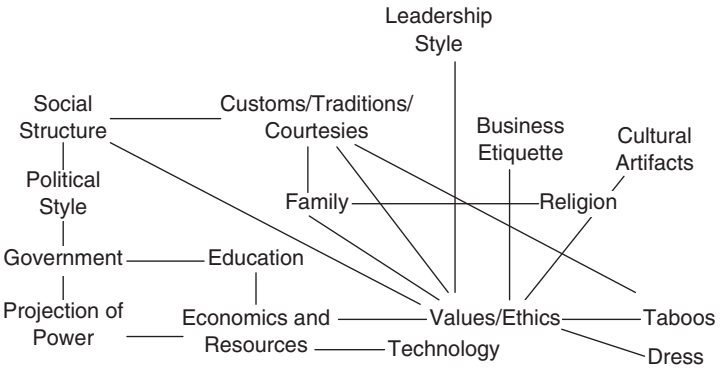

Figure 12.2 Network display of core cultural attributes (Rentsch et al. 2009)

Drawing and verifying conclusions

Having displayed the data, the final step of the analysis process is drawing and verifying conclusions. Many different tactics can be discerned to generate meaning and draw conclusions from a particular configuration of data in a display. An often used tactic is *noting patterns or themes* (Ryan and Bernard 2000). This can be very productive when the number of cases and/or the data overload is severe. The tactic seems rather easy to apply but it is important to see added evidence of the same pattern ('recurring regularities', as Guba (1978) puts is) and to remain open to unexpected findings when they appear (see also Yin's (2009) 'pattern matching'). Tactics that are closely linked to *noting patterns or themes* and that are rather concrete and descriptive include *seeing plausibility, clustering, making metaphors* and *counting* (Miles and Huberman 1994). With regard to counting Miles and Huberman state that counting tends to get ignored in qualitative research. There are, however, good reasons to do counting in a qualitative study. First, looking at distributions rapidly enables the researcher to notice the general drift of the data and to see the outliers. Second, counting can facilitate the verification of a hunch or hypothesis. And third, it can protect the researcher against biases.

A tactic that is more explanatory in nature is *building a logical chain of evidence*. This tactic develops a complex chain of events over a certain time period. The events are staged in repeated cause–effect patterns, whereby a dependent variable (event) at an earlier stage becomes the independent variable (causal event) for the next stage (Yin 2009). In Chapter 9 of this volume Vennesson and Wiesner analyse the concept of process tracing and deal with the issue of chains of evidence more in depth.

When a researcher has drawn conclusions it is necessary to verify whether they are valid, repeatable and right. There are numerous examples of qualitative studies that tell a wonderful and powerful story but do not match the data and are in fact wrong. Tactics for testing or confirming findings are extensively treated in qualitative research handbooks (e.g. Flick 2009; Myers 2009; Miles and Huberman 1994). Some examples of these tactics include:

- checking for representativeness: the extent to which a sub sample can be taken as representative of a wider set;
- checking for researcher effects: the influence a researcher has on its surroundings and vice versa can lead to biased observations and inferences;
- triangulation: the rationale of using multiple sources of evidence; types of triangulation include: (1) data source triangulation (multiple data sources), (2) investigator triangulation

(multiple investigators), (3) theoretical triangulation (multiple theoretical viewpoints), and (4) methodological triangulation (multiple methods) (Stake 1995);
- getting feedback from informants: local informants can act as judges, evaluating the major findings of a study; this is often referred to as a member check (see e.g. Lewis-Beck et al. 2004).

Having applied several tactics to draw and verify conclusions, how can a researcher know whether or not his finally emerging findings are good? There is great debate on what determines the quality of conclusions. Many researchers argue that it is not really possible to specify criteria for good qualitative work (see for example Schwandt 1996) and some even claim that qualitative researchers are always striving to 'not get it all wrong' (Wolcott 1990, 126). Miles and Huberman (1994) argue that it is worth striving for shared quality standards. They outline five commonly agreed upon issues that determine the goodness of a study:

- Objectivity/confirmability of qualitative work: the question here is whether the conclusions depend on the subjects and conditions of the inquiry rather than on the inquirer.
- Reliability/dependability/auditability: the underlying problem is to what extent the study is consistent, reasonably stable over time and across researchers and methods.
- Internal validity/credibility/authenticity: the questions raised here include whether the findings of the study make sense and are credible to the readers and to the people that have been studied.
- External validity/transferability/fittingness: this issue addresses the generalization of the findings: to what extent are they transferable to other contexts?
- Utilization/application/action orientation: even if findings are valid and transferable, the question remains what the study does for its participants (both researchers and researched) and customers. This issue closely links to ethical questions such as who benefits from the study and who may be harmed.

For researchers focusing on civil–military interaction these issues are very much applicable as many of their studies are set in foreign cultures and include actors that are unfamiliar to them. Moreover, in several studies local informants run a safety risk when they are openly seen with an outside researcher. Paying full attention to these quality issues can assist the researcher in unravelling these complex civil–military relationships and determining the boundaries within which conclusions are valid.

Conclusion and reflection

Most qualitative researchers that study civil–military interaction are confronted with an enormous amount of data varying from interview notes to internal memoranda to field observations. This chapter has attempted to guide these researchers, as well as those working in adjacent fields, in working with these data and coming to good conclusions. The process of qualitative data analysis starts with the research design and data collection as this is in fact anticipatory data reduction. Subsequently three phases are discerned: (1) data reduction, (2) data display and (3) drawing and verifying conclusions. Albeit no guarantee for success, addressing each of these phases significantly increases a researcher's ability to see the patterns in the fog of civil–military interaction.

Despite the many tactics and procedures that were addressed in this chapter, several limitations and open ends remain. A first limitation is inherent to the nature of qualitative research.

The general critique of this type of research is that it is too subjective, difficult to replicate, that it faces problems of generalizability and lacks transparency (e.g. Bryman 2008). Meticulously applying the tactics and procedures of the data analysis process does help to counter this critique but offers no guarantee that quality criteria such as objectivity and generalizability are being met.

A second limitation is related to data reduction. During this phase there is a potential for endless coding and comparisons. A researcher could apply open coding to all passages of a text and further elaborate all the categories (Flick 2009). The method provides few hints about what criteria the end of coding should be based on. The criterion of analytical saturation leaves it to the theory developed and therefore ultimately to the researcher to make this decision. Another commonly mentioned limitation related to data reduction is that by taking parts of text out of the context within which they appeared, the social setting can be lost.

A next limitation that some researchers face deals with using their creative capacity. If one applies the phased approach of qualitative data analysis in a very mechanistic way it can destroy creativity. While analysing patterns or developing data matrices are important, they may not create something new. Creating, however, is aimed at finding something new whether it is a descriptive category, hypothesis, or finding (Shields and Rangarajan 2013).

A last limitation that is addressed here concerns the quality and quantity of data with which many researchers are confronted. Data might be classified and therefore prohibited to use. An enormous quantity of data could make coding and displaying all the data an impossible a task. The emergence of computer-aided qualitative data analysis software (CAQDAS) can assist the researcher addressing this issue (see Bryman 2008). Programs such as NVivo or Atlas can take over many tasks of the researcher including allocating chunks of text to a code and linking them together (Friese 2012). However, as promising as these developments may sound, the qualitative analyst must still interpret his or her data and in the end analysis and interpretation remains the work of humans.

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