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Phenomenology and Qualitative Data Analysis Software (QDAS): A Careful Reconciliation

Brian Kelleher Sohn

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qualitative
research

Abstract: An oft-cited phenomenological methodologist, Max VAN MANEN (2014), claims that qualitative data analysis software (QDAS) is not an appropriate tool for phenomenological research. Yet phenomenologists rarely describe how phenomenology is to be done: pencil, paper, computer? DAVIDSON and DI GREGORIO (2011) urge QDAS contrarians such as VAN MANEN to get over their methodological loyalties and join the digital world, claiming that all qualitative researchers, whatever their methodology, perform processes aided by QDAS: disaggregation and recontextualization of texts. Other phenomenologists exemplify DAVIDSON and DI GREGORIO's observation that arguments against QDAS often identify problems more closely related to the researchers than QDAS. But the concerns about technology of McLUHAN (2003 [1964]), HEIDEGGER (2008 [1977]), and FLUSSER (2013) cannot be ignored. In this conceptual article I answer the questions of phenomenologists and the call of QDAS methodologists to describe *how* I used QDAS to carry out a phenomenological study in order to guide others who choose to reconcile the use of software to assist their research.

Table of Contents

- [1. Introduction](#)
- [2. Phenomenologists' Objections](#)
- [3. General Issues and Trends with QDAS Use](#)
- [4. The Technologists' Call](#)
- [5. The Reconciliation](#)
- [6. Recommendations](#)
 - [6.1 Keep your feet inside and outside the study](#)
 - [6.2 Bracketing](#)
- [7. Conclusion](#)

[References](#)

[Author](#)

[Citation](#)

1. Introduction

With the growing use among researchers of qualitative data analysis software (QDAS), careful consideration must be given to its employment. It is important for researchers, grantors, and the public to know that the use of QDAS is not a methodology nor a marker of quality: if cabinetmakers say they use dove joints, it indicates nothing about the value of their products. Calls for clarity regarding *how* QDAS is used have been issued by some (e.g., PAULUS, WOODS, ATKINS & MACKLIN, 2015; WOODS, PAULUS, ATKINS & MACKLIN, 2015), but examples of QDAS use are particularly important for phenomenologists because prominent phenomenological methodologists argue *against* its use. [1]

Most phenomenologists suggest reading and re-reading texts and put forth careful explanations of the attitudinal stance that should guide ways of thinking phenomenologically (e.g., GIORGI, 1997, 2007; SOHN, THOMAS, GREENBERG & POLLIO, manuscript in review; THOMAS & POLLIO, 2002; VAN MANEN, 2014) or talk extensively of writing as method (e.g., VAN MANEN, 2014), but do not sufficiently explain the tools to be used: paper, pencil, computer? A recent review of literature regarding phenomenological methodology completely ignores the topic of QDAS (FINLAY, 2012). [2]

One of the foremost living scholars in phenomenological methodology, Max VAN MANEN, claims that qualitative data analysis software (QDAS) is not an appropriate tool for phenomenological research. For VAN MANEN (2014), using "special software" may facilitate thematic analysis in such genres as grounded theory or ethnography, "but these are not the ways of doing phenomenology" (p.319). He goes on to say that coding, abstracting, and generalization cannot produce "phenomenological insights" (ibid.). [3]

Critiques of phenomenology are widespread (LANGDRIDGE, 2008; PALEY, 2017; POTTER & HEPBURN, 2005), and as a major genre of qualitative research it is difficult to pin down, but for the sake of this article, I present a brief set of goals for phenomenologists (see FINLAY, 2012, for a relatively thorough review of issues in phenomenological research). Phenomenologists seek to describe or interpret the essence and meaning of lived human experience. They seek what is hidden beneath the accumulation of taken-for-granted assumptions that make up most human knowledge of the world. They tend to conduct analysis without a priori theories such as those of the social sciences, hard sciences, and post-structuralisms, with a focus instead on the every-day, first-person accounts of phenomena. With VAN MANEN in particular, the end result of phenomenological research must be writings that help readers "gnostically" and "pathically" to know and feel the phenomenon in question (2014, p.268). [4]

DAVIDSON and DI GREGORIO (2011) urge QDAS contrarians such as VAN MANEN to get over their methodological loyalties and join the digital world, claiming that all qualitative researchers, whatever their methodology, perform the same processes of disaggregation and recontextualization of texts—processes aided by QDAS. They note that "arguments ... against the use of technology...are arguments about issues that are in the realm or control of the researcher and are not a function of the technology itself" (DAVIDSON & DI GREGORIO, 2011, p.638). I agree that qualitative researchers are agentic actors in the choices they make to use QDAS, notecards and highlighters, or some combination of software and (more) manual methods. Yet we must not treat QDAS as neutral—as with any other technology, its architecture affects its users and the research they produce. [5]

The purpose of this article is to first examine the objections phenomenologists have in relation to QDAS (Section 2), to then contextualize those concerns within the growing body of literature on its use (Section 3), and then to listen to and challenge the siren call of the technologists (Section 4). In section 5, I describe

the ways in which I used a particular QDAS, MAXQDA, for my dissertation, a phenomenological case study of the student experience of other students (SOHN, 2016). In the end I present a set of recommendations, devised through my own work as a phenomenologist who has carefully reconciled the use of QDAS (Section 6). [6]

2. Phenomenologists' Objections

GOBLE, AUSTIN, LARSEN, KREITZER, and BRINTNELL, phenomenologists in the healthcare field, begin their (2012) essay with sound warnings against QDAS framed with McLUHAN's (2003 [1964]) "medium is the message" (p.23) and HEIDEGGER's (2008 [1977]) views on technology as dehumanizing. They describe the ways QDAS affected them and their work, but in the end they make precisely the kind of arguments DAVIDSON and DI GREGORIO (2011, see above) disparage. GOBLE et al. (2012) argue that "through our use of technology we become functions of it" (§1). It is difficult to avoid becoming a tool of our tools: to someone with a hammer, everything looks like a nail. But hammers are the least of our technology—mobile devices provide a more relevant example of how we are changed by the technologies we use. FLUSSER (2013) writes that technology is a trick that extends our reach. Using the lever as an example, he describes the allure of cheating death through leveraging the power of art, artifice, and machines. The reach new technologies provide is a difficult potential to ignore, and for GOBLE et al. (2012), they conducted many more interviews (53) than they normally would have, influenced by the presumed facilitative power of QDAS. [7]

The right tool for the job makes it "easy." It is the facilitation provided by QDAS that GOBLE et al. (2012) take issue with. As ADAMS (2006) notes in regard to PowerPoint software, the majority of users employ default templates, limiting their thinking in particular ways and rendering their presentations sequential and numbing. The processes QDAS facilitates are, for GOBLE et al. (2012), obstacles to phenomenological insight. They describe the problems QDAS brings to their research and how it affects their being in the world. [8]

The first problem GOBLE et al. discuss is coding. As adherents of VAN MANEN's phenomenology, they note that coding is unnecessary. Instead they engage in three levels of reading: "wholistic," "selective," and "for detail" (VAN MANEN, 2014, p.320). The goal of the reading is to become familiar with the texts. While VAN MANEN does recommend highlighting and note-taking while reading, he does not call it coding. But when using QDAS, GOBLE et al. (2012) code so much—because it is easy, because they have so many transcripts, and because they are working with a large research team—that they come to see what they have done as coding for coding's sake. They argue that QDAS leads them to see their interview texts as *data*, zeros and ones that were labeled and organized in a fashion that numbs them (ADAMS, 2006) and prevents them from *being* or *dwelling* with the interview texts in the way required to discover their essence. [9]

The inability to be with and resonate with the texts is antithetical to the spirit of phenomenology and leads to another problem: the divide that forms between the researchers and their data. GOBLE et al. say that when using QDAS they "become separate and distinct from [their] research" (2012, §41). The immersion typically associated with phenomenological research eludes them because they fret over questions such as, "can this be coded?" or "can we enter that into NVivo?" The locale of the research and its analysis, due to the distance they feel, prevents them from the kinds of connection they typically experience, so they employ manual methods to overcome this issue. [10]

GOBLE et al. state that the work of phenomenology is inevitably transformed for the worse with the use of QDAS. They conclude with platitudes such as "with [QDAS] we become certain" (§43) and "with [QDAS] we become language-less" (§44). These poorly-defined problems are not inherent to the technology. If these researchers are swept away while using QDAS, if they make no attempt to familiarize themselves with the common problems researchers have identified with QDAS (e.g., GILBERT, 2002), they must bear at least some of the blame. Had these researchers taken on the large research project they described and avoided the use of QDAS, there is no indication they would have been more successful. [11]

GOBLE et al. (2012) conclude with a dire set of proclamations: that they become "standing reserves" with no potential for messiness and that research becomes just "a problem to be identified and eventually solved" (§44-45). Their underestimation of human ability to make a mess out of anything ordered is noteworthy, as is their "certain[ty]." But whether or not the utilization of QDAS takes users to the depth of dehumanization described by GOBLE et al., there is a set of issues worthy of examination by the qualitative research community generally and phenomenologists in particular: WOODS et al. (2015) found that phenomenologists are not using QDAS as much as other researchers such as grounded theorists (their review was limited to the use of the ATLAS.ti and NVivo QDAS platforms). So whether or not GOBLE et al. (2012) represent an exaggerated experience is not as important as carefully examining issues of QDAS use. [12]

GOBLE et al. (2012) admit that they as the primary researchers were novice QDAS users and for some this may invalidate their critiques. But one does not have to be an expert user to critique a program. Expertise can be the source of blind spots, particularly if one develops automaticity and fails to note how QDAS may affect research processes; it could become a kind of invisible partner. Secondly, they note the issue of placing qualitative research into the rat race of corporatized university systems where they, and other researchers, feel the pressure to use QDAS, whether or not they have experience doing so (see MORSE, 2006 for a discussion of some of the issues leading qualitative researchers in that direction). GOBLE et al. (2012), following VAN MANEN, want to present the research phenomenon through "texts [that] speak to readers at an intuitive as well as cognitive level, creating a way of understanding that is

embodied" (§15). How can one produce a text that is to be embodied when he/she feels forced to use (presumably) disembodied, computerized methods? [13]

The issues phenomenologists face with QDAS are notable, and it is conceivable that the habits of mind (ADAMS, 2006) encouraged by QDAS could impede the processes required to do high quality phenomenological (or other qualitative) research. Some of the specific issues with QDAS that GOBLE et al. (2012) discuss are common among qualitative researchers, and I describe them in a larger context in the next section. [14]

3. General Issues and Trends with QDAS Use

Novice users of technologies tend to employ the default functions of a design (ADAMS, 2006) and the consequences of such use within QDAS have been theorized (FRIESE, 2011) and documented (GILBERT, 2002). For example, multiple empirical studies on the use of QDAS have found that many users spend too much time coding (GARCÍA-HORTA & GUERRA-RAMOS, 2009; GILBERT, 2002), as did GOBLE et al. (2012). As FRIESE (2011) notes, before the advent of QDAS, "[n]o one would ever come close to 1000 or more codes when using the old-style paper & pencil technique" (§12). Identifying the problem is not the same thing as its solution, but it can begin a discussion. [15]

Commonly referred to as the "coding trap" (GILBERT, 2002, p.218), researchers fall into some combination of what they have learned qualitative research involves (coding) and what the program facilitates. MAXQDA, for example, allows for a drag and drop from codes to data or from data to codes. A click of the mouse and a few taps on the keyboard and a new code can be created. There is a perceived quickness and neatness afforded by such a process as compared to shuffling notecards and writing in pencil. GARCÍA-HORTA and GUERRA-RAMOS (2009) refer to the potential to get sucked in to various features of the technology as "data fetishism" and note that coding everything can "[inflate] the results that are to be reported" (p.163). [16]

From a phenomenological standpoint, the facility of coding has the potential to instrumentalize a process that is supposed to be artful, intuitive, and lead to "creative leaps" (CROSS, 2011, p.127) and the use of abductive reasoning (VAN MANEN, 2014). The purpose of phenomenology as VAN MANEN states it is not aided by piles of codes that support a certain theme. Quantity does not provide quality, and phenomenology is aided by uniqueness, not repetition. But repetition is easy with QDAS: GILBERT (2002) quotes one researcher who got into a kind of coding "zone" and "lost sight of where [he was] going, what [he was] analyzing" (p.219). [17]

In FRIESE's (2011) "Computer-assisted [Noticing, Collecting, and Thinking] NCT analysis" (§7), *collection* is central to her process and if there are not a sufficient number of collected coded segments in a category, it "create[s] analytic problems" (§20). It seems that grounded-theory-influenced researchers such as FRIESE suggest the adoption of a tendency of quantitative research: to ignore

outliers. It is possible that analytic categories with few codes represent a critical aspect of a research project. On the other hand, perhaps the category deserves to be ignored, but when working with QDAS, the potential to lose a crucial aspect of a phenomenon can be high for no other reason than it lacks quantity. [18]

Getting bogged down in quantities and the nitty gritty details of coding can take unnecessary time and effort, and can prevent the researcher from gaining a sense of the whole of a phenomenon. For phenomenologists, getting caught up in coding would be most beneficial if, through dwelling and getting lost in the words of participants, they find an example that "reconciles the incommensurable couplet of the particular and the universal" (VAN MANEN, 2014, p.260). But if coding were in some way mindless, it would be a waste of time. It is how one *approaches* the QDAS and coding that can make this difference. [19]

The coding trap is partially a trap because, as GILBERT (2002) points out, analytical power is reduced if the researcher's focus is zoomed in completely on phrases. Distance from the data is required to see patterns or intuit an overall sense of an interview transcript. To know whether or not phrases from various participants that are not literally the same represent an "experiential pattern" (THOMAS & POLLIO, 2002) requires the ability to step away from the particular—the gestalt of the individual interview, for the moment, must be broken. Yet if the researcher feels a coalescence across those dissimilar, particular phrases, a sameness can be asserted. The echo in the other interviews can enrich the particular gestalt of a single individual interview. [20]

This raises an interesting point for GOBLE et al. (2012), who claim that distance is a problem in their use of QDAS. Generally they object that they cannot immerse themselves in the data because of the barriers imposed by the technology. But many QDAS users feel *too* close to their data (GILBERT, 2002), and if GOBLE et al. fell into the coding trap, it is interesting that they coded for coding's sake while feeling distant. Overuse of technical features such as the ability to highlight, click, and code segments of text, rather than draw them in, raised a barrier. Their goal, to find the essence of a phenomenon, was apparently impeded though the segmenting of interview transcripts. This difficulty, even if separated from the use of QDAS, must be considered when authors like DAVIDSON and DI GREGORIO (2011) say all qualitative researchers essentially do the same things. [21]

4. The Technologists' Call

When I heard of QDAS for the first time I was with a doctoral student who showed me the basic features of ATLAS.ti. I messed around with coding and memoing and in subsequent years continued to develop the impression that using QDAS was more efficient, more legitimate, and the thing to do: our university provided free access to three QDAS platforms to encourage their use. I found more direct calls to use QDAS in the literature. [22]

DAVIDSON and DI GREGORIO (2011), some of the top scholars of QDAS, describe the basic functions of QDAS as disaggregation and recontextualization of the data (p.633). They argue that these functions can serve any and all qualitative research paradigms and that any proclaimed differences between the genres are "residue" (p.639) from battles over legitimacy. They urge all qualitative researchers to get over their sad clinging to tradition and join the digital revolution. [23]

This gloss of qualitative research fails to account for substantial differences in grounded theory, ethnography, narrative analysis, and phenomenology, and is typical language harkening to general technology adoption processes. "Come on, luddites, you're slowing us all down." The differences between the products of various qualitative research genres are stark depending on the tools used. Ignoring the differences is only possible when taking a broad view of qualitative research in which all researchers embark on "an iterative process of identifying the questions to be addressed, using the tool to access the data that could illuminate those questions, and through a process of exploration, retrieval, and comparison develop the analysis" (DI GREGORIO, 2011, §8). The same description could be used to define quantitative research or problem solving generally. When you examine an article like Catherine ADAMS' (2006) phenomenological study of PowerPoint, you can see that phenomenology (when true to a specific brand of phenomenology, in her case VAN MANEN's hermeneutic phenomenology), would not have clearly been served by disaggregation and recontextualization of her "data," if she would even have referred to the texts she calls on with that term. [24]

DAVIDSON and DI GREGORIO (2011) cite the work of LEWINS and SILVER (2007) to support the idea that qualitative researchers all engage in similar activities, but POTTER (1996), among the first researchers to conduct an empirical meta-analysis of qualitative methods, created a typology that illustrated clear differences in axiology, process, and final product. Each research genre has particular epistemologies and ontologies. However, other researchers have noted the similarities across *published* qualitative research studies and note the trouble defining the distinctiveness of different approaches in practice (PALEY, 2017). If researchers are not familiar with the paradigms of their genre before they begin using QDAS, they are likely to use default functions of QDAS. This can lead to a unification of different qualitative research methods and reduce the complexity of epistemologies and ontologies and therefore the possibility for rare and unique insights that can be gleaned with such different approaches as discursive psychology (EDWARDS & POTTER, 1992) and phenomenology, for example. [25]

Such "qualification" of the different qualitative research genres has been documented in a review of literature by WOODS et al. (2015). Focusing on ATLAS.ti and NVivo, they found that 326 of the 763 studies only went as far as describing their methods as "qualitative" or as "interview studies." These generic studies are at greater risk of being interpreted as a "just so" account of phenomena and obfuscate the differences between the maps and the territory. I do not discount the need for broad views of social problems, but if qualitative

research is reduced to inductive reasoning and post-positivistic interpretation, we lose the beauty that can be found in the subtleties and exceptions so essential to learning, social justice, and advocacy. [26]

Of the studies in WOODS et al. review, 31 out of 763 employed phenomenology, as compared to 100 which were grounded theory. Even with its well-known history and popularity, grounded theory was still far less common than the generic genres of "qualitative" or "interview study." This dominance may occur due to funding agencies and priorities of journal editors, but another possibility is the influence of QDAS. If one takes seriously DAVIDSON and DI GREGORIO's (2011) idea that all qualitative researchers engage in similar activities, and one sees that many qualitative researchers are shirking the labels of traditional approaches, whether or not researchers claimed a particular research genre becomes less interesting than what procedures they used. [27]

WOODS et al. (2015) found that what researchers usually do with QDAS is "support coding and retrieval of data, differentiate coded data by participant characteristics, and investigate conceptual relationships ... [they also] make analytic processes more transparent, primarily by using program outputs to illustrate their coding processes and research outputs" (p.14). Their conclusion is not dissimilar from DI GREGORIO's (2011) commentary on an experimental conference in which researchers were asked to analyze the same data set with the same research questions using different QDAS platforms. But use, strictly speaking, is not the primary concern of the phenomenologist—rather the important question posed by GOBLE et al. (2012) is, how does using these features affect the researcher's being in the world? The processes DI GREGORIO (2011) and WOODS et al. (2015) described as common among QDAS users are the same ones VAN MANEN (2014) critiques (save for the idea that the analysis process can be more transparent with QDAS—one has a kind of paper trail [KONOPÁSEK, 2008]). But do they *preclude* a researcher from gaining phenomenological insight? And are phenomenologists using QDAS differently? There is a difference between writing with a pencil and typing with a computer, clicking and dragging segments of text and creating a notecard. In the next section I describe how I used QDAS—wary of its affects but eager to take advantage of its conveniences. [28]

5. The Reconciliation

QDAS is often described as a tool (DI GREGORIO, 2011; GILBERT, 2002), but it could also be referred to as a structure. A structure provides support, but also imposes limits. The particular supports or limitations of QDAS can affect the being-in-the-world of the researcher. In my dissertation study (SOHN, 2016), which focused on the student experience of other students in a graduate seminar, I used MAXQDA to organize my documents, identify, label, index, and retrieve text, and to review the development of conceptual understanding of my data. As a phenomenologist in the field of education, I was guided by the writings of THOMAS and POLLIO (2002) and VAN MANEN (2014). I was supported (and limited) by the use of MAXQDA during the analysis and the writing phases of my

dissertation. The goal of this section is not to determine with certainty whether or not MAXQDA was boon or burden but to describe my experience of its use. [29]

I chose to use MAXQDA because I knew my dissertation project was much bigger than any project I had undertaken previously and my paper organization skills are poor. MAXQDA was the only QDAS I could purchase and keep—other programs were sold with yearly licenses. I had no preferences and minimal experience using any QDAS platform—I had recently used MAXQDA to analyze 30 interviews for another research project (PETTIGREW, SOHN, DALTON, CASTILLO & ALLSUP, manuscript in review). [30]

I did not use MAXQDA during the preparation phases of my study. I developed my question, reviewed literature, refined my question, and engaged in a bracketing interview outside of any QDAS platform. I analyzed my bracketing interview with an interdisciplinary phenomenology research group (IPRG) (SOHN et al., manuscript in review; see also THOMAS & POLLIO, 2002) that assisted me in developing an awareness of my positionality regarding my study. I kept a research journal using a word processor, and later copied and pasted it into MAXQDA's *logbook* feature. I experienced this transfer with a feeling of *now I'm really beginning* and a mixture of anxiety and anticipation. [31]

I began to use MAXQDA by uploading interview transcripts and other documents. Unlike some QDAS users, I had engaged in manual coding of some of the printed transcripts before using MAXQDA. Much of this manual coding took place during meetings of the IPRG. My project was a new analysis of data I had been working with for four years as part of a research team investigating phenomenological teaching and learning (e.g., GREENBERG, GREENBERG, PATTERSON & POLLIO, 2015; SOHN et al., 2016). This familiarity may have helped me avoid thinking of the documents as static collections of words to be clicked on for data access—I had heard many of their passages read aloud and discussed in our research group meetings. [32]

I began with *in vivo* coding to identify meaning units in the documents (SOHN, 2016; THOMAS & POLLIO, 2002). I cannot say definitively I managed to avoid the coding trap. In my 25 main documents, I coded 2,290 segments. There was one group of codes that did not relate directly to the findings I eventually reported, and another group of codes used to make re-organized documents for further analysis. Was the ease of coding what led me to develop those unused sets of codes? I certainly would not have developed the codes designed to create new documents without a QDAS, although I would have spent a lot of time copying and pasting in a word processor. Would I have immediately coded more useful segments had I employed strictly manual methods? In my relatively brief experience doing qualitative research (five years), I know that I always have some false starts, with or without a software platform architecture to influence my analysis. In this project, I felt that a fumbling towards what I needed in terms of coding was to be expected. Even though at the time I regretted many of the codes I had created, in the long run I felt that part of my facility in recalling

random segments of data was at least partially attributable to the totality of my coding process. [33]

A potential problem with coding in phenomenology is to lose the context of the coded segment of text, but with a click, MAXQDA retrieves the context of a coded segment (see Figure 1). Whether or not the coding I did was always useful to the final report, it was always a way to further immerse myself in the data, and none of my coding or memoing made me feel that I was dealing with anything other than the words of a living, breathing human. Many phenomenological methodologists call for line-by-line analysis. QDAS facilitated this, and I did not lose the sense of discovery, exploration, and wonder that is supposed to drive phenomenological inquiry. As a life-long rock climber, I have established routes in unexplored areas—I know a sense of freedom when I feel it. And QDAS did not limit this feeling as I coded, re-coded, and wrote analytic memos and research journal entries in MAXQDA. Even if one followed VAN MANEN's dictate that coding is not part of phenomenology, one could read "wholistically ... selectively ... and for detail" (2014, p.320) and write analytic memos of thoughts for each word, line, paragraph, and document, as he recommends.

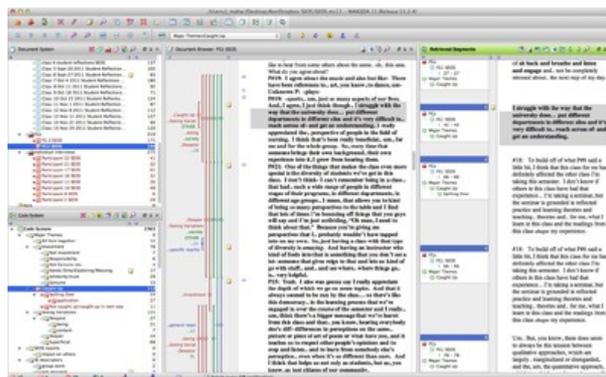


Figure 1: Retrieval and context in MAXQDA. In the right-hand column are codes retrieved by selecting documents and codes (highlighted in the left column). By clicking on the retrieved segments in the right-hand column, their context appears in the middle column. Please click [here](#) for an increased version of Figure 1. [34]

When GOBLE et al. (2012) entered their thoughts into QDAS memos, they had a sense that the thoughts were minimized. But memos are markers that can bring the researcher back to the entire cognitive and non-cognitive experience of a reaction to research data. I used memos relatively frequently: I created 193 total, and they often served to re-orient me to times when a line of data provided revelation. Re-reading my memos from the previous day of work would help me, a father of a toddler at the time of the research project, jump back in to the analysis. Unlike GOBLE et al., I was not less immersed in the data because of QDAS; rather the virtual setting of the texts seems to have *assisted* me in stepping out of my everyday life and into the world of the study. I could hear the voices of participants by listening to recorded audio from the class sessions or interviews, read their reflections, and step into their experiences alongside them. Having the data and codes and memos all in one virtual place allowed me

distance from the data as well, a key to the abductive thinking required for phenomenological insight. [35]

Every four to six weeks while I was conducting my analysis in MAXQDA, I took printed transcripts to an IPRG for discussion, insight, confirmation, contestation, and continued bracketing (SOHN et al., manuscript in review). In these sessions other members would read transcript sections aloud and describe what stood out to *them* about the student experience of other students. These sessions often sparked ideas for further review of literature. For example, in reading a transcript in which a study participant complained about group work, a veteran member of the group recommended I read a prior study that included the famous line from SARTRE's (1989 [1947]) play "No Exit," "Hell is other people" (p.46). The discussion continued with references to more relational phenomenologists such as MERLEAU-PONTY (e.g., 1962 [1945]) and BUBER (e.g., 1970 [1937]). These references, which were called to mind by the transcripts, enhanced my understanding of the human condition in relation to other people, the central concern of my study. [36]

Such departures during the analysis phase were indispensable interruptions from the work of reading and re-reading the data and writing about it within MAXQDA. The importance of closeness to and distance from data in qualitative research has been well discussed (e.g., GILBERT, 2002): we need to be immersed in our data and zoom in on the particular, but we also need to use a wide angle view in order to successfully engage in interpretation or analogy. The research group provided the opportunity to dialogue with veteran and novice phenomenologists with positionalities distinct from my own—they focused in on details I may have skipped and shared broad views on the data that often aligned with mine but sometimes did not. [37]

When I reached what I felt was a powerful understanding of my data (a position that developed over nine months), I began writing the results and discussion sections of my dissertation. It is here, I thought, that all the hard work of coding, indexing, and memoing would pay off. I could just copy and paste my results chapter into existence! And this was the most surprising drawback of using QDAS—the ease with which I could retrieve segments of texts turned writing into a chore. I began by copying and pasting into an outline, but after a few lackluster days I found myself avoiding writing despite looming deadlines. [38]

For me, it was this step—going from a finished analysis in MAXQDA to the writing of the report—where phenomenology suffered the most. I can imagine that for a grounded theory or content analysis study, copying and pasting from the retrieve functions of a QDAS would be time-saving. But copying and pasting does not serve when the goal of phenomenological writing is, as MERLEAU-PONTY puts it, to

"[bring] the meaning [of a phenomenon] into existence as a thing as the very heart of the text, it brings it to life in an organism of words, establishing it in the writer or the reader as a new sense organ, opening a new field or a new dimension to our experience" (MERLEAU-PONTY, 1968 [1964], p.182). [39]

To break out of the MAXQDA-facilitated writing rut, I returned to reading MERLEAU-PONTY and VAN MANEN (2014). Van MANEN writes that the goal of phenomenological writing is to "bring experience vividly into presence" (p.241). The writings of these phenomenologists helped me to re-examine my data interpretations to find what in them *stirred* me. I prioritized those findings and got back to work with MAXQDA as an assistant to, rather than the driver of my writing. [40]

6. Recommendations

QDAS is not a neutral tool, but we as researchers can develop deep foundations in the epistemologies and ontologies of our genre to avoid the traps some methodologists claim are inherent in its use. As a researcher new to using QDAS, SCHUHMANN (2011) worried that the structure of QDAS platforms would limit creative interpretation. She later concluded that the interface with a QDAS platform "adds a layer of interpretation to qualitative analysis as one has to know how to 'read' a software package" (§2). This additional layer, the interface between user and QDAS platform, is where the following recommendations will best serve researchers. In my case, I found that I coded to immerse myself in my data without feeling as if it were chopped into little bits. I analyzed within MAXQDA using the memo and logbook features without over-systemizing my thoughts. When I did feel as if MAXQDA was hurting my study, I returned to the IPRG and reread phenomenological writings to reignite my motivation for producing the report. [41]

Discovery, openness, and "wonder in the face of the world" (MERLEAU-PONTY, 1962 [1945], p.xiii), are some of the most common features of the phenomenological attitude. In order to maintain these qualities while using QDAS, I recommend the following practices: keep your feet inside and outside the study and be diligent and exhaustive in bracketing. [42]

6.1 Keep your feet inside and outside the study

The question of closeness and distance is common in qualitative research (e.g., GILBERT, 2002), but these discussions are often limited to the arena of data. To reconcile phenomenology and QDAS, we must extend the discussion to other areas. I include the following: stay steeped in the epistemologies and ontologies of the research genre, use manual and computerized methods to be intimate with the data, and interrupt analysis. [43]

To be immersed in phenomenology, throughout my study I read the works of well-known phenomenologists and phenomenological research reports and discussed them with members of the IPRG. For those without a research group, a colleague with similar interests may suffice. We know that particular theoretical lenses provide unique insights—just as Black studies reveal universal truths about social injustice, empirical studies following a series of procedures clearly and logically influenced by philosophy are likewise uniquely suited to provide novel ideas regarding research phenomena. [44]

The potential for phenomenology to lose its distinctiveness can be countered by staying aware of the directions QDAS can lead. If GOBLE et al. (2012) fell asleep at the wheel of QDAS, other phenomenologists can remain awake by maintaining an intimate presence to their data inside and outside the world of the software. While it may be impractical for research assistants, the time I spent journaling, listening to audio recordings, and auditing transcripts was helpful in keeping a sense of the humanity and wholeness of the various forms of data collected for my study. With all the apps and add-ons available for the major QDAS platforms available now, one need never conduct any part of a qualitative research project with manual methods, but for phenomenologists, doing so will help develop a sense of the essence of the research phenomenon that can grow and become more clearly differentiated in subsequent steps of the analysis. [45]

If data begins to feel stale, if dehumanization is a problem, find ways to re-enliven research texts. Re-listen to audio recordings of interviews. The humanity, emotion, and pathic elements often missing from a researcher's overly cognitive focus while reading texts on a screen can be re-lived intimately through hearing the voices of study participants. It is during these times that emotions may well up within the researcher, spurring a feeling for the essence of the phenomenon. These steps can be *facilitated* by QDAS platforms such as Transana (see DEMPSTER & WOODS, 2011, §62), which directly link transcription files to the media from which they were derived. [46]

To interrupt my analysis, I took regular breaks from my dissertation work to do the work of academia: develop manuscripts, submit to journals and conferences, and prepare to teach courses. As VAN MANEN (2014) notes, exercise and similar activities allow the brain to engage in what he refers to as "active passivity" and "passive activity" (pp.345-346). I did not always see the broad experiential patterns I sought during the moments of active activity, or purposeful engagement, with the data within MAXQDA. In times of passive activity or active passivity—driving, teaching, cooking, playing with my son, jogging—I gained insights to develop themes. [47]

6.2 Bracketing

Bracketing, a critical element of the phenomenological attitude, must be understood and practiced with diligence when using QDAS. Bracketing must take place within and without the QDAS platform, and I recommend approaches to maintaining wonder, coding, and thematizing. [48]

The metaphor of the stranger (see SHABATAY, 1991) is a useful one in negotiating bracketing when using QDAS. If we are to maintain wonder in the face of the data on the screen, the phrases and texts in the windows, we must be well aware of what we "know," yet take on the next participant's interview transcript with an openness that allows for contradiction or confirmation. With QDAS one could immediately go to a phrase called to mind in a recently reviewed transcript rather than stay with the current one. In order to "slackens the...threads" such that "the forms of transcendence fly up like sparks from a fire"

(MERLEAU-PONTY, 1962 [1945], p.xiii) (or from the computer screen), we must use the coding and memoing features to document and set aside initial and developing impressions that may not be resident in the transcript of another participant. We can allow the text to stand on its own, be its own world, and enter this world as a stranger. [49]

If we read, code, and memo in too systematic a way, a simplistic focus can dominate our orientation to the data. Piles of codes can be collected into categories without difficulty, potentially clouding our view. Yet at the same time they can provide ways to gain a sense of literally and figuratively similar elements within a data set—the phrases of various participants can maintain their particularity even as they are connected through the intentionality of the researcher. This is especially true when we take advantage of QDAS features that allow us to examine coded segments in their original context. [50]

Finding literal similarity may be enhanced by QDAS, but such commonalities may do little to enhance understanding of the essence of a phenomenon. In order to develop broad experiential patterns as themes, in order to experience the breakthroughs associated with the interpretation of the structure of human experience, metaphors can be mined for meaning (THOMAS & POLLIO, 2002). We must also experience the echo of resonance between the data and ourselves—and taking a moment to document such feelings in a memo may diminish it (memos, as pop-up features, are indeed smaller than other windows), but I do not believe that writing about it with a pencil would be very different. When QDAS mediates this experience, there is potential with coding, memo, and logbook features to further document and interrogate not only the analytic incidents that preceded the epiphany, but also the realization itself. Another way to document and interrogate phenomenological insights is through a research group. [51]

Talking with other colleagues and members of my research group was one of the ways I was able to continue bracketing and step beyond my own perceptions of my data. Our own perspective is powerful—we are most intimate with our research project. But colleagues can broaden the horizon upon which we see the figural aspects of our data. Their assistance in questioning our interpretation helps us with bracketing—both in a reassertion of the generative power and relevance of our prior knowledge and in the illumination of what we have taken for granted. The group can ask seemingly naïve questions that, if taken seriously, can help researchers know what they know in a more profound way. As is the case with many other facets of qualitative research, even discussing interpretations with colleagues can occur within QDAS platforms (e.g., DEMPSTER & WOODS, 2011) if face to face meeting is difficult. However, the commitment required of a face-to-face meeting signals the potential losses that accompany virtual feedback. LEVINAS's (1979 [1961]) insight, that in the face of another I see my responsibility, is surely relevant here. [52]

An early version of this article was presented at the Ethnographic and Qualitative Research Conference in Las Vegas, NV, in 2016. The audience response was generally positive, but one audience member asked me afterwards how many

pages of data were involved in my dissertation project. "Around 500," I told him. He laughed haughtily. "With that you can keep it all in your head. Now 1000 or more, then you need a computer." He said the project was changed for the worse by my use of QDAS. But the study would have taken me longer without QDAS, and its quality may have been the same. If one possesses a photographic memory, perhaps QDAS is unnecessary. [53]

7. Conclusion

Phenomenologists and technologists tend to be in opposition. The majority of well-known phenomenologists, save GIORGI (2007) and PERRY (e.g., 1998), are known for their love of the humanities and share Heidegger's concern that through technology humans may become exploitable resources. But software developers must accept that users will typically employ the default settings of QDAS. Researchers must have a sound basis in their epistemologies and ontologies before learning to use QDAS. As noted by DAVIDSON and DI GREGORIO (2011), "all tools have limitations and ... tools for research are in constant flux and development. Therefore, researchers must engage in an active dialogue between methodology and technology in order to craft the appropriate fit for their work" (p.633). Researchers who use QDAS without the direction of well-developed ontologies and epistemologies will be directed by the architecture of the software. If researchers have not found a methodological home, it is likely they may end up writing a generic qualitative study that, due to lack of a distinct perspective, fails to provide any profoundly new insights. [54]

Like artists, phenomenologists do not want to be confined. They want some of their method to be ineffable. We cannot always explain ahead of time the best methods to explore a phenomenon or why a text stirs us deeply. But for me (and many other phenomenologists), QDAS is not a tyranny. QDAS does not force us into non-phenomenological habits of mind. QDAS is not in any sense a neutral tool—researchers must be aware not only of what QDAS can and cannot do, but how it does and does not affect their being-in-the-world. But with a careful and dedicated attention to phenomenological considerations such as wonder and lived experience, phenomenologists can reconcile the use of QDAS to try and avoid its potential pitfalls. [55]

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