

Debunking Myths in Qualitative Data Analysis

Sharon A. Bong

Key words:

CAQDAS,
qualitative
research, in-depth
interviewing,
sampling,
Grounded Theory,
coding

Abstract: In deciding on CAQDAS use in my research, I deliberate firstly the primacy of grounded theory as a methodology and secondly the primacy of coding as a method. In the first section of this paper, I weigh the extent to which my research draws and departs from the principles and practices of grounded theory (GT). In examining the impact of cultures and religions on women's human rights in Malaysia I have used for example hypothesis-guided criteria for sampling. This is strictly speaking not in the original sense a grounded theory approach. In the paper, I make transparent the extent to which GT has informed my work in enhancing the qualitative research and in highlighting the uses and limits of grounded theory, I pose the question to what extent have I demystified its paradigmatic status in CAQDAS and its homogenising effects.

In the second section, I discuss the dominance of coding in qualitative data analysis and I argue that the pitfall of reifying coding as analyses can be avoided through a researcher's reflexivity and agency (self-determination) combined with a pragmatic view and the use of codes as a means and not as an end. I discuss whether CAQDAS use essentially facilitates the rigour of methodology and the transparency of method as for example manifested in one's audit trail, and whether this in turn constitute research that is more accountable, innovative and effective.

Table of Contents

- [1. Introduction](#)
- [2. Methodology: Primacy of Grounded Theory](#)
- [3. Method: Primacy of Coding](#)
- [4. Conclusion](#)
- [References](#)
- [Author](#)
- [Citation](#)

1. Introduction

I had been consumed with interrogating the added advantages of using CAQDAS or computer assisted qualitative data analysis software in comparison to a manual-cum-word processing (electronic cut-and paste) method in creatively managing and making sense of my data. As such, my initial questions focused on whether or not to use CAQDAS and if so, which one, for example NUD*IST, Nvivo and ATLAS.ti have basic code-and retrieve functions culminating in complex theory building capacities. [1]

This myopic view however, was checked by further investigation into relevant literature on analysing or interpreting qualitative data and the [CAQDAS Networking Project](#). It was also informed by peer and user feedback primarily (but not exclusively) through email correspondence with virtual members of the QUAL-SOFTWARE JISCMail list (QUAL-[SOFTWARE@JISCMAIL.AC.UK](mailto:QUAL-SOFTWARE@JISCMAIL.AC.UK)—for

subscribers only) and the invaluable Faculty of the Social Sciences course on Analysing Qualitative Data at Lancaster University. [2]

The fundamental question I ought to have deliberated on instead is *how to* analyse qualitative data within the methodological framework of my research design. This facilitates an internal coherence between methodology and method of data collection and data analysis. In other words, the option of CAQDAS and/or a manual-cum-word processing approach is essentially a tool to assist me in analysing qualitative data and does (and should) not constitute the analysis itself. [3]

The moment of enlightenment for me was not receiving absolute answers to the initial questions of whether or not to use CAQDAS and if so, which software package. My fear of engaging with my textual documents, in particular the 27 interview transcripts (complemented with field notes, state policies and speeches of the Prime Minister, press news and online reports, women/human rights conventions, newsletters of non-governmental organisations and web sites) was made visible. My inexperience in analysing qualitative data having been schooled in literary criticism became deflected and therefore masked my preoccupation bordering on obsession with CAQDAS use. I was in danger of legitimating my analysis by claiming allegiance to groundbreaking technology in the form of CAQDAS. As a latent technophobe, I was ironically seduced by the allure of novelty in the use of CAQDAS. I fancied that it correlated with the originality of my research question and multi-disciplinary approach of my research design: difference was thus valorised for its own sake. [4]

Situating "where one is coming from" (WOODWARD 2000, p.43) constitutes making visible or coming clean with my disposition as a novice qualitative researcher and attendant idiosyncrasies that punctuate one's research design, execution and at this juncture, one's analyses. As a corollary to such vulnerability, leaving behind an "audit trail" (MAYKUT & MOREHOUSE 1994, p.135)—which signposts one's conceptualisation phases and practical contingencies culminating in the final product, the thesis demystifies the research process by rendering it transparent and the researcher, open to critique or "being found out" by the experts or even emulation by the inexperienced DEY 1993, p.221). Making an informed decision about the method(s) of analysis is paramount and entails revisiting one's methodological assumptions reflexively in an iterative or cyclical mode (the politics of interpretation is discussed elsewhere). [5]

To that end I will consider a qualitative researcher's fidelity to a grounded theory approach and the ubiquity of coding in the sections methodology and methods, respectively. The methods section also offers an evaluation of the "methodological costs and benefits" (advantages and disadvantages) (KELLE 1997a) of CAQDAS which I had deliberated at length prior to investing in ATLAS.ti and concludes with a step-by-step data analysis process applied to 27 interview transcripts. [6]

2. Methodology: Primacy of Grounded Theory

The primacy of a grounded theory approach gleaned from (on and off line) literature on analysing and interpreting qualitative data warrants an assessment of the extent of its relevance and application to my research. Grounded theory is listed by John CRESWELL (1998) as one of five research traditions among biography, phenomenology, ethnography and case study and distinguished in terms of reporting approaches, philosophical assumptions, data collection activities including the logic of sampling, data analysis strategies and representation, rhetorical structures and terms about verification. Grounded theory's research interest is classified as the "discovery of regularities" and further defined as "identification (and categorisation) of elements, and exploration of their connections" among Renata TESCH's categorisation of 26 types of qualitative research (1990, p.72). [7]

The constant comparative method integral to grounded theory is presented as a (manual) step-by-step qualitative data analysis: inductive category coding based on "units of meaning" of textual data, refinement of categories, exploration of relationship and patterns across categories leading up to an integration of data or sense-making (MAYKUT & MOREHOUSE 1994, pp.126-149). Grounded theory is seemingly positioned (particularly as a sales pitch) as "paradigmatic in CAQDAS" (LONKILA 1995); it is alleged as heralding a "new orthodoxy" or "homogenisation" of methodology (COFFEY, HOLBROOK & ATKINSON 1996); and as a counter claim, this "mythological status" is debunked (LEE & FIELDING 1996). This will be more fully discussed in the methods section on CAQDAS use. [8]

While the centrality of grounded theory to qualitative researching/CAQDAS is contested (as above), its merit in grounding theory in data is not. The rigour of data collection (sampling and triangulation) and analysis (constant comparative method) in a grounded theory approach constitutes good practice. This in turn informs the criteria of sound qualitative research: "validity of data", "reliability of method" and "generalisability of analyses" (MASON 1996, p.145). The "validity of data" is premised on a negotiation of the ethical and political dimensions within the interviewer-interviewee relationship involving informed consent of interviewees, member check and peer debriefing (MASON 1996, pp.145-146). Protecting, managing and interpreting data with accountability and sensitivity are also incumbent on the researcher as a custodian of privileged information. The "reliability of method" is gauged by the internal coherence of one's research design, execution and findings or "design principles, data elicitation, data analysis and knowledge interests" (BAUER & GASKELL 2000, pp.4-5). And the "generalisability of analyses" is assessed by the degree of transparency in one's research methods effected by leaving an explicit audit trail (MAYKUT & MOREHOUSE 1994, p.135), "folklore of fieldwork" (MARSHALL & ROSSMAN 1995, p.111), "folklore techniques" (in reference to the cut-and-paste method of data analysis as the origin of coding-and-retrieval to the more sophisticated theory-building capacity of CAQDAS) (KELLE & LAURIE 1995, p.24) or a corollary "electronic path," a visual (graphic) representation of one's research process (FIELDING & LEE 1995). [9]

From its inception in the seminal text *The Discovery of Grounded Theory* (GLASER & STRAUSS 1974) to its methodological refinement (STRAUSS & CORBIN 1990), grounded theory's appeal is essentially the generation of theory from data: it foregrounds data (textual, visual or sound) as the source of theory.¹ Theory defined as the relationship among categories, is inductively generated (or it starts) from "units of meaning or analysis," "theoretical categories" and "codes" or "nodes" in CAQDAS terminology (TESCH 1990; LONKILA 1995, p.49; KELLE 1997b, paragraph 3.6). Its exploratory research design or inductive reasoning is thus contrasted with a "hypothetico-deductive" (H-D) explanatory approach or "deductive reasoning" that codes data for the purpose of hypothesis testing and not hypothesis generation or theory building. The differentiated modes of coding, "referential" or "interpretive" in grounded theory as opposed to "factual" or representational in H-D approach will be elaborated on in the next section (MASON 1996, p.142; KELLE & LAURIE 1995, p.25; SEIDEL & KELLE 1995, p.53; KELLE 1997b, paragraphs 3.6-3.9, 4.1). [10]

The consolidation of grounded theory as an established and trustworthy mode of qualitative inquiry however lends itself to hasty allegiances or false claims of fidelity to its methodology and method. There are invariable points of commonality and departure with/from grounded theory in relation to my research. [11]

My research considers the extent to which cultures and religions impact on women's/human rights discourse and activism in Malaysia from a feminist and post-colonial perspective. The "design principle" or "strategic principle" of the research (BAUER & GASKELL 2000, pp. 4-5) is a comparative study between activists-cum-theologians-cum-intellectuals who operate within a rights framework (based in secular women's/human rights non-governmental organisations or NGOs) and those who operate within religious-based ones who are engaged with (principally) Quranic and Biblical hermeneutics and rights. [12]

A point of departure from grounded theory is the hypothesis that drives my research design. I did not begin with a blank slate. Having indwelled in the women's/human rights movement in Malaysia for the past decade and standing at present as an insider/outsider (often at risk of going native), I contend that cultures and religions do impact the effective translation of women's/human rights in the context of Malaysia because the articulation and practice of rights is culturally and religiously contingent. As such, "women's/human rights," "culture" and "religion" are not mutually exclusive categories. In so doing, I have presupposed an integral relationship among these categories at the outset of my research, prior to "data elicitation" (BAUER & GASKELL 2000, pp.4-5) or data collection and analysis. This seemingly runs counter to the premise of grounding theory in data. [13]

On the one hand, one could equivocate by quibbling on the definition of "hypothesis": "the term hypothesis may denote an empirically testable statement about the exact relation of two defined variables or the term may stand for a

1 BAUER and GASKELL (2000) make this useful distinction.

tentative and imprecise conjecture about possible relationships between two domains of interest" (KELLE 1997b, 3.6). [14]

I could lay claim to the definition above that is not incompatible with a grounded theory approach. But my conjecture is problematically more than imprecise but less certain than an "exact relation" as I have yet to fully integrate data analysis or the voices of interviewees with my presuppositions. The dialectical tension between hypothesis/theory and data cannot be overstated as I do lay claim to a participatory potential of method (in-depth interviewing and textual analysis) (SILVERMAN 1998) and an emancipative intent of methodology (feminist and collaborative) (LATHER 1991; STANLEY 1990). As one eschews a "theoretical vacuum" or an improbable blank (apolitical) slate, the "impetus to theorise" is neither first (deductive) nor last (inductive) but iterative or dialectical (MASON 1996, p.142). Or more succinctly, "an open mind is not an empty head" (DEY 1993, p.229). [15]

On the other hand, as I make visible my presuppositions, I also come to terms with the extent to which I am implicitly, perhaps even surreptitiously testing theory or hypothesis as it conflicts with an exploratory research paradigm that I have espoused. The categories "women's/human rights," "culture" and "religion" are positioned less as empirically testable variables or mutually exclusive categories as they serve as "heuristic devices" or "analytic tools" to facilitate data analysis and interpretation and to engender a thick description. A fine grained hermeneutic analysis thus emerges: the polyphony of the impact of cultures and religions on activism grounded in professional/vocational and personal narratives (MASON 1996, p.113; COFFEY, HOLBROOK & ATKINSON 1996, paragraph 7.7; LONKILA 1995, p.49). [16]

As such my sampling strategy serves the combined ends of hypothesis testing and/through grounded theorising. The main method of empirical data collection is in-depth, audio-recorded interviews. With reference to the research question or "intellectual puzzle" (MASON 1996, p.47) which theorises the epistemic and practical implications of negotiating rights within a cultural and religious framework, sampling is purposefully homogeneous and heterogeneous. In the former instance, the shared criterion among 27 interviewees is their privileged locality at the interface of rights, cultures and religions. They are gatekeepers of local knowledge and key practitioners in the field of women's/human rights in Malaysia because they negotiate almost on a daily basis what it means to translate women's/human rights in their various cultural and religious contexts within the public/private realms that they inhabit. [17]

Such "elite interviewing", which is defined as a specialised form of interviewing that focuses on interviewees who are "influential, prominent and well-informed" marks the homogeneity of sampling (MARSHALL & ROSSMAN 1995, p.83). This is counterbalanced by an internal diversity afforded by the heterogeneity of sampling or proliferation of differences based on identity markers of interviewees such as area of activism/interest, ethnicity, religiosity/spirituality, organisational affiliation, sexual orientation and geographical location of current activism. [18]

Homogeneous and heterogeneous samplings that I have employed resonate to some degree with grounded theory's concept of theoretical sampling where the "process of data collection is *controlled* by the emerging theory, whether substantive or formal ... [and the] criteria are those of *theoretical purpose and relevance*" (GLASER & STRAUSS 1974, pp.45-48). The pilot interview and on-going assessment of the descriptive and interpretive density of interviews already conducted prompted an increased sampling from the initially proposed 10 to 27 to provide a richer base for the development of categories towards theory building or thematic links of categories. [19]

Such *ad hoc* and preliminary analysis of this modest sampling however departs from the rigour of theoretical saturation dictated by a grounded theory approach where sampling is exhausted or saturated only when "no additional data are being found whereby the [researcher] can develop properties of the category" (GLASER & STRAUSS 1974, p.61). The yardstick of knowing when to cease sampling or interviewing in this instance, is less an instinctive act (nor tempered by interviewing fatigue) than it is an exhaustive and exhausting constant comparative method of data collection in tandem with data analysis *ad infinitum*. [20]

In addition, the interview format comprising three broad areas of inquiry served as a hypothesis-guided framework. It provided an invaluable thematic structure for data analysis and further theorising on the impact of culture and religion on women's/human rights professionally or vocationally (where activism is voluntary and not paid as in the former) in the public realm and personally on the domestic front. It was tested in a pilot interview and refined across 26 semi-structured interviews where interviewees were asked:

1. to outline their activism from the beginning to present day involvement;
2. to consider cultural and religious factors impacting their activism; and
3. to assess the link (if any) between their faith and their activism. [21]

Sampling, transcribing², analysis and interpretation constitute theorising as each phase of the research process is informed by the ethics of inclusion/exclusion of narrators and their narratives (TESCH 1990, p.114; OCHS 1979; MASON 1996, p.108; WEAVER & ATKINSON 1994, p.20). Such a theory building enterprise culminates in an Asian-Malaysian feminist standpoint on politicising spirituality and spiritualising politics. The former concept centres on faith and praxis in theologising from the grassroots: in bringing rights into the church (for Christians), mosque (Muslims), temples (Hindus) and environment (Buddhists and the indigenous) as a way of life. The latter notion calls for a spiritual grounding of the basic tenets of good governance of a modernising state in terms of accountability, transparency and equitable distribution of the nation's wealth. [22]

I similarly eschewed a blank slate or "empty head" (DEY 1993, p.229) approach for sampling and interviewing. I began the highly anticipated phase of data analysis with a preliminary list of codes which emerged from a pilot analysis of the

2 Transcription is theory (OCHS 1979).

shortest interview transcript by experimenting on ATLAS.ti's free download version. The final code list consisted of 31 code families and 406 codes. [23]

3. Method: Primacy of Coding

In the above section I have explored the means by which my research draws from the good practice of a grounded theory approach to satisfy the criteria of quality qualitative researching through "validity of data", "reliability of method", and "generalisability of analyses" (MASON 1996, p.145). [24]

I have elaborated on two points of departure from a grounded theory approach: firstly, that my research and theoretical maturation are inductively grounded in data but are guided by a hypothesis which is redefined as a provisional link among key codes; rights, culture and religion. Secondly, I have employed theoretical sampling, an integral method of data collection of grounded theory to the extent that I had conducted elite interviewing with 27 interviewees. This sampling is both heterogeneous (alluding to permutation of identity markers) and homogeneous (as knower and doer of rights within a multi-cultural and multi-religious context). But the rigour of dialectically (as opposed to sequentially) feeding data collection into data analysis through a back-and-forth constant comparative method in order to saturate analysis (as well as sampling) is approximated but not fully achieved. [25]

The production of texts for analysis through sampling, interviewing and transcribing concretises the validity of data criterion. It affords the site for the negotiation of contested meaning through measures such as eliciting informed consent and member checks to engender what is concealed or revealed and by whom. As such it makes visible the ethics and politics of inclusion/exclusion that is a corollary of the power differentials between interviewer-interviewee. Reconstituting these sites as original texts rather than the more perfunctory label of raw data divested of meaning, is thus more appropriate. It infers that these primary texts are valued in itself and as a means to the end of theory building (SEIDEL & KELLE 1995, p.58; MARSHALL & ROSSMAN 1995, p.113). The politics of interpretation as such extends (but is not the starting point of) the negotiation of meaning inherent in the production of these texts for analysis. [26]

In order to proliferate meaning, the interviews are transcribed *ad verbatim* with repetitious and incomplete utterances much to the chagrin and embarrassment of interviewees. I personally transcribed all interviews in the interest of confidentiality with the added advantage of familiarising myself with its contents. As the average length of an interview is an hour and a half, the transcripts average between 20-30 pages of single-spaced texts. This is a considerable wealth of information to organise and make sense of. [27]

For ATLAS.ti use the interviews are re-formatted and saved (originally as Word documents) as plain texts that is ASCII text with line breaks (WEITZMAN & MILES 1995). In terms of data storage, multiple back up copies had been made. Where data is valued as both information and "potential information", its

discretionary protection, use and dissemination in ensuring the "non-identifiability" of interviewees, in both "automatic data processing (adp) form" and manual records (as above including field notes) constitute responsible stewardship of data (AKERROYD 1991, pp.89-91). [28]

The primary texts (interview transcripts) are thus produced where reliability of method (of sampling, interviewing and analysis) and the generalisability of analyses follow through from the validity of data. The dilemma of how to analyse one's textual data raised at the outset, has been framed methodologically in assessing the applicability of grounded theory to my research or conversely, my fidelity to its good practice. Concomitantly, following through the reliability of method points to coding as a method of data analysis that is corollary to a grounded theory methodology in particular and in general, to qualitative data analysis. Although coding "is not the only, the best, or even the preferred method for the analysis of qualitative data" (LEE & FIELDING 1996, 2.4), notwithstanding its ubiquity in (on and off line) literature and usage, its merit in organising and interpreting data is noteworthy.³ [29]

Coding is paradigmatic of the "constant comparative method" of grounded theory and qualitative data analysis. Its four-step analytic process consists of: 1. comparing units of meaning across categories for inductive category coding; 2. refining categories; 3. "delimiting the theory" by exploring relationships and patterns across categories; and 4. integrating data to write theory (GLASER & STRAUSS 1974, pp.105-115; MAYKUT & MOREHOUSE 1994, pp.134-145). The "folklore of fieldwork" (MARSHALL & ROSSMAN 1995, p.111) comprising the legacy of researchers audit trails posits the centrality of coding. This composite testament to coding encompasses manual or physical handling of data ("Cut-Up-and-Put-in-Folders approach" and the "File-Card system") and CAQDAS (beginning with word processing programmes or electronic cut-and-paste, data base managers to sophisticated "third-generation software" or text analysis software based on basic code-and-retrieve techniques which culminate in complex theory building) (TESCH 1990, pp.127-134; KELLE 1997b, paragraph 2.6). [30]

To "can (i.e., get rid of)" one's data as Harry WOLCOTT (1990, p.35) ceremoniously describes data management and interpretation is synonymous with "data reduction" (MARSHALL & ROSSMAN 1995, p.113), "data distillation" or "data condensation" (TESCH 1990, p.139). Data analysis is at once conceptual and organisational, interpretive as well as mechanical. Coding for expedient retrieval (of categories) and theory building (relationship among categories) involves the pragmatics of breaking down or dissecting one's data into manageable and meaningful analytical units. Coding as such "is a theorizing process" (RICHARDS & RICHARDS 1994, p.148) where the ethical and practical exigencies of inclusion/ exclusion are factored in. [31]

3 See for instance James GEE (1999) on discourse analysis.

The conflation of coding with analysis however (WEAVER & ATKINSON 1994, p.20), heralds "analytic madness" (SEIDEL 1991, p.109) or "analytic pathologies" (FIELDING & LEE 1998, p.119): viewing coding as an end in itself and not a means to the end of theory building. This is a pitfall applicable and detrimental to both manual and CAQDAS methods although it is more marked in the latter as computer software has the capacity to proliferate coding (FISHER 1999, p.119). The proliferation of codes in itself is not problematic but it is the proliferation of codes without or independent of a conceptual framework, that is. And this is compounded by a less reflexive researcher who is more liable to "hijacking" (sabotaging) his/her analysis (BARRY 1998, paragraph 2.1). Being enamoured of coding is not a crime but disengaging it from ones methodological and epistemological presuppositions, runs the following risks which are variations on the theme of over-emphasising coding: poorly grounded coding scheme, prolonging the coding process until the scheme is too unwieldy, coding that takes over the analysis rather than serve it (FIELDING & LEE 1998, p.119). By the same token that it is the researcher who drives the analysis, it is the researcher who is culpable, not the tool (in reference to both manual and CAQDAS approaches to coding). [32]

As an extension of conflating coding with analysis (in addition to the caveat of coding for its own sake), other plausible dangers are the "reification of researcher and data" as well as the "distancing of researcher from data" (WEAVER & ATKINSON 1994, pp.20-21; SEIDEL 1991, pp.112-114). In the former, the coding process, an essentially analytical task, is deemed problematic when we presuppose that meaning is "out there" (inherent in codes and families of codes), waiting to be discovered by the objective researcher and that multiple occurrences more viably signifies meaning rather than single occurrences of categories or codes. Coding with reflexivity or methodological conscientiousness in recognising that the interpretive act is partial and incomplete and weighing single or rare or seemingly isolated occurrences (in being receptive to "noises in data") according to its analytic significance are solutions to this problem (WEAVER & ATKINSON 1994, p.21). [33]

In the latter, the "distancing of researcher from data" (SEIDEL 1991, pp.112-114) is another likelihood resulting from the reification of coding where data reduction that is endemic in analysis, becomes reductive. In other words, coding or segmenting one's data can unwittingly lead to ones "losing the phenomena" when coding or decontextualised units of meaning are unintelligible from within (transcript) and without (alienated from one's conceptual framework) (SEIDEL & KELLE 1995, p.59). [34]

The commonsensical solutions are to highlight sufficient text when coding enhanced by an intimate knowledge of one's data and to code towards theory building in the context of full transcripts and one's overall research design (SEIDEL & KELLE 1995, pp.60-61). ATLAS.ti automatically attaches appropriate identifiers (MASON 1996, p.123) to indexing or coded categories for easy referencing and cross-referencing on-screen and as outputs for audit trails. These include all details within a Hermeneutic Unit or data structure: names of

primary documents (which I have assigned according to interviewees' pseudonyms), date of document(s) worked on, page, paragraph and line numbers of quotations highlighted and appended codes, memos (analytic notes), families (containers for type primary documents, codes and memos), results of the Query Tool towards theory building and networks (meaningful semantic relationship among coded categories presented graphically as a connection of nodes). [35]

To recapitulate, two main analytic misconceptions have been debunked: firstly, the primacy of grounded theory as heralding a new orthodoxy or the homogenisation of methodology; and secondly, the primacy of coding as imbibed with coding madness or analytic pathologies premised on the reification of coding as analysis per se. By logic of extension, the allegations that CAQDAS compounds these by mythologising grounded theory and supporting the injunction to code is tenuous and unconvincing as it divests the researcher of reflexive agency (self-determination) in charting the direction of his/her analysis (LEE & FIELDING 1996, paragraph 3.1). [36]

Neither is it helpful to stigmatise CAQDAS use by paradoxically positing that it "destigmatises" qualitative analysis by conferring on the latter the "authority of science and the prestige of technology" (WEAVER & ATKINSON 1994, p.16) and thereby serves as a scientific gloss to authenticate qualitative analysis (COFFEY, HOLBROOK & ATKINSON 1996, paragraph 7.6). It is similarly ludicrous to assert that CAQDAS from the perspective of technological determinism is invested with threats of "dehumanisation, mechanisation, quantification and sterilisation" that are grossly inimical to the virtues of qualitative researching (PFAFFENBERGER quoted in WEAVER & ATKINSON 1994, p.9). Within the parameters of an overly rehearsed dualism, that of quantitative/qualitative methodologies and methods, one is damned if one does (use CAQDAS) and damned if one does not! [37]

The awareness that codes as "heuristic devices" are part of data analysis but does not constitute it fully (COFFEY, HOLBROOK & ATKINSON 1996, paragraph 7.7; SEIDEL & KELLE 1995, pp.52-53) and the consideration of making "the best use of available technology" (MASON 1996, pp.127-128) serve as sound reference points in evaluating the merits and demerits of CAQDAS use. Essentially mechanical tasks of data analysis are expedited through its code-and-retrieve function that in turn enhances the conceptual tasks of theory building. Data analysis is thus rendered more rigorous, thorough, creative and fun. The *added* advantage of CAQDAS as compared to a cut-and-paste method (either manual or electronic) is the permutation of coding categories and links to engender a fine-grained hermeneutic analysis (COFFEY, HOLBROOK & ATKINSON 1996). As such, CAQDAS is neither "a panacea for analytic woes nor a devil-tool of positivism and scientism" (LEE & FIELDING 1996, 4.5). A cost-benefit appraisal of investing in CAQDAS use necessitates a prior familiarity with qualitative data analysis and subsequently entails fitting packages to analytical frameworks and not vice versa (FIELDING 1995b).⁴ [38]

4 For an informed decision on the choice of software from the plethora of genres that exists, see in particular FIELDING 1995a and 1995b; HENRY 1999; WEITZMAN and MILES 1995.

Consequently, "slicing" (segmenting), "splitting" and "splicing" (subcategorising and categorising) one's data (MASON 1996, p.111; DEY 1993, pp.231, 276) are necessary analytic procedures that foreground coding. Cognisant of the pitfalls of reifying coding and proliferating codes (for its own sake) resulting from an abeyance of reflexivity, TESCH's two-pronged mechanics of interpretational qualitative analysis centred on decontextualisation and recontextualisation are useful guides that reinstate re-categorisation when "slicing," "splitting" and "splicing" one's data are evinced (1990, pp.115-127). Text segments as such are doubly contextualised: firstly, within their primary source i.e. transcripts (by having it always at hand) and subsequently, via their linkages with other categories or codes towards theory building. [39]

The distinctiveness and complexity of each narrative thus lends itself to a cross sectional (reminiscent of grounded theory's constant comparative method with a difference, as described above) and non-cross sectional or holistic analysis of data (MASON 1996, pp.111-131). This triangulation of method in turn entails using ATLAS.ti in tandem with a non-computerised method of data analysis particularly in the final stages of theory building to adequately flesh out the desired "granularity of codes" as finely (not coarsely) grained (FIELDING & LEE 1998, pp.122, 128) (see audit trail below). [40]

The generalisability of analyses coheres with and follows through generalisations implied by one's research question and supported by one's sampling strategy as elaborated in the previous sections on methodology and method (MASON 1996). The following constitutes not only my analytic procedure informed by the above deliberations but an audit trail that I hope contributes to the collective (sociological) memory of folklore techniques of and from the field:

Audit trail

Preparing data for analysis

- Generating data through in-depth interviews;
- transcribing audio-recorded interviews;
- member checking or giving interviewees the opportunity to refine their transcripts for accuracy or clarity and to delete sections (where necessary) and to provide me with pseudonyms in the interest of confidentiality;
- familiarising myself with the interview transcripts through close readings and re-listening to its audio-recording for further accuracy, clarity and understanding;
- formatting each transcript for ATLAS.ti compatibility by saving Word documents as plain text with line breaks (this includes realigning the right margins with hard returns to halve the length of lines for coding purposes); and
- importing formatted transcripts to ATLAS.ti for analysis. [41]

Data analysis

- Reviewing qualitative data analysis literature to consider merits and limits of CAQDAS use;
- experimenting with ATLAS.ti by downloading its free demo version and coding the shortest interview transcript for an initial code list (guided by hypothesis);
- investing in ATLAS.ti and learning its basic functions;
- marking free quotations (creating un-coded text segments) to create manageable units of analysis or text segments in each transcript;
- attaching codes from the initial code list to each quotation and building up the code list;
- refining code list by tidying up overlapping codes and checking the proliferation of codes by an iterative cross-referencing of transcripts;
- creating code families when the 27th and final transcript was coded;
- manually finding connections between codes towards theory-building; and
- mapping this web of connections for presentation of audit trail. [42]

4. Conclusion

In the first Section, I have elucidated the means by which my research draws from the sound principles and practice of grounded theory to satisfy the criteria of quality qualitative researching through "validity of data," "reliability of method," and "generalisability of analyses" (MASON 1996, p.145). There are however two points of departure: firstly, that my research and theoretical maturation are inductively grounded in data but are guided by a hypothesis which is redefined as a provisional but constitutive link among key codes such as rights, culture and religion. Secondly heterogeneous and homogeneous samplings that I have used approximate but do not achieve the rigour of theoretical sampling. In other words, the centrality of grounded theory is contingent on its application and improvisation by individual researchers. This in turn, de-mystifies grounded theory's paradigmatic status in CAQDAS (LONKILA 1995). [43]

In the second Section, two main analytic misconceptions have been further debunked. Firstly, the primacy of grounded theory as heralding a new orthodoxy or the homogenisation of methodology (COFFEY, HOLBROOK & ATKINSON 1996); and secondly, the primacy of coding as imbibed with coding madness or analytic pathologies premised on the reification of coding as analysis per se (WEAVER & ATKINSON 1994, p.20; SEIDEL 1991, p.109; FIELDING & LEE 1998, p.119). A researcher's reflexivity and agency in charting the direction of his/her analyses through pragmatic view and use of codes as a means and not as an end in itself as I have argued would challenge the allegation that CAQDAS compounds these myths by mythologising grounded theory and supporting the injunction to code (LEE & FIELDING 1996). CAQDAS use thus facilitates the rigour of methodology and the transparency of method as manifested in one's audit trail that in essence constitutes research that is accountable, innovative and effective. [44]

References

- Akeroyd, Anne V. (1991). Personal Information and Qualitative Research Data: Some Practical and Ethical Problems Arising from Data Protection Legislation. In [Nigel G. Fielding](#) & Raymond M. Lee (Eds.), *Using Computers in Qualitative Research* (pp.89-106). London/Newbury Park/New Delhi: Sage.
- Barry, Christine A. (1998). Choosing Qualitative Data Analysis Software: Atlas/ti and Nudist Compared. *Sociological Research Online*, 3(3), <http://www.socresonline.org.uk/socresonline/3/3/4.html>.
- Bauer, Martin W. & Gaskell, George (Ed.) (2000). *Qualitative Researching With Text, Image and Sound: A Practical Handbook*. London; Thousand Oaks; New Delhi: Sage.
- Bryman, Alan & Burgess, Robert G. (Ed.) (1999). *Qualitative Research* (vol. 4). London: Thousand Oaks; New Delhi: Sage.
- Coffey, Amanda; Holbrook, Beverley & Atkinson, Paul (1996). Qualitative Data Analysis: Technologies and Representations. *Sociological Research Online*, 1(1), <http://www.socresonline.org.uk/socresonline/1/1/4.html>.
- Creswell, John W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Thousand Oaks; London; New Delhi: Sage.
- Dey, Ian (1993). *Qualitative Data Analysis: A User-Friendly Guide For Social Scientists*. London & New York: Routledge.
- Fielding, Nigel (1995a). Choosing the Right Qualitative Software Package. *ESRC Data Archive Bulletin*, May, no. 58, <http://caqdas.soc.surrey.ac.uk/choose.htm> [Broken link, FQS, 04/07/14].
- Fielding, Nigel (1995b). Fitting Packages to Projects. *ESRC Data Archive Bulletin*, May, no.59, <http://caqdas.soc.surrey.ac.uk/fitpack.htm>.
- Fielding, Nigel & Lee, Raymond (1995). The Hypertext Facility in Qualitative Analysis Software. *ESRC Data Archive Bulletin*, May, no.59, <http://caqdas.soc.surrey.ac.uk/hypertext.htm> [Broken link, FQS, 04/07/14].
- Fielding, Nigel G. & Lee, Raymond M. (1998). *Computer Analysis and Qualitative Research*. London; Thousand Oaks; New Delhi: Sage.
- Fielding, Nigel L. & Lee, Raymond M. (Eds.) (1991). *Using Computers in Qualitative Research*. London; Newbury Park; New Delhi: Sage.
- Fisher, Mike (1999). Using Computers in Qualitative Analysis. In Henry Millsom (Ed.), *I.T. in the Social Sciences: A Students Guide to the Information and Communication Technologies* (pp.112-127). Oxford: Blackwell.
- Gee, James Paul (1999). *An Introduction to Discourse Analysis: Theory and Method*. London: Routledge.
- [Glaser, Barney G.](#) & Strauss, Anselm L. (1974). *The Discovery of Grounded Theory: Strategies For Qualitative Research*. Chicago: Aldine Publishing (First published in 1967).
- Henry, Millsom (Ed.) (1999). *I.T. in the Social Sciences: A Students Guide to the Information and Communication Technologies*. Oxford: Blackwell.
- [Kelle, Udo](#) (1997a). Capabilities for Theory Building & Hypothesis Testing. In Software for Computer Aided Qualitative Data Analysis. *Data Archive Bulletin*, May, 65, <http://caqdas.soc.surrey.ac.uk/kelle.doc> [Broken link, FQS, 04/07/14].
- Kelle, Udo (1997b). Theory Building in Qualitative Research and Computer Programs for the Management of Textual Data. *Sociological Research Online*, 2(2), <http://www.socresonline.org.uk/socresonline/2/2/1.html>.
- Kelle, Udo (Ed.) (1995). *Computer-Aided Qualitative Data Analysis: Theory, Methods and Practice*. London/Thousand Oaks/New Delhi: Sage.
- Kelle, Udo & Laurie, Heather (1995). Computer Use in Qualitative Research and Issues of Validity. In Udo Kelle (Ed.), *Computer-Aided Qualitative Data Analysis: Theory, Methods and Practice* (pp.19-28). London/Thousand Oaks/New Delhi: Sage.
- Lather, Patti (1991). *Getting Smart: Feminist Research and Pedagogy Within the Postmodern*. New York and London: Routledge.

- Lee, Raymond M. & Fielding, Nigel (1996). Qualitative Data Analysis: Representations of a Technology: A Comment on Coffey, Holbrook and Atkinson. *Sociological Research Online*, 1(4), <http://www.socresonline.org.uk/socresonline/1/4/1f.html>.
- Lonkila, Markku (1995). Grounded Theory as an Emerging Paradigm for Computer-Assisted Qualitative Data Analysis. In Udo Kelle (Ed.), *Computer-Aided Qualitative Data Analysis: Theory, Methods and Practice* (pp.41-51). London/Thousand Oaks/New Delhi: Sage.
- Marshall, Catherine & Rossman, Gretchen B. (1995). *Designing Qualitative Research* (2nd edition). Thousand Oaks, London and New Delhi: Sage Publications.
- Mason, Jennifer (1996). *Qualitative Researching*. London: Thousand Oaks: New Delhi: Sage.
- Maykut, Pamela & Richard Morehouse (1994). *Beginning Qualitative Research: A Philosophic and Practical Guide*. London and Washington, DC: Falmer Press.
- Ochs, Elinor (1979). Transcription as Theory. In Elinor Ochs & Bambi Schieffelin (Eds.) *Developmental Pragmatics* (pp.43-72). New York: Academic Press.
- Richards, Lyn & Richards, Tom (1994). From Filing Cabinet to Computer. In Alan Bryman & Robert G. Burgess (Eds.), *Analyzing Qualitative Data* (pp.146-172). London/New York: Routledge.
- Seidel, John (1991). Method and Madness in the Application of Computer Technology to Qualitative Data Analysis. In Nigel G. Fielding & Raymond M. Lee (Eds.), *Using Computers in Qualitative Research* (pp.107-116). London/Newbury Park/New Delhi: Sage.
- Seidel, John & Kelle, Udo (1995). Different Functions of Coding in the Analysis of Textual Data. In Udo Kelle (Ed.), *Computer-Aided Qualitative Data Analysis: Theory, Methods and Practice* (pp.52-61). London/Thousand Oaks/New Delhi: Sage.
- Silverman, David (Ed.) (1998). *Qualitative Research: Theory, Method and Practice*. London; Thousand Oaks; New Delhi: Sage.
- Stanley, Liz (Ed.) (1990). *Feminist Praxis: Research, Theory and Epistemology in Feminist Sociology*. London & New York: Routledge.
- Strauss, Anselm & Corbin, Juliet (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, California; London; New Delhi: Sage.
- Tesch, Renata (1990). *Qualitative Research: Analysis Types and Software Tools*. New York, Philadelphia; London: The Falmer Press.
- Weaver, Anna & Atkinson, Paul (1994). *Microcomputing and Qualitative Data Analysis*. Aldershot; Brookfield, Vermont: Avebury.
- Weitzman, Eben A. & Miles, Matthew B. (1995). *A Software Sourcebook: Computer Programs for Qualitative Data Analysis*. Thousand Oaks; London; New Delhi: Sage.
- Wolcott, Harry F. (1990). *Writing Up Qualitative Research*. Newbury Park; London; New Delhi: Sage.
- Woodward, Clare (2000). Hearing Voices? Research Issues When Telling Respondents Stories of Childhood Sexual Abuse From a Feminist Perspective. In Carole Truman, Donna M. Mertens & Beth Humphries (Eds.), *Research and Inequality* (pp.37-51). London: UCL Press.

Author

Sharon A. BONG is currently completing her PhD research which draws from her exposure to and involvement with the feminist movement at national, regional and international levels, and considers the impact of cultures and religions on women's human rights in the context of Malaysia. She has also worked as a Programme Officer with ARROW (the Asian-Pacific Resource and Research Centre for Women) and as a feature writer with the New Straits Times Press, Malaysia.

She is a PhD candidate with the Department of Religious Studies, Lancaster University, Lancaster LA1 4YG, United Kingdom.

Contact:

Sharon A. Bong

Department of Religious Studies
Lancaster University
Lancaster LA1 4YG
United Kingdom

E-mail: bongsa@hotmail.com

Citation

Bong, Sharon A. (2002). Debunking Myths in Qualitative Data Analysis [44 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 3(2), Art. 10, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0202107>.

Revised 2/2007