Framework Analysis: A whole paradigm approach

Introduction

The Critical Realist philosopher of science, Roy Bhaskar, suggested with elegant economy that *'The nature of the object of study determines the knowledge that we can have of it' (Bhaskar, 1978)*. Furthermore, for Bhaskar only three extant classes of 'object' are tractable to investigation, namely physical objects, mental subjects and relational phenomena. Investigation of each distinctive 'class' therefore departs from differing paradigmatic assumptions regarding (a) whether a phenomenon is 'real' or exists (an ontological question), and (b) what are the philosophical parameters of demonstrating such existence (an *inseparable* epistemological question). Examples of Bhaskar's 'mental subjects' are the stock-in-trade of the qualitative researcher and include research problematics such as: inner life - thoughts, emotions, perceptions; personal accounts - versions of events, personal narratives; situated interaction - discourses, talk in interaction; and ethnographically observed social orders. The paradigmatic assumptions underpinning such enquiry include the explicit acknowledgement that mental subjects can exist only insofar as there are *actual* subjects (people) to report and/or enact these matters. Furthermore, rendering these matters 'open to inspection' is dependent upon the involvement of other parties – listeners who apply their active interpretations and subjective meanings to talk, interactions, events etc. Plummer (1997) identified that, once shared with the wider world, reported 'inner life', 'situated interactions', or 'ethnographic descriptions', for instance, do not acquire a fixed meaning: Rather, subsequent consumers actively read their own meanings into such publicly available discourse. Mental subjects (and their consequent subjective descriptions) are therefore ephemeral, not fixed, and lie beyond measurement. These paradigmatic concerns coalesce around what Hughes (1980) termed 'the humanist alternative to positivist orthodoxy', in which the social world is conceived as being of a fundamentally different order to that of the natural world. Specifically, this entails the acknowledgement that meaning arises out of the interaction between individuals, and therefore discursive representations of human conduct are dependent upon language and description. External 'reality' is always mediated (or even

constructed) via the processes of perception and (active) interpretation and subsequent representation and hence attempts to 'objectify' social interactions or processes are misguided.

Bhaskar's (1978) programmatic agenda is inherently pragmatic in nature, in which the nature of the research problematic implicates one, or another, paradigmatic position. In turn, paradigms delimit the knowledge that can be obtained. Conceivably, all social research commences with the pragmatic business of circumscribing a presenting research problematic. This in turn leads to the selection and justification of a methodological approach best suited to investigate the phenomenon in question. Accepting these assertions inevitably also means accepting the incommensurability of different paradigms: Attempting to judge the assumptive basis of any one paradigm in terms of that of another paradigm represents a fundamental error of reasoning. The aim of this paper is therefore not to re-ignite or take sides in a misguided and ultimately futile 'paradigm war', but rather undertake a reflexive introspection in relation to one qualitative methodology and lay bare the underlying epistemological tensions within. It is important that this paper is not, in any measure, an attempt to answer the rhetorical questions of 'what is wrong with qualitative research' or 'what is wrong with Framework Analysis'. It would be possible to replicate this type of reflexive introspection in relation to *any* methodological approach from purist experimentation, to the social survey, to n=1 auto-ethnographies and expose similar underlying ontological and epistemological points of interest. As Hughes (1980: 13) reminds us, *'every research tool or procedure is inextricably embedded in commitments to particular versions of the world and ways of knowing that world made by the researcher using them.*' To select a research methodology is therefore also to become unavoidably embroiled in the ontological and epistemological concerns which *'allow these instruments to be used for the purposes conceived'* (Hughes, 1980: 13).

In order to be rendered practicable to researchers, epistemological concerns receive their formal expression through an often uneasy translational process so as to become (supposedly) more tangible: The discursive representation of these methodological instructions subsequently forms the substantive content of various methodological textbooks. However, it is important to distinguish between the separate but related concepts of methodology and method. The methodology relates to a general set of instructions or 'recipe' of how to approach or find out about X, whilst the method implies the situated, practical enactment of the methodology's abstract instructions. Several notable tensions exist in the relationship between methodology and method. It can be difficult to discern how relatively abstract, general methodological principles might be operationalised in specific situated contexts: 'How to' suggestions are often absent within methodological texts. There may be several good reasons for this *aporia*, including:

- **The complexity of topics of investigation:** O'Brien (2009) asserted that social life is necessarily messy, and as a consequence, the translation of methodology into method is filled with 'tension, contradiction, conflict, and ambiguity';
- **The professionalising tendency within social research:** Lynch (1993: 215) lamented the evident 'disciplined and scientist' cast assumed within some qualitative methodology in direct contrast to his suggested manifesto for a 'normal science' methodology - '*nothing fancy … the juxtaposition of (arguably) comparable case, citing testimonies and reports, drawing out common themes, noting relevant discrepancies and trends, and [especially] appealing to common intuitions and judgements.*' (Lynch, 1993:304); and,
- **The incommensurability of language:** Williams (2000) identified the recurrent concern within social research to clarify the ambivalent relationship between professional and lay understandings of social reality. This incommensurability clearly has greatest resonance within applied social research where the desired end-point is 'knowledge-for-action'.

Students of social research methods in search of a 'Haynes Manual' type set of instructions are often, if not invariably thwarted in their ambitions and are either confronted with an abstract description of the method or a mechanical set of instructions for application (Pope et al., 2000; Braun and Clarke, 2006; Smith and Firth, 2011; Gale et al., 2013; Parkinson et al., 2016). It is our contention that methodology textbooks rightly expose ambiguous tensions between the act of 'doing' and the methodological considerations underpinning that act. The intention of this paper is not to resolve these tensions, but rather to make the interplay between epistemological, methodological, and concerns relating to method visible to inspection. To illustrate this interplay, we will demonstrate one example of a piece of applied policy research and in particular, the process of Framework Analysis. Applied policy research concentrates on finding solutions to an immediate practical problem (Ritchie and Spencer, 2002), and has a key role to play in providing insight, explanations and theories of social behaviour (Ritchie and Spencer, 2002). Framework Analysis sits at the heart of applied policy research methodology, and has been developed to facilitate systematic, transparent and trustworthy analysis of data (Ritchie and Spencer, 2002; Ritchie et al., 2013).

The Study

The study used as an example in this paper examined reasons for recruit attrition within the British Army Infantry (Author, 2015b). This study aimed to understand the impact that enlistment into a military organisation (the British Army infantry) had on the individual recruit that failed, and explore the reasons given by those recruits.

Framework Analysis

The process of Framework Analysis has been described by Ritchie and Spencer (2013; 2002) and its use has been used and reported on in a number of publications over the last decade (Author, 2016; Parkinson et al., 2016; Author, 2015b; Author, 2015a; Gale et al.,

2013; Author, 2013; Dixon-Woods, 2011; Smith and Firth, 2011; Braun and Clarke, 2006; Pope et al., 2000; Bryman and Burgess, 1994).

The Framework Analysis approach was developed in the UK specifically for applied or policy relevant qualitative research to meet set objectives of investigation within limited time periods (Pope et al., 2000). The distinctive feature of Framework Analysis is that it forms a series of thematic matrices in which every participant is allocated a row and each sub-theme a column. This allows the analyst, and those commissioning the research, to move between multiple layers of abstraction without losing sight of raw data (Ritchie et al., 2013). It is this level of transparency – making explicit the processes employed in the interpretation of raw data - that prompted the example study to use this method within the military setting. The recommended analysis process consists of five phases, and methodological commentary provided accompanies each of these phases.

Familiarisation.

Ritchie and Spencer (2002) identify that when undertaking research where extensive material is available, judgements have to be made as to how data for analysis are to be selected and broken down into a dataset of a manageable size. Within this study 100 interviews were conducted (recruits that were leaving training) over a period of 2 years. The interview transcripts were combined with the recruits' leaving reports from their commanding officer. Case records were then randomly picked from each training unit to create multiples of ten. The initial ten were used in the familiarisation process and further multiples of ten were added until no new themes or relationships were emerging, i.e. data saturation was achieved[i].

The initial stage of this method of analysis involves immersion in a pragmatic selection of data by reading all of data within the selection (Pope et al., 2000). To achieve this the initial set of 10 case notes was used in conjunction with a spreadsheet to begin to catalogue emerging themes. As each set of notes was read in turn, a new line was added to the spreadsheet so

that verbatim text could be recorded. This allowed text to be added to establish themes as well as adding any new emerging themes from new case files. When all 10 case files had been used, the spreadsheet was printed out, stuck together and pinned to a wall. This enabled some semblance of order to be brought to the data, and a mind map to be produced that established group headings for themes within the text (see Figure 1).

At this point in the process, the analyst might pause to consider a notable epistemological and theoretical tension at work 'under the surface' of the analysis process which, initially, might appear as unproblematic or even mechanical. In particular, claims to 'data saturation' are hampered by the same philosophical limitations that plague inductivism in general. The problematic issue of establishing the validity of universal statements from singular statements (Hempel, 1966) can be seen as analogous with attempts to generalise from the context-bound findings of qualitative enquiry, and is subject to further discussion which we will explore later. Of more concern at this juncture is a further problem of inductivism: namely, the logical impossibility of establishing just how probable a conclusion might be from a given number of observations. This critique applies directly to claims about 'data saturation' and the researcher can never be certain that saturation point has been reached and that no further new material might emerge. In other words, there is an unavoidable problem in deciding just when to stop interviewing, participant- observing etc. and no calculable means of establishing the probability that data saturation has been reached. The decision to stop is therefore simply a pragmatically-determined matter of subjective judgement, reflexively framed by the time-bound nature of the research project in question.

Insert figure 1 here

Constructing an initial thematic framework

The next stage of the process involved taking the familiarised data and identifying key issues, concepts and themes by which further data could be referenced. This was achieved by

returning to the aims and objectives of the study and reflecting on the prior issues as well as the recurring themes in the dataset (Pope et al., 2000). By the end of this stage the initial data had been grouped into manageable chunks and a thematic framework established. With the framework, an index was then added to the dataset in preparation for passing all data through the indexing process.

Indexing and Sorting

'Indexing' refers to the process whereby the thematic framework or index is systematically applied to data; it is not a routine exercise as it involves numerous judgments as to the meaning and significance of data (Ritchie and Spencer, 2002). It is this judgement process and interpretation that can allow individual subjectivity to emerge in a study, as ultimately the researcher has been immersed in the dataset for a long period of time and preconceptions will inevitably shape the interpretation of what is being read. As noted, qualitative data interpretation both embraces and celebrates subjectivity; however, by applying a thematic framework or index to the whole dataset, judgements and assumptions of what the dataset means to the researcher are made transparent for all to see (Ritchie and Spencer, 2002). It is this level of transparent and potentially replicable indexing and labelling of all data that systematically adds robustness to this method of data analysis.

It was evident from the outset that Framework Analysis was not a linear process and that the thematic framework was constantly evolving as more data were added. During this process the case files (interview transcripts) were read in turn and an index code was annotated against each existing or emerging theme in the margin. In addition, the passage of text was then highlighted so that it could be lifted into the charts, as supporting evidence at the next stage. As noted by Ritchie and Spencer (2002), this is not a routine exercise as judgements had to be made as to whether the emerging data 'fitted' within the established framework, or the added data were revealing a new theme within the framework. It is essential that researchers return to their original emerging themes from the familiarisation stage and use

these to help develop the thematic framework through the indexing process. Until the researcher exercises his or her own subjective judgement in relation to data saturation, the thematic framework should remain live and constantly evolving as the index develops. Analysts must be mindful that during this process they may need to return to previous transcripts as new themes emerge in order to consider whether those themes are present in data previously considered. Figure 2 demonstrates the process of how data were reduced into the thematic framework to establish the index that was applied to the dataset.

At this point in the data analysis process, the analyst may pause again for reflexive consideration of a further underlying tension – the degree to which the hoped-for transparency, implied in Richie and Spencer's methodology, is possible. Data analysis, as stated, is unavoidably reflexively shaped. Reflexive transparency represents an attempt to account for the sum total of ways in which the research process – and specifically the researcher as a subjective actor - actively interprets, influences (or even shapes) meanings that are generated. As Lynch (1993) noted, reflexive analysis is generally valued as an academic virtue within qualitative research, and attempts at reflexivity (perhaps at best) demonstrate a commitment to making subjective judgements open to inspection. However, it would be grossly mistaken to think of this process, regardless of how searching and / or confessional, as taking the eventual account any nearer to an 'objective' truth of 'what actually happened.

Any misplaced sense of certainty yearned for by 'aspirant objectivists' remains elusively beyond the grasp of qualitative research precisely because of the paradigmatic boundaries stated above. In the first place, there is an inherent difficulty in assuming a truth-value assignation to the content of what is revealed during the course of an interview. A strong realist stance would imply the acceptance of an association between what is said during a research interview and actual events or happenings. In contrast, a constructionist position

makes no such assumptions, and rather, happily regards descriptions and accounts as merely symbolic of actual events / happenings. It is suffice to note that the latter position doesn't devalue the status of data, as what people say still reflects their own subjective realities, interpretations and priorities. The issue of writing and presentation of findings adds a further layer of subjectivity to data analysis: As Williams (2000) noted, no matter how 'open-to-inspection' data analysis is made e.g. through respondent validation techniques, or in this case by the use of a data matrix, in the last instance the researcher remains in authorial control of the content. The matter of writing research is not merely the descriptive statement of 'facts'. van Maanen (1988) suggested that how any research finding is reported is reliant upon literary style. A realist style would tend to deploy various literary devices to make findings appear more authentic. Other modes of presentation are reliant upon poetic or dramatic reporting styles to produce a convincing account. Generally, authors of qualitative research [consciously or unconsciously] remain aware of the 'rules' that apply to 'appearing convincing' – and duly act-out these when reporting their research. However qualitative research is reported, as Plummer (1997) reminds us, those who consume or cite the research, in turn, actively interpret findings from their own [subjective] frame of reference.

Insert figure 2 here

Charting (Reviewing Data Extracts)[ii]

Pope et al (2000) describe the charting stage as rearranging data into the appropriate parts of the thematic framework, and more recently Ritchie et al (2013) have characterised this stage as a way of organising data into more coherent groupings, as usually initial thematic frameworks are rather crude and disorganised. In broader methodological literature, this is generally referred to as secondary data reduction, or sorting the data under superordinate themes. Again, this was not a distinct process in isolation from any other. As data are

processed the researcher may generally begin to develop a feel for what the themes are telling them, and through this abductive process, usually overarching themes will begin to appear. Charting is essentially the process of organising the thematic framework and the index under emerging superordinate headings as well as beginning to make subjective sense of data. Within the example study, the charts appeared to grow with newly added data naturally gravitating into their own charting area. Clear initial chart titles were evident but what was most interesting is that very quickly both sub and supra themes emerged from the initial charts, reinforcing that one does not have to be dogmatic in applying a qualitative data analysis technique, but more importantly use the technique as a guide towards exercising subjective judgements in deriving meanings from data. It was very evident that if the researcher had not allowed a looping process to occur (see Figure 3) between the thematic framework phase, indexing, and charting, then fundamental sub and supra themes would have been missed. This process led to the construction of four initial charts from which two subsequent charts emerged (see figure 4).

Insert figure 3 here

Insert figure 4 here

Mapping and interpretation (Data Summary and Display)

By this stage of the analysis the dataset had been sifted and sorted into its core themes in preparation for interpretation and mapping. Guided by the six key objectives and features of qualitative analysis[iii] and guided by the original research aims the charted data were used to map the range of the recruit experience, as well as finding associations and typologies within the dataset. This was then ultimately used to map the recruit experience for those recruits that failed in training.

Insert figure 5 here

Validity of the Framework Analysis Approach

Framework Analysis not only provides a systematic approach to analysing large amounts of textual data, but also tackles a more fundamental obstacle for commissioners of qualitative research. In the case of this study, the historic research approach to this problem within the Ministry of Defence in the United Kingdom had almost always been firmly rooted in a positivist approach (Long, 1990; Mael and Ashforth, 1995; Hampson, 1997; Larson et al., 2002; Niebuhr et al., 2008) with little appetite to fund or support larger scale qualitative social enquiry. At the same time, the problem of recruit attrition within the Infantry remained consistently high with little understanding of potential reasons why. However, if the Ministry of Defence was going to be able to act on the findings of qualitative research it was essential to make it very clear how the findings of the research were obtained. If policy makers are to implement change based on qualitative research findings, they need to have confidence in the validity, transparency and trustworthiness of those findings.

Validity in qualitative research conducted by a single field worker has always invited the question 'why should we believe it'? (Bosk, 1979). Qualitative research has been erroneously criticised for the absence of standard means for assuring validity. However, this assumption of the lack of validity is often based on the stipulation for validity in quantitative research (Maxwell, 2002). Maxwell (2002) argued that typologies developed for quantitative research cannot be directly applied to qualitative research without distorting *a priori* paradigmatic assumptions. Maxwell (2002) therefore cautioned against judging qualitative 'apples' against the criteria of quantitative 'pears' via the application of inappropriate validity typologies. However, this is not to say that questions of 'validity' do not remain salient. It should be clear at this point that in conducting qualitative enquiry there will never be one correct objective account or 'Gods eye view' (Putnam and Conant, 1990) as observers cannot step outside of the world in order to objectivise that which is subjective in nature. The concept of validity

presented by Maxwell (2002) does not depend on the existence of a (mythical) absolute truth. If the researcher can demonstrate the integrity of the dataset and the accuracy of its recording, then data themselves cannot be deemed invalid on the basis of 'subjectivity'. However, the validity of processes of subjective (or inter-subjective) interpretation can be subject to question. The example study adopted Maxwell's (2002) four points of validity in qualitative research: descriptive validity, interpretive validity, theoretical validity and generalisability. Descriptive validity, the foundation upon which qualitative research is built, relates to the accuracy of the recording of data and the integrity of the researcher to provide adequate detail in their account of their own subjective experiences. The strength of Framework Analysis is that observations 'lifted' from textual data are made clearly visible during the familiarisation phase. These observations, in turn, are used to construct a thematic framework and index, and all subsequent observations are then applied to that index and framework in order to test assumptions. The observations are then transposed verbatim into charts.

Interpretive validity is inherently a matter of inference from the observations recorded (Maxwell, 2002). In this respect, the charting process within Framework Analysis provides a clear, transparent picture of the researcher's subjective inferences prior to mapping. The systematic process of theory construction in Framework Analysis clearly builds on evidence (within data), and demonstrates the development of links and relationships (within the dataset) that build up to theories. Thus, claims to integrity and validity lie within the inherent transparency of the approach.

Maxwell (2002) acknowledged that most qualitative research is not designed to allow systematic generalisation as the findings of qualitative research cannot be generalised in a statistical sense. However, this is not to say that findings cannot (with caution) be generalised at all. Williams (2000) suggested that moderatum generalisations are possible. These generalisations assume the following form: To use an analogy much beloved of sociologists, imagine that someone was flying around the Earth in a spacecraft, and was only allowed to

take two pictures: Picture 1 might be of the Himalayas, and picture 2 might conceivably be of the surface of the Atlantic Ocean. It would be foolish to make the erroneous statistical inference that mountains cover 50% of the Earth's surface, whilst the remaining 50% is covered by ocean. However, it would not be unreasonable to conclude that (a) such things do exist on the surface of the Earth, and (b) that they are interesting features that increase our knowledge / understanding of the world, and finally, (c) with caution, the conclusion might be drawn that similar things might also exist in similar worlds. A benefit of applied policy research and Framework Analysis is that it has the capability to manage large amounts of qualitative data based on multiple case observations. In the example study, the accounts of recruits who failed in training were analysed through the framework process and cases were added until theoretical saturation was achieved.

Conclusion

The intention of this paper was to demonstrate the interplay of epistemological, methodological and pragmatic issues at work in one research approach, not as a means of subverting the approach, but rather as an attempt to demonstrate the complexities of one qualitative methodology. Throughout this process, we have endeavoured to stay focussed upon Mills' (1959) contention that research is a form of craft i.e. a skilled, practical, 'doing' activity. However, even accepting that research is a 'doing' activity, it does not absolve the researcher from exploring and understanding paradigmatic concerns at play below the level of surface appearences.

If qualitative evidence is to be regarded seriously in a political or policy context in which hierarchies of evidence privilege quantification, it must be at the very least rigorous, systematic, and proportionate in its claims. Part of this can be achieved by means of reflexive accountability – making decisions taken along the way open to inspection or audit.

It is argued that rhetorical transparency in the creation of any qualitative account can enhance authenticity, and in part, this paper is intended to demonstrate that it is possible to cut a path

through the jungle of epistemological and methodological complexity, whilst at the same time providing a 'Haynes Manual' set of instructions without devaluing underlying philosophical and theoretical matters.

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[i] Files that were found to be incomplete i.e. Officer Commanding Reports (n=9) missing were removed from the selection and thereby excluded from analysis.

[ii] The study used to demonstrate Framework analysis was undertaken using Ritchie and Spencer's Ritchie J and Spencer L. (2002) Qualitative Data Analysis for Applied Policy Research. In: HUBERMAN MA and MILES MB (eds) *The Qualitative Research Companion.* London: Sage Publications, 305-329. original publication of the method. In Ritchie's later publication Ritchie J, Lewis J, McNaughton-Nicholls C, et al. (2013) *Qualitative research practice : a guide for social science students and researchers,* Thousand Oaks, CA: SAGE Publications. this stage is renamed '*Reviewing Data Extracts'.*

[iii] Key objectives and features of qualitative analysis: defining concepts, mapping range and nature of phenomena, creating typologies, finding associations, providing explanations and developing strategies. Ritchie J and Spencer L. (2002) Qualitative Data Analysis for Applied Policy Research. In: HUBERMAN MA and MILES MB (eds) *The Qualitative Research Companion.* London: Sage Publications, 305-329.

Figure 1: Familiarisation of subjective data (recruit interviews)

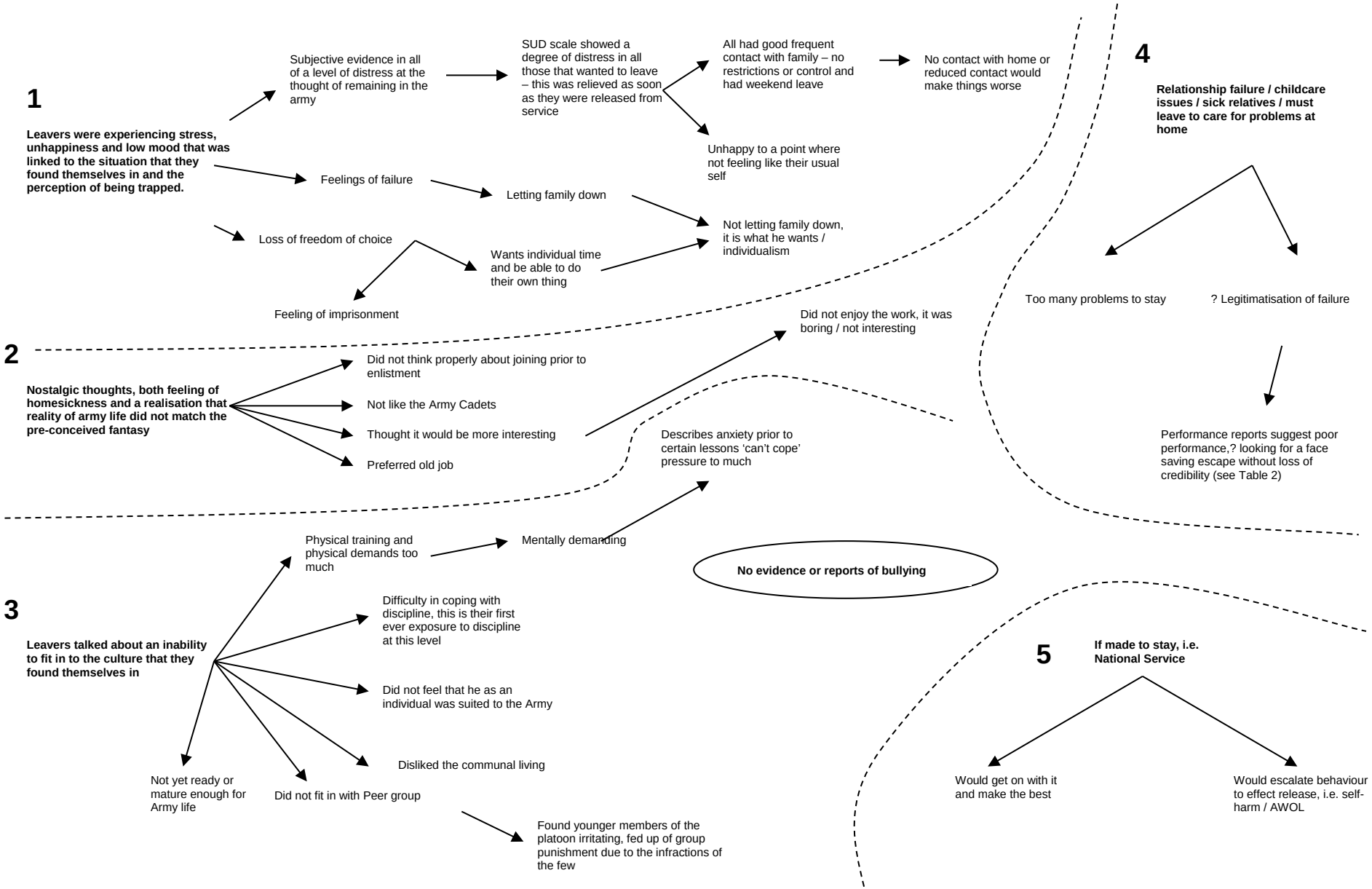

Figure 2: Process of analysis: Thematic Framework and Index

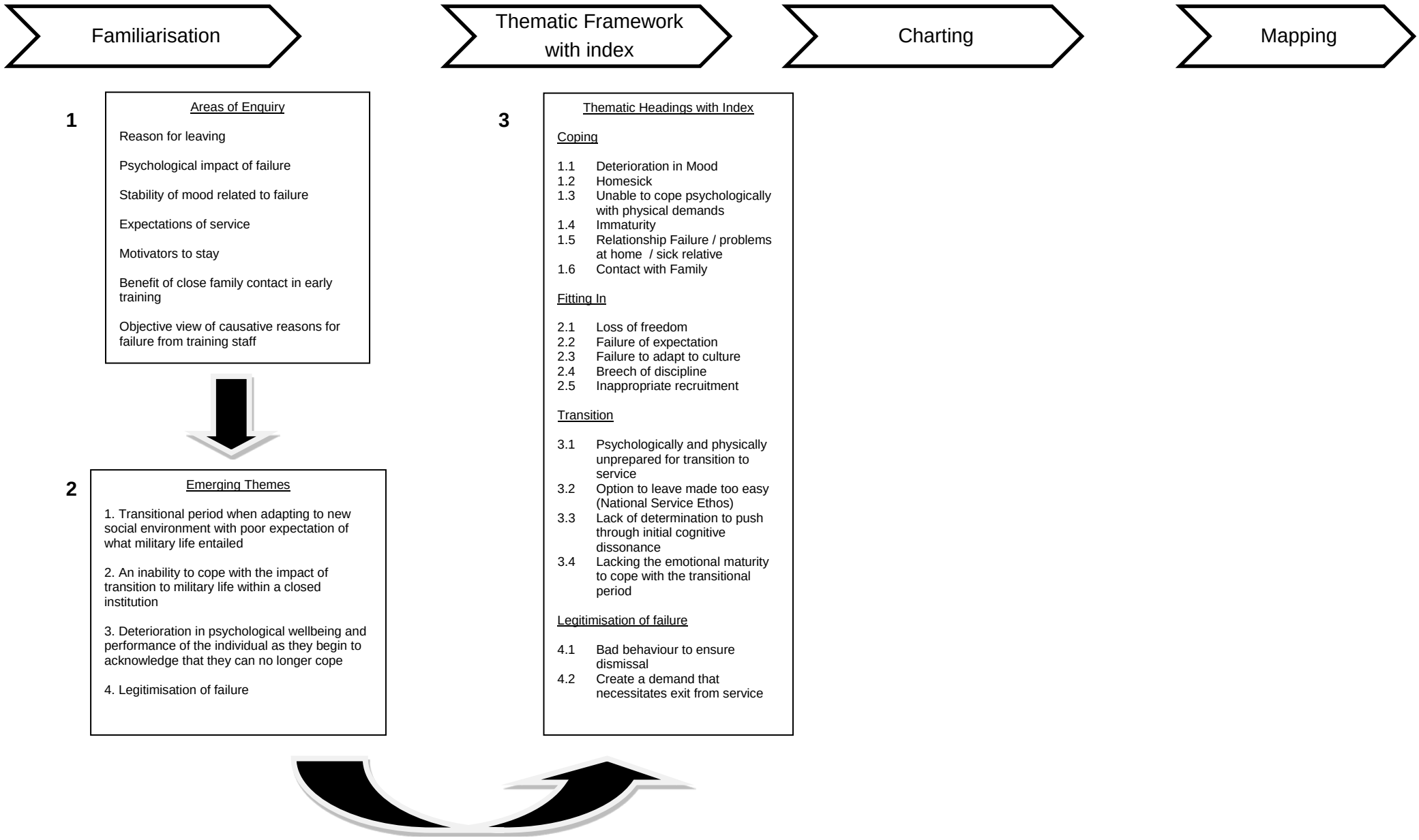

Figure 3: Framework analysis in practice

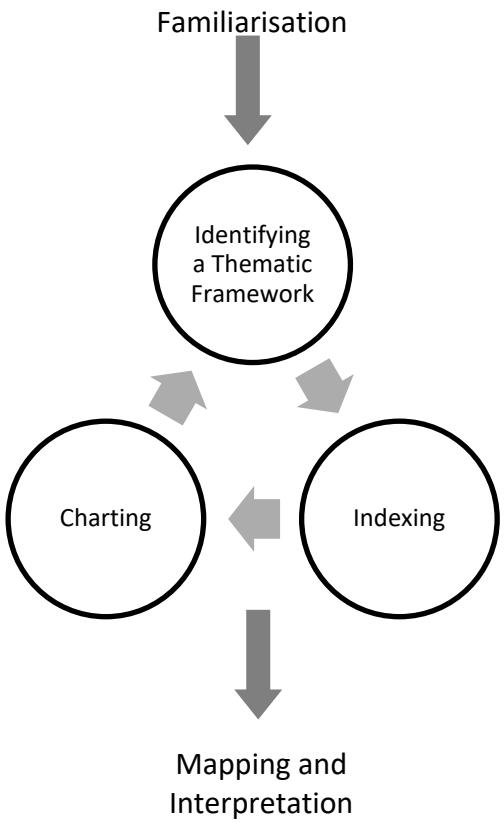

Figure 4: Process of analysis: Charting

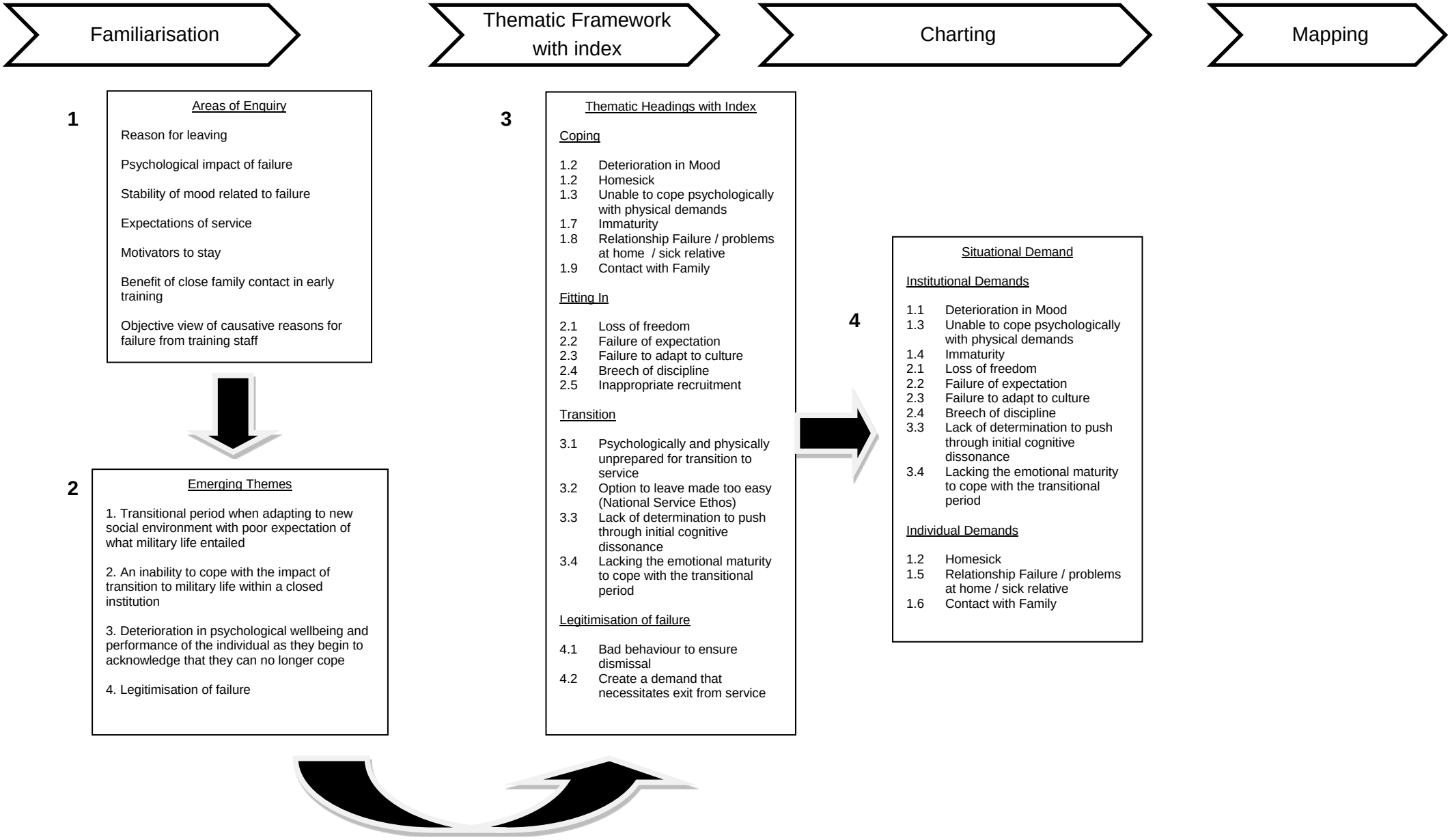

Figure 5: Process of analysis: Mapping and Interpretation