Elaborating on *Thick Analysis:*
About Thoroughness and Creativity in Qualitative Analysis

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Abstract: This article elaborates on the concept of *thick analysis*, introduced in 2010 by EVERS and VAN STAA. The aim of thick analysis is to enhance the depth and breadth of data analysis by creatively combining several analysis methods, allowing for a more comprehensive analysis. As the use of qualitative data analysis (QDA) software is becoming more and more immersed in qualitative research practices, thick analysis is now within reach of every researcher. Therefore, a different categorization of the numerous analysis methods is introduced, each of which is given a motto designed to pinpoint its main feature. The purpose of this exercise is to seduce researchers to think beyond existing frameworks for analysis by offering an exemplary overview and listing of possible combinations of analysis methods.

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1. Introduction: The Rationale Behind Thick Analysis

The concept of *thick analysis*[1] was introduced in 2010 by EVERS and VAN STAA to indicate the purposeful and creative combination of analysis methods to analyze a set of qualitative data. A fictive analysis of some data on HIV in Jamaica was presented as an example of how this might work in practice. Our own longstanding use of qualitative data analysis (QDA) software inspired us, for a number of reasons, to develop the concept of thick analysis as a decisive strategy to deal with one's data:

- We found researchers often claiming that they had done a grounded theory approach while in reality they did not adhere to the grounded theory procedures, or their analysis process was a black box. As it is a renowned

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1 We chose the term *thick analysis* as a tribute to Clifford GEERTZ (1973). He designed the term: *thick description* for the way he described several layers of interpretation possible in the description of Balinese cock fights.

method, the label grounded theory methodology (GTM) often seems to have been used to legitimize their work.

- GTM is not always the best or most appropriate analysis method, but researchers seem to have little fantasy in thinking through other ways of analyzing their data or opt for this method because of its reputation.

- The introduction of QDA software has greatly enhanced the possibilities of working one's data and has made it fairly easy to experiment with several ways of analyzing them.

- QDA software facilitates transparency of the analysis.

- We believe that using different analysis methods during thick analysis adds to the deeper understanding of the data. It not only is a means of convergent validity, as in analysis triangulation, but also addresses unique angles or offers different viewpoints as well. As such, thick analysis adds new information to the interpretation with each new viewpoint taken and breaks through the linear line of thought used in other more conventional analysis methods. Thick analysis then, will deal with the complexity of social phenomena more convincingly and comprehensively than the use of just one analysis method. [1]

As such, thick analysis might remind one of GTM, which is one example of what we originally considered thick analysis to be. But as thick analysis combines *several* analysis methods in an eclectic manner, it encompasses more than GTM alone. And as its procedures are not regulated, fixed, or prescribed, it taps into the creative spirit of the researcher, who, in interaction with the data, is free to devise a combination of analysis methods that fits this specific dataset and research question. The number of possible combinations of analysis methods is infinite though, and while different authors provided an overview of qualitative analysis methods (e.g., GRBICH 2007; SALDAÑA, 2013 [2009]; TESCH, 1990) they did not succeed in organizing the different methods in a comprehensive manner or in integrating the role of QDA software in qualitative analysis. The current article seeks to deal with those issues. [2]

The purpose of this exercise is manifold: 1. to seduce researchers to use QDA software to analyze their data in a more creative and comprehensive manner, thus 2. using their data amply and 3. adding to the quality and thoroughness of their analyses. Further, to aid them in doing so, by 4. providing an exemplary overview of possible combinations of analysis methods and 5. explicitly mentioning possible uses of QDA software during the process. [3]

In the present article, I will elaborate on what I think qualitative analysis ought to be (Section 2), which role QDA software can play during analysis (Section 3), and how the data can be processed (Section 4). The use of QDA software is taken as a precondition for *thick analysis,* a concept introduced in 2010 (EVERS & VAN STAA) and elaborated further in this article by categorizing three types of analysis methods and designing a motto for each one of them (Section 5). This was done to repair some of the overlap and confusion surrounding SALDAÑA's (2013

[2009]) classification of coding[2] and at the same time to step away from the idea that analysis is a linear process, which the terms "first" and "second cycle coding" seem to suggest. Secondly, without trying to be exhaustive, some additional analysis techniques, tactics and strategies[3] have been added to the overview presented here (Section 6). Section 7 focuses on an exemplary listing of possible combinations of analysis methods to aid and motivate researchers to give thick analysis a try. A picture by M.C. ESCHER, which seems the perfect metaphor for thick analysis, is presented in Section 8. The closing Section 9 deals with the practicalities of using thick analysis in your research. [4]

2. Designing and Defining Qualitative Analysis

Qualitative research is often associated with an explorative approach (EVERS & DE BOER, 2012), which seems to lessen the need for a thorough design thought out beforehand. I look at this differently. It is precisely the improvisational nature of qualitative research that requires a solid preparation to enhance the flexibility of the researcher during the process. Flexibility does not equal exploration, as explorative research is looking for a reality not yet known, as there is little knowledge of the research topic yet. Flexibility on the other hand, might even mean that the researcher designs a conceptual framework and has certain hypotheses about what (s)he will find. This will not prevent her/him from being flexible and open to what is found during data collection and analysis, as that flexibility is one quintessence of qualitative research *per se*. [5]

Although my placing an emphasis on design is probably not a "natural" attitude of a qualitative researcher, I argue for such an emphasis because the introduction of QDA software has greatly enhanced the opportunities of searching and rearranging the data by using tools such as coding, hyperlinking and visualizing (cf. EVERS, 2011, 2015a). This has not only altered the position of coding in the analysis process as such, but also added a whole new repertoire of analysis opportunities, on account of which researchers run the risk to drown in their data (MARSHALL, 2000). During the design phase then, you might want to think about whether your research goal is *description*, *explanation* or *theory building*, as this will both influence data collection and the analysis method employed and will prevent you possibly from drowning in your data, an all too familiar experience among qualitative researchers. [6]

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2 To name just three points of critique: 1. In the distinction between first and second cycle coding, several codes that seem to belong to second cycle coding because of their level of abstractness are classified under first cycle codes, e.g., metasummary, metasynthesis, causal codes. 2., there seems to be no clear distinction between code type and purpose of analysis, e.g., evaluative coding is done using already existing code types like descriptive, magnitude and in-vivo codes, which are used in eclectic coding (a triangulation method instead of a coding method) as well. 3., some code types are introduced which do not seem to add new options, e.g., grammatical, elemental, affective codes, while others seem to overlap, e.g., holistic with descriptive coding.

3 Argumentation codes, auto codes, CA codes used for conversation analysis, MCA codes used for membership categorization analysis, narrative codes, constant comparison, conversation analysis, (critical) discourse analysis, ethnography, grounded theory, narrative analysis.

As is the case with qualitative interviewing (EVERS, 2015b), many definitions are in use to describe qualitative analysis. Some deal with procedures, e.g., coding, classifying, and others with phases during analysis, e.g., exploration, segmentation. Some focus on units of analysis such as segments or transcripts, while others use analytic tactics such as metaphor analysis or thematic analysis as their starting point. Finally, some mention software tools in describing qualitative analysis such as netviews, or sets. [7]

The way to go about qualitative analysis still remains a bit of a black box though (SILVER & LEWINS, 2014), and the use of QDA software is not incorporated in the definitions of the process. I present a definition of *qualitative analysis* that takes the use of QDA software as a starting point, departs from the actual process of analysis and takes its varying viewpoints into consideration, while at the same time it is quite concrete: [8]

The process of dissecting qualitative data into smaller units uses a particular analytic technique, regrouping these units in relation to one another, the context and theoretical notions, in order to describe them exhaustively or to test certain assumptions about them. In interpreting the data, identifying relationships between theoretical or empirical constructs or between analytic units can be either the purpose or the result of the analysis. Patterns in the data or variations in patterns, similarities and differences between the units of analysis[4], which might change during the analysis, can all be of interest, just as—sometimes—one or more unique cases. The results of the analysis will be described in a non-numerical manner, i.e., in textual and maybe visual form, underpinned with quotations or images from the dataset. [9]

Obviously, I regard qualitative analysis as a process, consisting of several actions and phases with differing purposes and results. Mostly, the process will involve several cycles of data collection and analysis and preferably make use of a combination of different analysis methods, thereby resulting in a *thick analysis*. This process is not linear but fluid, often chaotic, and therefore will greatly benefit from the use of QDA software. In the context of applied research, however, the time or funding for either several data collection cycles or thick analysis may be lacking. Earlier we have suggested that researchers may then resort to *pragmatic analysis* (EVERS & VAN STAA, 2010). [10]

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4   A unit of analysis consists of the part of the dataset, which is the—temporary—focus of attention. It can vary from one respondent to a group of respondents, it can consist of a certain theme in the data, which you want to analyze in depth, or it can be the research question applied to the whole of the dataset. On the other hand, it can be a certain paragraph of a transcript. In short, the unit of analysis will vary according to the purpose of your analysis at a certain point in time.

3. The Role of QDA Software

The introduction of QDA software has greatly influenced the way researchers work, and the end of its impact is yet to be seen (EVERS, 2011). MARSHALL (2000), analyzing an e-mail discussion on the Qualsoft-list regarding practical analysis tips from several researchers, pointed out that analysts may find themselves in a "coding spasm" for several reasons:

- Researchers running out of time because they are overwhelmed by the amount of data and doubtful of their ability to deal with it.
- Researchers becoming insecure about the moment of ending the analysis. Which level of refinement should be strived for? Does theoretical saturation mean the end of coding?
- Researchers being insecure about whether or not QDA software influences and maybe even determines the analysis and to what extent. [11]

In my experience, the first two points are not necessarily a result of the use of QDA software; they come with the territory of qualitative analysis. Such software does, however, make it much easier to process the data and increases the number of possible choices in analytic techniques and tactics. This surely will add to the insecurity, although insecurity basically is a result of either a lack of analytic experience or of methodological knowledge. This article addresses these points by developing a categorization of analysis methods and a non-exhaustive exemplary listing of analysis techniques, tactics and strategies and their possible combinations, which may aid researchers in choosing the appropriate approach. [12]

4. Coding Versus Analysis Methods

Just like the term *analysis* is being used and defined in several ways, so are the terms *code* and *coding*. Some authors see coding as part of a more structured procedure, in which codes are mutually exclusive categories (e.g., DEY, 2005 [1993]). Others consider coding as a differentiating device between distinct analytic tactics or strategies, i.e., between GTM and content analysis (e.g., SCHREIER, 2012, 2014). Some see codes as a technical instrument to sort data (COFFEY & ATKINSON, 1996; RICHARDS & RICHARDS, 1992), while others see it as an instrument only dealing with content (HENNINK, HUTTER & BAILEY, 2011). Thus, the terms *code* and *coding* are both used from either an interpretive perspective or from a more positivist perspective. This can be partly explained from a historical point of view: in designing a survey, investigators used to compile a "codebook" to deal with the answers given. When QDA software was introduced using "codes," some authors were anxious about losing the specific nature of qualitative research[5] as they associated the term code with a deductive approach, comparable to survey research. This anxiety has become less evident now that QDA software is slowly becoming more accepted after its introduction in the 1980s (EVERS, 2011). [13]

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5   Currently, a similar anxiety is surfacing as a result of the concept of text mining being introduced in QDA software, due to the growing amount of big data available (cf. WIEDEMANN, 2013).

Coding in qualitative analysis is essentially a how-question: *How* is the researcher working the data in order to answer the research question? This can be done, for example, by *reading, interpreting* and *re-reading* in consideration of earlier texts, much the same as in the hermeneutic tradition of reading bible texts. Or it can be done by *fragmenting* the data into smaller bits and *coding* and adapting them as in a grounded theory approach. Yet another way of dealing with the data is, for instance, *sorting* photos of the same type of artifact by color or form. The use of QDA software has blurred the boundaries between the three types of "coding" mentioned above, i.e., (re-) reading, fragmenting and sorting. Software enables one to combine different types of "coding" as well as providing a *software tool*.[6] For that reason, I will from here on refer to *coding*[7] as *processing the data, which is* defined as: The *actual manner* in which the researcher *works* with the data to make them *interpretable*. This is done by using several procedures and software tools, e.g., reading, highlighting, segmenting, linking codes to data segments, hyperlinking data segments to each other and sorting data segments by code or by hyperlink. I will use the term *coding* for the use of the software tool. [14]

Segmenting the data into smaller units can be done on different levels, according to the unit of analysis employed. A *code*, then, will be defined here as typifying a data segment with one or several catch words, aiming to make the dataset searchable, manageable, interpretable and manipulable. Depending on the analysis method used, the code can either point to the *content* of the segment, its form, or a *formal characteristic,* such as turn taking or the interview question posed. In addition, the abstraction level of codes may vary, as does the relatedness to other codes. [15]

The code(s)[8] and hyperlinks used on the segment can—on a content level—deal with several aspects of the segment, and this brings us close(r) to an analysis method. In this article, an *analysis method* is defined as: [16]

The mode(s) a researcher chooses or designs to *interpret* the data and *reflect* on them while considering the research question(s), using QDA software. Choices are made to focus on *specific aspects* in the data; to interpret these aspects in a *transcendent* way; *reflect* on them considering the data as a whole and *relate* them to other aspects in order to answer the research question. This might lead to additional data collection and analysis. [17]

Actually, the question then is: *What* are you looking for in the data? The answer will determine the shape of the analytic technique(s), tactics and strategy you will use, the type of codes and other software tools you will use and how you will be re-reading and re-interpreting the data to reach a full understanding of them. [18]

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6   In some QDA software a code is called node.

7   You might wonder why I did not keep the more widely used term "coding"? I decided for *processing the data* because with all the new options and tools becoming available within QDA software, qualitative analysis is so much more than merely "coding" the data. In some software, there is a multi-dimensional space in which you work with the data and link them in different ways. Coding is too simple a term for those spaces and the end of it is yet to be seen.

8   Some authors call them "labels," in QDA software they are termed "codes" or "nodes" and in some disciplines within humanities they are termed "annotations."

5. Simplifying Thick Analysis: A Categorization of and Motto for Analysis Methods

To facilitate the use of thick analysis, I have developed a categorization of *analysis methods.* I make a distinction between *analytic techniques*, *analytic tactics* and *analytic strategies*[9]; together they form the *analysis methods* one can choose from. All three of them will probably be employed during a qualitative analysis, but how and in which order is a decision the researcher will make differently in each project. In Figure 1 they are illustrated.
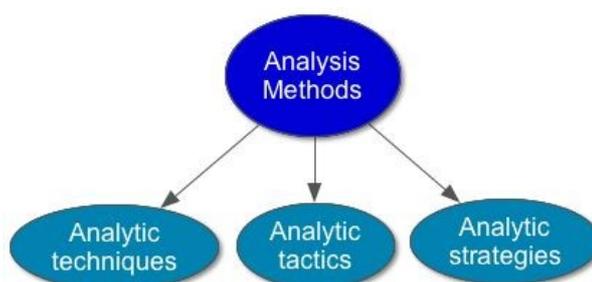

Figure 1: Categorization of analysis methods [19]

By designing a *motto* for each one of them as well, I intend to make their prime goals intuitively clear. This can help the researcher in making a clear distinction between them[10] and to see when they are appropriate during the research process. Sometimes the analysis method(s) will be decided on beforehand, at other times during analysis. The three analysis methods are defined in the table below:

Analysis method	Motto	Definition
Analytic techniques	*Searching and finding*	In using analytic techniques, the researcher is trying to decide: What is in *this segment?* Mostly, the aim is to make the dataset searchable: *What* is in the data? Coding and hyperlinking are the software tools used and they are mainly utilized as a search strategy to (re-) organize the dataset with regard to certain aspects in which the researcher is interested. Codes and hyperlinks can be based on either the content of the segment, its form, or formal aspects and they can be designed either from an inductive, deductive or abductive reasoning perspective. Interpretation will mainly take place on the level of the data segment.

9 One might interpret these terms as being part of a hierarchical process, analogue to military operations where these terms have been in use for a long time. This is not how I propose to use them here, as I do not think these categories to be hierarchically organized. I chose these terms, as each one of them seemed the best term available for the process the analyst goes through in analyzing the data.

10 In existing categorizations, several code types seem to overlap, as well as the different phases that are distinguished. This categorization tries to repair that.

Analysis method	Motto	Definition
Analytic tactics	*Connecting*	The question using analytic tactics is: What do *these codes* or *other software tools* used in different analytic techniques tell me about the dataset and are they in some way related? Interpretation now is on or between *groups of segments.*Codes used earlier can be the instruments to further the analysis now, but other software tools—like hyperlinks or visualization tools—can be used as well. The aim is to re-use analytic techniques on a higher level of abstraction to see what is in the data and how this can be combined with other apparent themes or findings. Codes can be categorized or a typology constructed, groups of segments can be compared for differences, similarities, patterns or indeed the absence of issues that were expected to be present. Relationships between categories can be explored, either in the way grounded theory prescribes it, or in an eclectic manner designed by the researcher based on the data.
Analytic strategies	*Transcending interpretation*	The questions at hand when applying analytic strategies are: How can the *analysis results* of the different techniques and tactics be *connected*? And: What are these *combined results* telling me about the *empirical world*? In applying analytic strategies, you are combining the *results* of several analytic techniques and tactics in a transcending manner, sometimes by recoding or re-arranging the data. These strategies are applied on an even more aggregated level; hence, their target is the *total dataset.* This might entail the last phase of well-known research methods like grounded theory, ethnography or case studies. On the other hand, you might want to combine several analytic techniques and tactics in an eclectic manner. Interpreting the whole of the dataset in such a transcendent way is aimed either at exhaustively describing the phenomenon at hand, explaining it, or developing some theory about it.

Table 1: Analysis methods: types, mottos and definitions [20]

The description of the three categories of analysis methods in Table 1 might seem to reflect a linear process. If the researcher uses a well-prescribed analysis method like GTM, this indeed is a linear process. In that case, the researcher starts the process from the analytic techniques level by coding the data line by line, and then works through the tactics and strategy level to get at the theory that

was the aim of the analysis in the first place. But the main argument in this article is to step away from that kind of linearity, and to choose and use analysis methods more creatively, deciding on any of the three categories and working the data accordingly. So, on the one hand, there is a certain *sequence* in the process, such that if one starts from the analytic tactics viewpoint, some analytic techniques need to be used to enable one to get to a result. At the same time, one can start from the analytic techniques viewpoint and leave it there, just describing what is in the data without looking further for connections or aiming at an exhaustive transcending interpretation of the data. On the other hand, one can start from the viewpoint of an analytic strategy, by deciding to combine several analytic tactics. An exemplary overview of tactics, techniques and strategies is illustrated in Figure 3. A listing of possible combinations of tactics with techniques or other tactics is presented in Table 2 and a listing of possible combinations of strategies with tactics is presented in Table 3. The manner in which analytic tactics, techniques and strategies intertwine to get at the final research report is illustrated in Figure 2. [21]

Processing the data thus to my mind is an eclectic operation; there is no one-and-only way for analysis and several techniques and tactics might be combined. The code system and other tools used to arrange the data remain provisional until the analysis is finished. In all of these processes, QDA software greatly enhances the possibilities and ease of combining. Still, the researcher is doing the thinking and even automated processes will need careful design and consideration beforehand. The result of analysis might be a transcended synthesis of the data; either as a simplified description of them, an explanation of certain phenomena or a theory. All these processes are described in Figure 2:
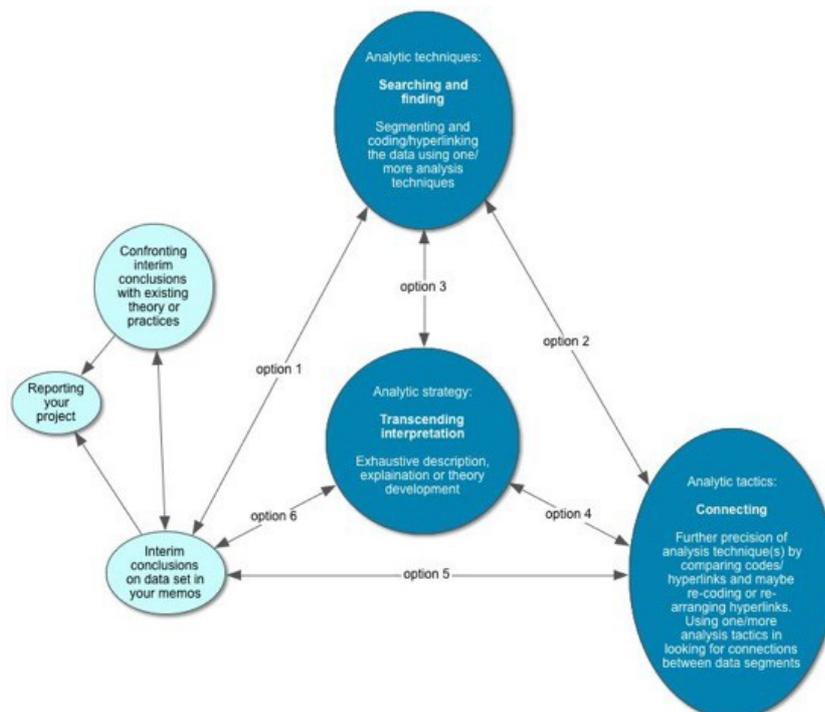

Figure 2: The analysis process [22]

Reflection is central throughout the whole process and as such, at the heart of this model although it is not represented here visually. After the initial start of analysis with one or more analytic techniques, starting either from the viewpoint of technique(s), tactics, or strategy, several options are outlined:

• Option 1: Formulating interim conclusions on the dataset based on analytic techniques, leading to a report;
• Option 2: Either moving from the analytic technique(s) used to tactic(s), or from tactic(s) to technique(s);
• Option 3: Moving either from analytic technique(s) to strategy, or from strategy to technique(s);
• Option 4: Moving either from analytic strategy to tactic(s), or from tactics to strategy;
• Option 5: Formulating interim conclusions on the dataset, based on the results of analytic tactic(s);
• Option 6: Formulating interim conclusions on the dataset, based on the interim results of analytic strategies. [23]

This model visualizes the different choices available to inform the process[11]. Ideally, the choices will be based on the research goal combined with the interim analysis results in interaction with theoretical notions or practices, but in reality, time and money constraints play an important role. These will be dealt with in section 9. [24]

Central to the model is the reflection done by the researcher during the whole of the process and laid down in memos in QDA software. In the *reflection process* during the analysis of your data, several issues might arise which need to be dealt with in your memos:

• Which analysis methods are applied and why?
• Do the data meet the quality standards, or should part of the dataset be excluded due to, e.g., steering questions or missed opportunities to probe?
• Is additional data collection wanted and if so, what and how?
• What is my role during data collection and analysis? Are my preferences (too) fixed? Are there any distortions or blind spots?
• How is the process organized? Am I keeping track of all choices made? Am I defining my codes so that they describe what can be found in the data and can I use them consistently?
• Am I keeping track of interim results and conclusions, even if the result is contrary to my expectations, negative, or not present? [25]

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11 Not in the model, but surely part of it, is the option to collect additional data, based on interim analysis results.

6. Thick Analysis, an Exemplary Overview of Possibilities

As mentioned earlier, the categorization in *analytic techniques, analytic tactics* and *analytic strategies* was created for different reasons:

- to create an exemplary overview of analysis methods available;
- to categorize the different analysis methods in such a manner that overlap within the categories was kept to a minimum and they would really be complementary to each other;
- to produce an overview that triggered the creativity of the researcher by showing all kinds of combinations of analysis methods. [26]

Figure 3 presents the overview, showing the analysis methods found in a selection of methodological literature[12]. Several new techniques are also introduced in the overview: argumentation codes, CA codes,[13] MCA codes[14] for membership categorization analysis, pragmatic open codes and pragmatic in-vivo codes. Some were triggered by the introduction of QDA software, e.g., argumentation codes, CA codes and MCA codes. The figure is purposefully made in a web format, to underpin my conviction that this process is a "jumping exercise," based on the creativity and insight of the researcher in dealing with the theoretical and empirical side of the project, which is made much easier by using QDA software. This "web" can be regarded as an overview of possible analysis methods to be employed and the analyst can start from any point in the picture. The three categories of analysis methods introduced earlier, i.e., analytic techniques, tactics and strategies, each form a possible starting point for the researcher's analysis. The nodes belonging to each category form collections within a group and in that sense might be seen as a hierarchical structure, but I prefer the idea of sets, as all the nodes from each category can be combined in all kinds of ways. The analyst might decide to combine nodes *within* the category or *between* categories, depending on the data and the research question. In a research project, all three of the categories, i.e., analytic techniques, analytic tactics and analytic strategies, can be used in whatever constellation and sequence.

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12 In alphabetical order: BOGDAN and KNOPP BIKLEN (2007), CHARMAZ (2006), COFFEY and ATKINSON (1996), COPI and COHEN (2005), DE BOER (2011), DORST (2015), ELLIOTT (2005), EVERS (2010, 2015a), EVERS and VAN STAA (2010), GIBSON and ZELLMER-BRUHN (2001), GLASER (1978), GLASER and STRAUSS (1967), GRAUMANS and VAN DEN BERG (2011), GUEST, MacQUEEN and NAMEY (2012), HENNINK et al. (2011), LeCOMPTE and SCHENSUL (1999), LÉVI-STRAUSS (1969 [1949]), McGREEVY (1994), MILES and HUBERMAN (1994), MILES, HUBERMAN and SALDAÑA (2014), PATTON (2002), PRÖPPER and BLEIJENBERGH (1995), SALDAÑA (2013 [2009]), SCHMITT (2005), SEALE (1999), STARING (2015), STRAUSS (1987), STRAUSS and CORBIN (1990, 1998), TEN HAVE (2007, 2011a, 2011b), TESCH (1990, 1992), THOMAS and ZNANIECKI (1918-1920), VAN DEN BERG (2011), VAN EEMEREN and SNOECK HENKEMANS (2011), VAN GORP (2015), WESTER (2006), WILLEBOORDSE (2015), WOLCOTT (1994).

13 CA codes are used in conversation analysis

14 MCA codes are used in membership categorization analysis, a type of discourse analysis (VAN DEN BERG, 2011).
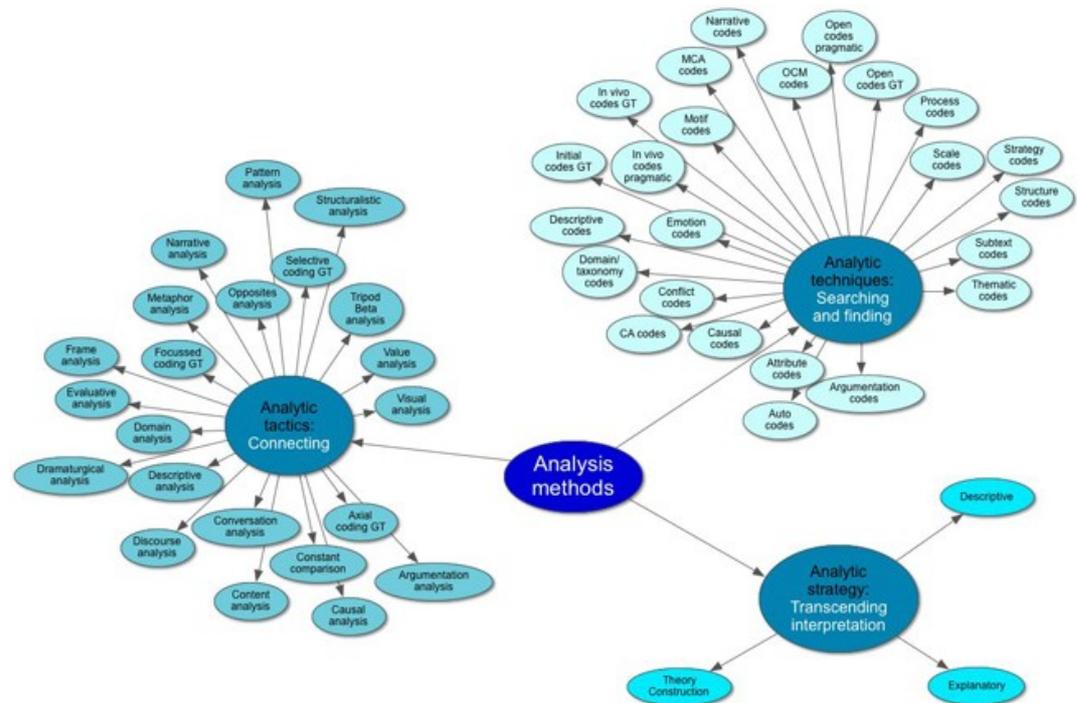
Figure 3: Exemplary overview of analysis methods in qualitative analysis [27]

Let's have an example of how this might work. Assume that the researcher starts the analysis by choosing (deductively oriented) thematic codes, derived from a literature review and conceptual framework as a descriptive analytic strategy, thus combining an analytic technique with an analytic strategy. The researcher then finds that the dataset contains many metaphors, writes a memo about this and decides for a metaphor analysis as well (DORST, 2015), thereby adding an analytic tactic to the process and using in-vivo codes and auto codes as an analytic technique to get there. In (re-)coding the data for metaphors, the researcher might develop the idea that certain "frames" are apparent in the metaphors used, looks at some interim results to check for this idea and finds it favorable. The researcher writes a memo about it[15] and decides to add another analytic tactic: a frame analysis (VAN GORP, 2015). Trying to reach at the frames underlying the text, the researcher uses open codes and specific frame-related thematic codes as an analytic technique, and a descriptive analysis alongside the metaphor analysis already done. The metaphor analysis has now become part of the frame analysis, which was not the intention when the researcher started out. In order to create the underlying frames, the researcher might need to collect additional data, maybe even adding different data sources to the sample. Of course, this will be noted in a memo about the sampling techniques used in the project. To reach an overall conclusion on the dataset as a whole, the researcher might opt for a pattern analysis (MILES & HUBERMAN, 1994) based on all of the coding done. [28]

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15 In the event it did not seem likely, (s)he would have written a memo about that.

The point made here is that qualitative analysis may be seen as a web of possibilities, open to the researcher to use and combine in creative ways, as such drilling deeper into the data from differing angles, enhancing their understanding of the respondents' world and making better use of the time invested to collect them. That is what we have termed *thick analysis* earlier (EVERS & VAN STAA, 2010) and what is being proposed as a new standard for qualitative analysis here. [29]

7. Thick Analysis: Listing Some Examples of Combining Tactics, Techniques and Strategies

To enable you to easily combine different analysis methods I have developed the categorization and mottos mentioned in Table 1 and Figure 3, described the several nodes in each group and thought through which ones might be combined (EVERS, 2015a). Possible combinations of analytic techniques for each analytic tactic and each analytic strategy are listed in the next two tables[16]. These tables, then, might function as a teaser on behalf of thick analysis. However, I would like to invite readers to think about yet other combinations that might fit specific data and research goal(s). [30]

In Table 2, the analytic techniques, which might be used in combination with the different tactics, mentioned in Figure 3 are shown. In Table 3, possible combinations of analytic strategies with techniques and tactics are shown.

Analytic tactics	Possible analytic techniques and/or analytic tactics[17]
Argumentation analysis	Argumentation codes, CA codes, causal codes
Axial coding GTM	Initial codes GTM[18]
Descriptive analysis	Attribute codes, descriptive codes
Causal analysis	Causal codes, open codes pragmatic[19], process codes

16 As they are based on the literature mentioned earlier, they form quite a good overview of what is out there but they cannot be exhaustive.

17 This will depend on the research goal and question.

18 GTM stands for grounded theory methodology, one of the best-known and applied analysis strategies. Several "schools" currently exist (CHARMAZ, 2006; CLARKE, 2005; CORBIN & STRAUSS, 2008; GLASER, 1978; GLASER & STRAUSS, 1967; STRAUSS & CORBIN, 1998) and the terminology of these schools is distinguished separately in the table.

19 In my experience, researchers "borrow" several analytic techniques and tactics from GTM but use them in a more pragmatic manner. In the table they are therefore distinguished.

Analytic tactics	Possible analytic techniques and/or analytic tactics
Constant comparison	Attribute codes, descriptive codes, causal codes, conflict codes, domain/taxonomy codes, emotion codes, initial codes GTM, in-vivo codes GTM, MCA codes, motif codes, narrative codes, OCM codes[20], open codes GTM, open codes pragmatic, process codes, scale codes, strategy codes, subtext codes, thematic codes
Content analysis	Attribute codes, auto codes, thematic codes
Conversation analysis	Descriptive codes, CA codes, open codes pragmatic
Discourse analysis	Axial coding GTM, constant comparison, focused coding GTM, MCA codes, open codes GTM, thematic codes
Domain analysis	Auto codes, in-vivo codes GTM, domain/taxonomy codes
Dramaturgical analysis	Attribute codes, conflict codes, emotion codes, motif codes, strategy codes, subtext codes, metaphor analysis, opposition/contrast analysis, visual analysis, value analysis
Evaluative analysis	Argumentation codes, attribute codes, descriptive codes, causal codes, emotion codes, in-vivo codes pragmatic, narrative codes, open codes pragmatic, process codes, scale codes, thematic codes
Frame analysis	Open codes pragmatic, thematic codes, descriptive analysis, metaphor analysis
Focused coding GTM	Initial codes GTM
Metaphor analysis	Auto codes, in-vivo codes pragmatic
Narrative analysis (LABOV[21])	Conflict codes, emotion codes, motif codes, narrative codes, process codes, strategy codes
Pattern analysis	Descriptive codes, CA codes, causal codes, conflict codes, emotion codes, in-vivo codes GTM, in-vivo codes pragmatic, MCA codes, open codes GTM, open codes pragmatic, process codes, scale codes, thematic codes
Selective coding GTM	In-vivo codes, open codes GTM
Structuralistic analysis	Attribute codes, causal code, domain/taxonomy codes, in-vivo codes pragmatic, OCM codes, process codes, thematic codes
Opposition, contrast analysis	Causal codes, conflict codes, emotion codes, motif codes, open codes pragmatic, process codes, strategy codes, subtext codes

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20 Outline of cultural materials is an index created by Yale University to archive the Human Relations Area Files, an enormous collection of ethnographic field notes and other data from the whole world (SALDAÑA, 2013 [2009]).

21 For an explanation of LABOV's method of narrative analysis, see COFFEY and ATKINSON (1996) or ELLIOTT (2005).

Analytic tactics	Possible analytic techniques and/or analytic tactics
Tripod Beta analysis	Descriptive codes, causal codes, conflict codes, scale codes, thematic codes
Visual analysis[22]	Attribute codes, conflict codes, emotion codes, in-vivo codes pragmatic, MCA codes, motif codes, narrative codes, OCM codes, process codes, scale codes, thematic codes, argumentation analysis, conversation analysis, discourse analysis, dramaturgical analysis, frame analysis, metaphor analysis, narrative analysis, structuralistic analysis, contrast/opposition analysis, value analysis
Value analysis	In-vivo codes GTM, in-vivo codes pragmatic, open codes GTM, open codes pragmatic, thematic codes, axial coding GTM, discourse analysis, focused coding GTM, selective coding GTM

Table 2: *Connecting*: Possible combinations of analysis tactics with techniques and/or tactics

Analytic strategy	Applicable analytic techniques and/or analytic tactics
Descriptive (example: ethnography, case study)	Auto codes, axial coding GTM, causal analysis, constant comparison, content analysis, domain analysis, evaluative analysis, focused coding GTM, metaphor analysis, narrative analysis (LABOV), pattern analysis, structuralistic analysis, opposition/contrast analysis, visual analysis, value analysis.
Explanatory (example: analytic induction, case study, ethnography, GTM)	Argumentation analysis, axial coding GTM, causal analysis, constant comparison, content analysis, conversation analysis, discourse analysis, dramaturgical analysis, evaluative analysis, focused coding GTM, narrative analysis (LABOV), structuralistic analysis, opposition/contrast analysis, tripod beta analysis, visual analysis
Theory construction (example: analytic induction, case study, GTM)	Argumentation analysis, axial coding GTM, causal analysis, constant comparison, conversation analysis, descriptive analysis, frame analysis, focused coding GTM, pattern analysis, selective coding GTM, structuralistic analysis, tripod beta analysis, visual analysis, value analysis

Table 3: *Transcending interpretation*: Possible combinations of analysis strategies with tactics and techniques [31]

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22 Visual analysis might use photographs of observations done by the researcher, but it might also handle pictures or movies made by other persons. To this end, quite different analytic techniques or analytic tactics might be utilized.

8. Other World by M.C. ESCHER: The Perfect Metaphor for Thick Analysis

Several viewpoints can be used during qualitative analysis, leading to analysis triangulation. We have argued for *thick analysis* earlier (EVERS & VAN STAA, 2010), as a process in which several analysis methods are used simultaneously or subsequently in a systematic and creative way, thus providing you with a much broader and deeper understanding of your data. [32]

The wood engraving: *Other World* by M.C. ESCHER (1947), which I stumbled upon while writing my book on qualitative analysis (EVERS, 2015a), intuitively seemed a perfect image of the idea of triangulation, as it pictures the surface of the moon and outer space from two different viewpoints, while at the same time picturing both a horn and a Simurgh from three different angles, as is visible in Figure 4:
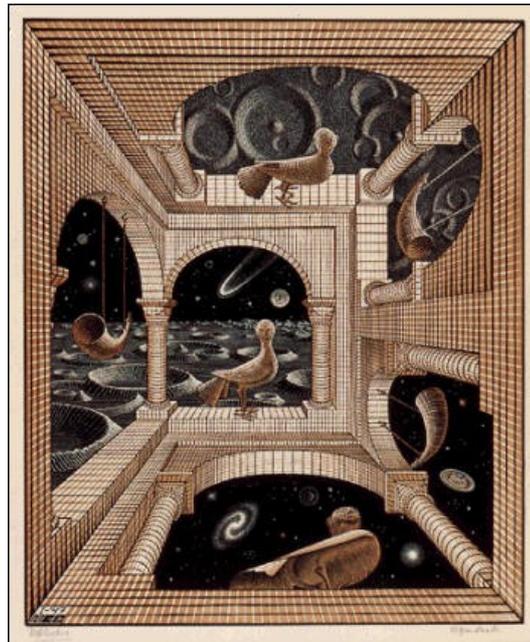

Figure 4: M.C. ESCHER's "Other World," © 2015, The M.C. Escher Company, the Netherlands[23] [33]

Mickey PILLER, the curator of the Escher Museum in the Netherlands describes the role of *movement* in ESCHER's work as follows:

"And then, to my amazement, I slowly discovered another, fourth, type of movement that goes on inside your head as you try to unravel and make sense of a special work of art. In the case of Other World, you will be amazed at what you can see if you take the time and the effort to look closely at the work" (2013, n.p.). [34]

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23 All rights reserved. Used by permission, http://www.mcescher.com/.

This observation makes the image even more applicable. You could easily replace the words "a special work of art," and "Other World" for [your data] and "the work" for [them]:

> "And then, to my amazement, I slowly discovered another, fourth, type of movement that goes on inside your head as you try to unravel and make sense of [your data]. In the case of [your data], you will be amazed at what you can see if you take the time and the effort to look closely at [them from different angles]" (ibid.). [35]

This concept of movement matches perfectly with the creativity and flexibility inherent to *thick analysis*, but it even goes further, as a qualitative researcher needs this movement taking place in the mind, both in dealing with the process of data collection *and* analysis. As such, it is a prerequisite for good qualitative research, and thus a beautiful metaphor for the underlying implication of my message! [36]

9. Practicalities of Thick Analysis: Planning the Analysis

Taking into account all the possibilities mentioned earlier, a thick analysis indeed might become very "thick." Planning ahead, then, is advised to prevent disturbing events from happening. The planning of your thick analysis has several implications, however, as it adds on to the cyclical nature of qualitative research already mentioned in Section 2:

- Start thinking about your thick analysis during the design phase of your project, as this might involve collecting specific (types of) data. For example, if you plan on a metaphor analysis as part of your thick analysis, you might familiarize yourself with metaphors used in the domain you are researching, so as to "hear" them during data collection as well as to perhaps purposively elicit them (EVERS, 2015a, 2015b).
- Do you have access to QDA software, or do you need to buy that? At what cost? In selecting QDA software to use for your project, take into account the tools available to perform certain analytic tasks. All of the software on the market will have codes and memos available, but what about other annotation tools? Hyperlinking tools? Visualization tools? For thick analysis, you will profit from having these tools available.
- Are you already familiar with the use of (this) QDA software, or do you need some training? At what cost?
- Planning on QDA software purchase and training: start using your QDA software right from the beginning of your project as you might consider doing your literature review in such software as well.
- Plan beforehand several rounds of data collection and analysis, as it will enable you to build in additional activities during the project, based on your advancing understanding during analysis. See the example mentioned earlier about an unraveling thick analysis. In this example, the researcher might have decided on additional data collection, varying data sources and data types to inform both the metaphor analysis and frame analysis;

- Whatever analysis methods you choose, you will need to read, view and re-read or re-view *all* textual and visual data at least once. This is a requisite for a thorough understanding and grounded interpretation of the data; it is needed to enable you to connect different parts of the data.

- Having said that, it is not always necessary to analyze *all* data with the same thoroughness or with every analysis method you are using in your thick analysis. It is certainly possible, in combining different analysis techniques and tactics, to analyze only those parts of the dataset that are compliant with the analysis method chosen.

- Qualitative data analysis is time consuming, although the time needed will vary based on your experience with analysis and QDA software. Applying thick analysis to your data will even be more time consuming than using just one analysis method for a descriptive result. In general, the more detailed and/or complicated the analysis methods used, the more time needed. For example, coding for attributes will be far less time consuming than both coding and hyperlinking for an argumentation analysis. Thematic coding is a faster way of processing your data, assuming codes are well defined, compared to, for instance, open coding in GTM or CA. Those types of coding are even more complicated. Therefore, it will help to plan your time amply when considering thick analysis. [37]

In the end, your thick analysis will result in an in-depth understanding of different aspects of your dataset. As such, it will deliver a far more comprehensive understanding of the empirical world you have researched and I really hope this article has convinced you to give it a try. To speak in terms of Escher's Other World: let the movement in your brain begin! [38]

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Citation