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Author(s): Wiltshire, Gareth; Ronkainen, Noora

Title: A realist approach to thematic analysis : making sense of qualitative data through experiential, inferential and dispositional themes

Year: 2021

Version: Accepted version (Final draft)

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Please cite the original version:

Wiltshire, G., & Ronkainen, N. (2021). A realist approach to thematic analysis : making sense of qualitative data through experiential, inferential and dispositional themes. Journal of Critical Realism, 20(2), 159-180. https://doi.org/10.1080/14767430.2021.1894909

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- 3

4 Abstract

5 Thematic analysis (TA) is the most widely used method for analysing qualitative data. Recent 6 debates highlighting the binary distinctions between reflexive TA grounded within the 7 qualitative paradigm and *codebook TA* with neo-positivist orientations have emphasised the 8 existence of numerous tensions that researchers must navigate. This article attempts to resolve 9 some of these tensions through developing an approach to TA underpinned by realist 10 philosophy of science. Focusing on interview data, we propose the use of three types of themes 11 (empirical, inferential and dispositional themes) and the use of corresponding validity 12 indicators (empirical adequacy, ontological plausibility and explanatory power). Using an 13 illustrative example, we outline the conceptual foundations of a realist approach to TA and 14 present recommendations for conducting it in practice. This approach, we claim, reconciles 15 several existing binaries between distinctive types of TA by incorporating the contributions of 16 both for the development of different types of themes.

17

18 Keywords: critical realism; paradigms; small q qualitative; big Q qualitative; data analysis;
19 validity; study design; research quality; interdisciplinary research; methodology.

20

21

23 A realist approach to thematic analysis: proposing the use of empirical,

24 inferential and dispositional themes

25 Introduction

26 Thematic analysis (TA) is the most widely used method for analysing textual data in 27 contemporary qualitative research. Part of the popularity of TA could be that it is accessible to 28 novice qualitative researchers and that it tends to produce clear and comprehensible findings 29 that meaningfully make sense of otherwise complex data (Braun et al., 2016). Indeed, in 30 contrast to analytic methods that comprise a more complete methodology (e.g., 31 phenomenological analysis, Foucauldian discourse analysis or narrative analysis), TA can be 32 seen as an intuitive method without deep theoretical commitments (Braun and Clarke, 2006). 33 While qualitative research has long relied on some type of thematization during analysis, 34 Boyatzis (1998) offered one of the first structured guidelines for conducting TA and considered 35 it as a potential bridge between qualitative and quantitative research traditions. Although 36 several versions of TA have since been introduced (e.g., Attride-Striling, 2001; Guest et al., 37 2012; Joffe, 2012; Lawless and Chen, 2019), the approach that has clearly become the most influential is attributed to Braun and Clarke (e.g., 2006; 2016; 2019a; 2019b). Their (2006) 38 39 Using thematic analysis in psychology paper is highly cited – with over 70,000 citations recorded on Google Scholar – and has become the standard point of reference for TA. 40

Despite this breadth of application, engaging with TA is not entirely unproblematic. Recent contributions from leading proponents have highlighting the existence of paradigmatic disagreements between two broad approaches to TA. Braun et al. (2016) use the terms 'small q' qualitative research and 'big Q' qualitative research to make this point. 'Small q' TA follows largely in line with Boyatzis' (1998) early version which, with the ambition of being a bridge between qualitative and quantitative traditions, involved translating 'qualitative information 47 into a format amenable to statistical analysis' (viii) as well emphasising the need for interrater 48 reliability. Boyatzis' approach – alongside Guest et al.'s (2012) approach – was described by 49 Braun and Clarke (2019a: 594) as *codebook TA* (or *coding reliability TA*) and is partially 50 characterised as being 'guided by a pre-determined codebook or coding frame' for the purpose 51 of identifying material that is relevant to a particular 'data domain' (i.e., a theme). Indeed, 52 codebook TA was also said to be grounded in 'neo-positivist' underpinnings and relies on 'a 53 straightforward realist ontology' (Braun and Clarke, 2019b: 9-10).

54 In contrast, Braun and Clarke position their version of TA in line with the 'big Q' 55 approach whereby qualitative methods are not merely techniques, but instead are seen as 56 inseparable from the wider methodological process and hence faithful to a so-called 'qualitative 57 paradigm'. Defining what characterises the qualitative paradigm may be a contentious task, but 58 key authors have drawn on labels such as interpretivism, relativism and constructivism to signal 59 the ontological, epistemological and axiological assumptions that are often considered to be 60 interwoven within qualitative inquiry (Sale et al., 2002). Explicitly, Creswell and Miller (2000: 61 125) wrote: 'the qualitative paradigm assumes that reality is socially constructed and it is what 62 participants perceive it to be'. This was echoed by Smith (2017: 138) who noted that 'often the 63 qualitative researcher believes that reality is multiple and dependent on them' as well as that 64 'knowledge is constructed and subjective.'

Despite the initial description of TA in their 2006 paper as an approach that is 'essentially independent of theory and epistemology, and can be applied *across* a range of theoretical and epistemological approaches' (Braun and Clarke, 2006: 78), qualitative paradigmatic framings increasingly play a more leading role in the most recent reflections and guidelines. For them, 'qualitative data analysis is about telling "stories", about interpreting, and creating, not discovering and finding the "truth" that is either "out there" and findable form, or buried deep within, the data' (Braun and Clarke, 2019a: 591). More specifically for TA, they reflected that 'we expressly developed TA as an approach embedded within, and reflecting the values and sensibility of, a qualitative paradigm' (Braun and Clarke, 2019a: 9). Indeed, these explicit demarcations have been made manifest with the introduction of the label *organic TA* (Braun and Clarke, 2016) and more recently *reflexive TA* (Braun and Clarke, 2019a). Appealing to framings of this kind, Braun and Clarke 2019b: 10) positioned their version of TA as being 'incompatible' with assumptions of codebook TA.

78 Highlighting the binary distinctions between reflexive TA (grounded within the 79 qualitative paradigm) and codebook TA (with neo-positivist orientations) presents researchers - particularly novice researchers - with two 'incompatible' paradigmatic options for 80 81 conducting TA, with the former being overwhelmingly the most popular choice. As such, we 82 suggest that a gap in the literature has become apparent for qualitative researchers who wish to 83 adopt an alternative paradigmatic perspective altogether. Often seen as a path through the 84 polarised traditions of positivism and interpretivism, realist philosophical assumptions 85 (Bhaskar, 1975; 1978; Sayer; 1984; Archer, 2007; Danermark et al., 2002, 2019; Maxwell, 86 2012; Pawson, 2013) may offer such an alternative.

87 This present article intends to make an original contribution to the qualitative research 88 literature by proposing a realist approach to TA. In what follows, we justify the need for such 89 an approach beyond merely highlighting its absence by identifying several tensions in reflexive 90 TA as it is currently described. Key realist concepts are then defined and explained before 91 situating this article within the existing literature attempting to translate realist philosophical 92 principles into methodological practice. The bulk of this article is then dedicated to outlining 93 the conceptual foundations of a realist approach to TA and clarifying one way of conducting it 94 in practice using an illustrative example with interview data. Ultimately, we claim that this 95 approach reconciles and moves beyond the existing paradigmatic binaries in the TA literature.

96 Why might a realist approach to thematic analysis be useful?

97 Tensions in reflexive TA

98 Beyond the absence of a conscientious engagement with realist philosophy of science in the 99 existing TA landscape, there may be other reasons for seeking an alternative approach to TA. 100 First, notwithstanding the aforementioned benefits of reflexive TA, we suggest that tensions 101 can arise for some researchers because of its explicit alignment with the qualitative paradigm. 102 While this alignment, no doubt, engenders a sense of coherence for some, an obvious tension 103 may arise for those wishing to integrate reflexive TA with quantitative methods as part of a 104 broader study and, indeed, while collaborating with primarily quantitative-oriented colleagues. 105 Amidst ongoing calls for greater methodological border-crossing (Danermark et al. 2019; 106 Wiltshire, 2018) as well as movements within contemporary policy environments that support 107 it (McLeish, 2016) it is likely than many researchers will find the 'incompatibility' framing of 108 the qualitative paradigm increasingly challenging.

109 Second, it could be argued that framing different versions of TA in binary terms is 110 constraining and limiting if it happens to be the case that they are not actually in conflict. 111 Examining some points of contention between the two strands of TA has led us to question this 112 claimed incompatibility in various places. For example, one distinction between the two strands 113 of TA is highlighted when Braun and Clarke critique codebook TA's focus on 'surface-level' 114 descriptions of patterns which they associate with quantitative-oriented analysis, as opposed to 115 seeking 'deep reflection on, and engagement with, the data' (Braun and Clarke, 2019a: 593) 116 which characterises reflexive TA. This surface/deep binary, we claim, need not be seen as 117 characteristics of opposing approaches because both may be needed in building knowledge 118 about a particular phenomenon of interest. Similarly, on the topic of using multiple coders, it 119 was suggested that,

if more than one researcher is involved in the analytic process, the coding approach is
collaborative and reflexive, designed to develop a richer more nuanced reading of the
data, rather than seeking a consensus on meaning (Braun and Clarke, 2019a: 595).

Here, we see a binary presented with *richness and nuance* on the one hand and *seeking consensus* on the other. Our view is that seems desirable to seek both richness and nuance *and* consensus.

Furthermore, when considering what constitutes quality TA, Braun and Clarke (2019a: 594) tend to downplay or reject the use of practical activities such as following a defined procedure, using a codebook or checking the reliability of analysts' coding (see Boyatzis, 1998; Guest et al., 2012; Joffe, 2012), stating that:

Quality reflexive TA is not about following procedures 'correctly' (or about 'accurate'
and 'reliable' coding, or achieving consensus between coders), but about the
researcher's reflective and thoughtful engagement with their data and their reflexive
and thoughtful engagement with the analytic process.

Once again, a distinction is made between *procedures, accuracy, reliability and consensus* on the one hand, and being *reflexive and thoughtful* on the other despite it being possible that the values of reflexivity and thoughtfulness are complimentary to – rather than incompatible with – the stated codebook TA procedures.

The final related point that we raise here is that reflexive TA is unclear about the principles used to sort out more trustworthy 'nuanced readings' of the data from the less trustworthy ones. This is especially problematic if diverse and even contradictory interpretations are offered by analysts. That is, being 'reflexive and thoughtful' is undoubtedly necessary for reaching trustworthy findings, but they are no guarantee of this any more than following a defined procedure, using a codebook and checking levels of agreement between 144 analysts. This is because a deep, reflexive and thoughtful engagement with data and the 145 analysis process does not entirely mitigate the risk of prejudicial, manipulative and plainly 146 mistaken engagements that are inherent to science. We hope to address some of these issues in 147 the approach we develop in this present article.

148

149 Advancing realist methodology

150 We use the term 'realism' here for simplicity and because it is inclusive of different traditions of realism, but we acknowledge that much of our understanding is informed by authors 151 152 associated with the label of critical realism (e.g., Bhaskar, 1975; 1978; Archer, 2007; 153 Danermark et al., 2002; Sayer, 1984). Notwithstanding the various divergencies between 154 traditions, realism broadly assumes that there are things that have a real, objective existence 155 'out there' in the world and these things become the intended objects of study for the natural 156 and social sciences. However, reflecting the long history in the philosophy of science claiming 157 that knowledge is fallible and that a complete apprehension of the objective world is naïve, 158 realism makes an important distinction between epistemological assumptions (referring to 159 knowledge) and ontological assumptions (referring to being). Specifically, realism respects the 160 epistemological idea that reality cannot be apprehended directly because it is processed through 161 our brains, language, culture, methods and so on (Westhorp et al., 2013: 13) yet simultaneously 162 subscribes to the idea that 'there is a state of the matter which is what it is, regardless of how 163 we do view it, choose to view it or are somehow manipulated into viewing it' (Archer, 2007: 164 195).

After assuming this basic position, many realists draw inspiration from Bhaskar's 'stratified ontology' (Bhaskar, 1975; 1978; 1989). Bhaskar claimed that phenomena in the world can be differentiated into three overlapping domains: observed experiences and events in the 'empirical domain' (i.e., things that really exists and are captured in data and noticed by the researcher); unobserved but occurring experiences and events in the 'actual domain' (i.e., things that really exists but may not be captured in data or noticed by the researcher); and unobservable causal powers and potential mechanisms in the 'real domain' (i.e., things that are not observable but have the potential to produce events).

173 While various metaphors have been used to help understand this stratified ontology 174 (Jagosh, 2019), we have found it helpful to imagine looking down at a flower from directly 175 above. The petals are in relatively clear view (the empirical domain) but much of the rest of 176 the flower (the actual domain) is not, although we can reasonably infer that it is actually there 177 and that we could see it if we were to look from another angle. The soil in which the flower is 178 growing and the nutrients that it contains (the real domain) are out of the reach of our visual 179 field. This means that we can only know anything about its predisposed properties – such as 180 the quality of the soil – by observing the real effects that they have on the flower and building 181 a theory about it. Making these distinctions is seen as important for research activities because 182 it helps 'clear the ground' by defining the different kinds of things that investigations should 183 be seeking to shed light on. In the context of qualitative data analysis, the assumption of 184 ontological depth suggests the need for researchers to engage in empirical as well as a highly 185 theoretical and speculative activities.

Grounded in these metaphysical assumptions, numerous other principles have come to characterise realist approaches. Firstly, realist research recognises the inherent value in both qualitative and quantitative methods through the idea of 'critical methodological pluralism' (Danermark et al., 2002). In addition, contrary to the qualitative paradigm, realism values the concept of validity, although it is important to amend it for some aspects of qualitative research (Maxwell, 2012). Causal explanation is central to scientific activities in the realist approach and is seen as a demarcation from empiricist research that focuses on predicting observable phenomena (Clark et al., 2007). Indeed, in the context of life-story and biographical research,
Steensen (2006: 11) suggested that:

research should be carried out not just to document how people's lives evolve in the subjective sense, but also in order to explain life trajectories as they take place in modern societies.

This emphasis on explanation requires that researchers approach research with an intention to answer explanatory questions which, according to Sayer (1984, 104/5) necessarily invokes causal language such as 'what "makes it happen", what "produces", "generates", "creates" or "determines" it, or, more weakly, what "enables" or "leads to it".'

202 While the principles and characteristics of realist philosophy of science have been 203 thoroughly developed, it has been suggested that they have yet to be fully realised as a scientific 204 project. Both Ackroyd and Karlsson (2014) and Fletcher (2017) highlighted the need for critical 205 realism in particular to move from methodology to method given that few researchers have yet 206 to demonstrate how philosophical principles ultimately contributed to their findings. A number 207 of methodological developments have now been established, including realist interviewing 208 (Mukumbang et al., 2019), realist grounded theory (Hoddy, 2019) and realist case studies 209 (Wynn and Williams, 2020). Furthermore, the methods of Realist Evaluation and Realist 210 Synthesis are increasingly being utilised (Pawson and Tilly, 1997; Pawson, 2013; Westhorp et 211 al., 2013) and the integration of realism the much revered (in evidence-based medicine at least) 212 method of randomised controlled trials is being considered (van Belle et al., 2016). In 213 proposing a version of TA grounded in realist philosophical ideas, we hope that this article 214 adds to this growing body of work.

215 Generating themes and enhancing rigor in a realist approach to TA

216 This section uses an illustrative example to outline what a realist approach to TA might 217 look like (see Table 1 for a summary of the full process). As we will demonstrate, some of the 218 characteristics of a realist approach to TA are distinctive from existing approaches while others 219 are already apparent in existing approaches, either implicitly or explicitly. We propose that the 220 generation of themes from a realist approach could be structured around the three domains 221 outlined in Bhaskar's conception of a stratified ontology. As such, a realist approach to TA can 222 translate philosophical principles into methodological practice by explicitly using three 223 different types of themes which are different, yet reliant upon each other:

- Empirical themes, referring to intentions, hopes, concerns, beliefs, and feelings captured in the data;
- Inferential themes, referring to inferences and conceptual redescriptions using more
 abstract language; and
- Dispositional themes, referring to theories about the properties that must exist in
 order to produce the phenomena being studied.

230 Generating these themes requires data-driven coding, deductive thinking and inductive 231 thinking (which are currently used in other approaches to TA) (Braun and Clark, 2006) as well 232 as abductive and retroductive thinking (which are advocated in realist methodology) (Jagosh, 233 2020; Emmel et al., 2018). For the most part, our process progresses through the themes 234 sequentially as they appear here, but it should be acknowledged that all three themes are likely 235 to be simultaneously present in the minds of researchers throughout the process and this can be 236 helpful. While these themes are being generated, we also propose that the rigor and quality of 237 the analysis can be enhanced through considering Maxwell's (1992; 2012) types of validity 238 (descriptive, interpretive and theoretical) as well as broader indicators of validity such as empirical adequacy, ontological plausibility and explanatory power. 239

The data we are using for illustrative purposes were collected as a part of the second 240 241 author's research on athletics (track and field) coaches' careers and the meanings that coaches assign to their involvement with sport (see 2nd author et al., 2019). The data set consists of 23 242 243 semi-structured narrative interviews (35-89 minutes, average 59 minutes) with sports coaches residing in Finland and the UK (aged 22-86 years), but only two transcripts were analysed to 244 245 maintain clarity for the illustrative purposes of this article. The interviews started with the question "please tell me about your story of becoming a coach" and the topics that were 246 247 explored in each interview also included participants' involvement in athletics, club culture 248 and their coaching philosophy. We chose this data set primarily because it was readily available 249 to us and we were familiar with the research context which allowed us space to concentrate on 250 the process of analysis. In hoping to allow readers to be able to draw parallels with their own 251 work, we also felt that the experiences of sports coaches would resonate with numerous other 252 qualitative researchers working in diverse social science fields such as education, management, 253 community development and leisure studies among others.

254 [Insert Table 1 around here]

255

256 *Generating empirical themes*

257 We see empirical themes as attempts to describe participants' intentions, hopes, concerns, 258 feelings and beliefs as they are evident in the data. With the notion of validity in mind, implying 259 that it is possible that we could get it wrong, we started to work on the analysis separately in 260 the knowledge that we would later compare and contrast our lists of empirical themes. Taking 261 our illustrative example, we each began generating empirical themes by reading through the 262 first interview for familiarity while annotating the transcript with tentative ideas about participants' intentions, hopes, concerns, feelings and beliefs. This first reading was also a good 263 264 opportunity to pick out 'objective' contextual information about each participant such as their 265 demographic characteristics, their circumstances and the relevant events that have impacted 266 them. On the second reading, instead of annotating notes on the transcript we each listed 'nascent' empirical themes as we progressed through the transcript using a simple spreadsheet 267 268 or table (see Figure 1). Nascent empirical themes were listed vertically (each theme as a new 269 row) and were written as plain-English descriptions of the particular type of intention, hope, 270 concern, belief or feeling expressed by the participant and observed in the transcript. We used 271 the sentence starter 'The participant expresses that...' as a way of structuring our ideas with 272 consistency and we usually used the language used by participants themselves. For example, 273 an early part of the first interview transcript read;

I think I had an inspirational PE teacher myself. And that had a big influence on me. They were very much keen on their athletics as well and I think a lot of that rubbed off on me. Therefore, when I started teaching, I think I started coaching around about the same time.

278 This was coded by researcher A as:

The participant expresses that he felt inspired to coach by his own experience of being coached himself.

This 'data-driven',¹ coding was carried out by each of us for the whole of the first transcript before copying the complete list of nascent empirical themes to a master list. This process was repeated for the second transcript but with the additional task of 'deductively',² checking whether or not the intentions, hopes, concerns, beliefs and feelings expressed by the

¹ Other descriptions of qualitative data analysis refer to this process as 'inductive' coding (see Braun and Clarke, 2006). However, we later use the term 'inductive' to refer to a type of logical reasoning so we use 'data-driven' to avoid confusion.

 $^{^2}$ Other description of qualitative data analysis refer to deductive coding as 'theory-driven' or 'top-down' thinking (Braun and Clarke, 2006). We use the term 'deductively' as it is used in logic to refer to the process of testing the truth of an emerging premise based on the truth of an observable conclusion (e.g., Sports coaches generally experience X (premise 1). This particular participant is a sports coach (premise 2). Therefore, this participant experiences X (conclusion).)

285 first participant were also true for the second participant. To assist this, we added a new column 286 to the table of themes (adjacent to the themes and data from the first transcript) and recorded 287 our decision using the terms 'also true for this participant', 'not true for this participant', and 288 'no evidence available'. The new data-driven findings that were not already identified in the 289 first transcript were added to the master list. Our illustrative example stopped at two transcripts, 290 but the process can be repeated for as many transcripts as are required in a wider study. At this 291 point, it is also possible provide interview participants with a list of nascent empirical themes 292 generated from their interview. Although 'member checking' for eventual analytic findings has 293 raised a number of concerns (Smith and McGannon, 2018), we see no in-principle reason why 294 nascent empirical themes that are descriptive and in lay-terms would not benefit from being 295 reported back to participants.

296 Once complete, the nascent empirical themes on the master list were re-phrased to 297 reflect their existence in the data set with the sentence starter "Data show that..."At this stage, 298 it was possible to make an evidence-based judgement about the strength of each nascent 299 empirical theme as well as look for potential patterns based on the contextual information 300 available such as, for example, gender differences between participants. We see frequently-301 occurring themes as 'demi-regularities' because they indicated that an interesting pattern of 302 events was occurring but without restricting us to making law-like judgements about those 303 patterns (Jagosh et al., 2012). Here, we found it useful to draw on quantitative-type information 304 about how frequently each theme arose in the data (across the two transcripts) which is 305 commonly implied when studies report findings with phrases like 'many participants in our 306 study' or 'a common theme in our data was', but rarely made transparent.

That said, avoiding the temptation to fetishize the apparent precision that quantitativetype information allows, we also trusted in our natural, empathetic human capacities to recognise more or less significant themes based on the strength with which they were conveyed, irrespective of how frequently they appeared in the data. Both of us sought emotional 'hot spots' in the data (Ringrose and Reynold, 2014) to help in this regard and one of us drew on the additional benefit of having conducted the interviews and hence having witnessed the strength of feeling about each theme *in situ* (Ezzy, 2010). Based on this judgement, the nascent empirical themes on the master list were re-phrased again to reflect the presence of the theme across the data set with the sentence structure used in the following example:

316 Data show that [some/many/most] participants in this study [strongly] intended to find 317 success as a coach from the athletes that they coached.

318 Efforts to enhance the quality of our analysis at this stage were guided by the concepts 319 of empirical adequacy (is there sufficient data to support the claims made?), and Maxwell's 320 (1992; 2012) descriptive validity (how well the researcher's description corresponds to the 321 available facts) and interpretive validity (how well the researcher's interpretation of 322 experiences corresponds with the participant's interpreted experiences). Thinking with these 323 ideas, we attempted to remain sensitive to noticing whether nascent empirical themes fell short 324 of being defensible. We see these as important, fundamental principles which are especially 325 relevant to claims that are novel, unexpected and surprising and hence may require greater 326 levels of empirical verification. Even though enhancing empirical adequacy, descriptive 327 validity and interpretive validity is possible for a single researcher we found that comparing 328 and combining our analysis was a valuable exercise. Using a consensus document (see Figure 329 2), we reviewed each others' themes in turn for accuracy – checking the original transcript in 330 the case of disputes – and arrived at a decision to keep, combine, discard or rename themes. 331 This resulted in a combined list of 31 mature empirical themes (see Table 2).

332

333 *Generating inferential themes*

334 A realist approach to TA ought also to be sensitive to the notion that some aspects of 335 the social world are not empirically observed but can be inferred through our empirical 336 investigations. In this sense, inferential themes are different to empirical themes because they 337 attempt to take this step by moving beyond the 'data-driven' and 'deductive' thinking used to develop empirical themes to instead utilising a dual combination of 'inductive',³ and abductive 338 339 thinking as an extension of the empirical themes. Returning to working independently, thinking 340 inductively involved moving from a descriptive statement about the participants in this 341 particular data set (i.e., "Data show that some participants in this study may feel...") to a 342 plausible statement about the broader population or practice of interest (i.e., "It is plausible to 343 claim that sports coaches may feel..." or "It is plausible to claim that the practice of coaching 344 could involve..."). This was a relatively straight forward move, although the key judgement 345 about the kind of probabilistic language to use (i.e., "sports coaches may feel...", "sports 346 coaches commonly feel..." or "sports coaches are likely to feel...") and the use of general/particular indicators (i.e., "male sports coaches...", "young sports coaches...") was 347 348 contentious as a result of only analysing two transcripts for our illustrative example. In this 349 way, our example shows that enhancing the quality of these inferences can usefully be guided 350 by empirical adequacy as well as ontological plausibility (i.e., can this claim reasonably be 351 considered as a plausible reflection of what occurs in the world?).

Following as we do from existing realist scholarship, we consider the notions of abstraction entailed within abductive thinking to be highly valuable. While inductive and deductive reasoning are useful thought processes, they are of limited value because neither contribute to the development of new explanatory theories (Decotaeu, 2017). This is because

³ We use the term inductive to mean the reasoning involved in generating a more general claim from what is known about a particular case.

deductive statements preserve the knowledge contained in their assumptions and inductive statements produce generalisations of the properties that are already observed in the data (Danermark et al., 2002). Abduction, in contrast, is a conceptual 'redescription' (Fletcher, 2017; Hoddy, 2019) or 'recontextualisation' (Danermark et al., 2002) of empirical data that gives a more abstract and general form to the phenomenon in a way which acknowledges the early presence of conceptual framings while also allowing empirical data to inform such conceptual framings (Lusted, 2018). As Danermark et al. (2002: 91) explained,

The revolution of recontextualizations is that they give a new meaning to already known phenomena. Social science discoveries are to a large extent associated with recontextualization. Social scientists do not discover new events that nobody knew about before. What is discovered is connections and relations, not directly observable, by which we can understand and explain already known occurrences in a novel way.

In our illustrative analysis, we attempted to draw on existing concepts that we were aware of in the literature and which helped to reach past the lay-language used for the empirical themes. Take, for example, the following empirical theme:

In with the crowd: Data show that some participants in this study felt like coaching keptthem 'in' the sporting community.

Thinking both inductively and abductively, this was eventually developed into the followinginferential theme:

Belonging to a community: The practice of coaching [could/often/is likely to] provide coaches with a sense of belonging, feeling cared for, a social identity and way to maintain relationships.

378 Developing these inferences relies on a researchers' knowledge of the conceptual 379 landscape as well as, potentially, the original and creative invention of new concepts. For us, this emphasised the importance of researchers' specialist knowledge as well as being able to access literature that opens up and clarifies key concepts. That said, we again used the notion of interpretive validity to resist the temptation to over-extend our abductive thinking because we noticed a potential risk in being drawn to interesting (and popular) concepts at the expense of fairly representing the experiences of participants.

As with the empirical themes, we used a consensus document to compare and combine our ideas in order to move from nascent inferential themes to mature inferential themes (see Figure 3). The main value in this process was to adding concepts that were missed by a single researcher and further exposing ideas to disputes about empirical adequacy, ontological plausibility and interpretive validity. Additionally, it was possible at this stage to collapse two or more of the empirical themes that were underpinned by a shared concept. This resulted in a list of 21 mature inferential themes (see Table 2).

392

393 *Generating dispositional themes*

394 Reflecting the deepest domain in Bhaskar's stratified ontology, we see dispositional themes as 395 attempts to theorise about the potential powers that must exist in order for the phenomena in 396 the world to manifest. Dispositional themes rely necessarily on the previous levels of themes 397 but move beyond them by thinking 'retroductively.' The thought process of retroduction entails 398 thinking about the mechanisms - that may be 'latent' or 'dormant' - but have real causal 399 influence on the world because of their intrinsic properties (Jagosh, 2020). Themes at this level 400 are 'dispositional' in this sense precisely because they do not always produce actual events in 401 the real-world as their causal power is dependent on the context in which they reside (Hoddy, 402 2019; Decotaeu, 2017). According to Danermark et al., (2019) retroductive thinking can be 403 guided by asking questions like 'what must be the case in order for X to happen?' and 'can we 404 imagine X without Y existing first?' Indeed, as a reasoning process that moves from concrete 405 to abstract and back again, retroduction is the 'central mode of inference' in critical realism 406 (Lawson, 1998: 156, cited in Fletcher) and is also widely used in social sciences more broadly 407 even though it is not always made explicit (Danermark et al., 2002). In order to achieve its 408 aims, retroduction draws on grand theoretical narratives about why the world is as it is, as well 409 as so-called middle range theories (Astbury, 2018) that are deliberately more local and limited 410 in scope.

In our illustrative example, we again worked independently on nascent dispositional themes before bringing our ideas together in a consensus document (see Figure 4). Thinking primarily from memory and secondarily from scanning the literature, various theories, concepts and propositions were put forward using the following sentence starter to structure our thinking: "The inferred phenomenon is dependent upon the existence of...". For example, one dispositional theme that we arrived at was:

417 Traditional volunteer ideology: The inferred phenomenon is dependent upon the 418 existence of a traditional volunteer ideology of mutual aid whereby members of a 419 community organisation have a responsibility and obligation to 'return the favour.'

We arrived at this dispositional theme after noticing that three different inferential themes could
be partially explained because of the existence of this common underlying structure. These
inferential themes were:

In service to others: It is plausible to claim that coaches [could/often/are likely to] feel
compelled to respond in service to the perceived needs of others.

425 It is plausible to claim that coaches [could/often/are likely to] believe that athletes' goals
426 take priority over their own goals.

427 It is plausible to claim that coaches [could/often/are likely to] feel a sense of428 commitment to and solidarity with their club.

429 As with empirical and inferential themes, it was important to enhance the quality of the 430 analysis and, relatedly, question the validity of dispositional themes both as individual analysts 431 and then collaboratively. The concept of explanatory power was useful as a validity indicator 432 in this regard as it helped us question the extent to which the postulated theory explains the 433 inferential and empirical themes that related to it. Indeed, this is not dissimilar to Maxwell's 434 (1992; 2012) notion of theoretical validity which is described as 'an account's function as an 435 explanation, as well as description or interpretation of phenomena' (p. 291). Deciding which 436 explanatory themes have more or less explanatory power entails a kind of judgemental 437 rationalism (Bhaskar, 1989) intended to reveal logical inconsistencies, paradoxes and 438 anomalies (i.e., 'holes in the argument').

To allow for further scrutiny of nascent dispositional themes we found it helpful to reorganise and re-articulate the analyse in a way which brought all three levels of themes together. We essentially 'reversed the order' of the themes and framed sentences in an explanatory way which clearly and transparently exposed our logic (see Figure 6). For example, bringing together dispositional, inferential and empirical themes, the following statement was put forward:

445 **Because of the existence of...**

the existentialist notion of the human disposition to make lives meaningful through

serious commitments and concernful involvement...

448 there may be a tendency that...

449 coaches [could/often/are likely to] believe that commitment is important to coaching450 and that this forms part of it being considered 'serious leisure'.

451

This manifested in our data which showed that...

452 [some/many/most] participants in this study [strongly] believe that coaching should be453 a long-term, serious commitment.

454 Not only was this a useful way of exposing the logic of our propositions, but it also 455 served as a helpful summary of the analysis as a whole. At the conclusion of this process we 456 had generated 11 dispositional themes (see Table 2).

457 [Insert Table 2 around here]

458

459 Concluding remarks

Data analysis represents a crucial stage of knowledge production within qualitative research studies and TA is the most widely used method of data analysis for textual data. In the absence of an alternative to the polarised approaches of *reflexive TA* grounded within the qualitative paradigm and *codebook TA* with neo-positivist orientations, this article proposes an approach to TA grounded in realist philosophy of science. Indeed, such an approach was considered of interest within the ongoing and incomplete efforts to translate realist assumptions into methodological practice.

Given that reflexive TA (Braun and Clark, 2006; 2016; 2019a; 2019b), as the most widely used approach, is increasingly framed in qualitative paradigmatic terms as being incompatible with the assumptions of quantitative research, we hoped to develop an approach that is – in principle – compatible with a diverse range of methods and researchers. As realism is methodologically pluralist (Pawson, 2013; Danermark et al., 2002) we believe that the approach developed in this paper provides an effective platform for integrating TA into broader interdisciplinary projects. Specifically, it is feasible that empirical themes could be used in the development of cross-sectional surveys, inferential themes may be particularly helpful in
designing interventionist programmes for different social groups and dispositional themes
could be further explored in participatory action research or case-studies in order to refute or
refine theoretical explanations.

478 Additionally, having initially problematised the apparent binary distinctions between the characteristics of current approaches to TA (e.g., surface/deep, nuance/consensus, 479 480 procedural/thoughtful), we sought to operationalise a conceptual and practical process to 481 reconcile them. The realist approach presented here uses Bhaskar's stratified ontology to 482 imagine three levels of themes and, in doing so, incorporates and values both surface and deep 483 aspects of qualitative analysis. We have reflected on the use of a consensus document to bring 484 together the ideas of multiple analysts and consider that reaching agreement need not be at the 485 expense of nuance and that collaboration has additive (accumulating additional analytic 486 insights) as well as subtractive (reducing errors and the threats to validity) qualities. Indeed, 487 while our example analysis was by no means mechanical in its adherence to procedure, we 488 found value in clarifying and delimiting our 'thoughtfulness' by explicitly using different 489 modes of inference (data-driven, deductive, inductive, abductive and retroductive) at different 490 stages for different reasons.

491 While we hope that we have provided a clear and accessible account of what a realist 492 approach to TA might look like, there is, no doubt, room for further development and we 493 welcome interrogation of both the principles and practices that we have proposed here. Namely, 494 questions remain about the scope and limitations of this approach for at least two reasons: (a) 495 because we have limited this article to interview data meaning that refinements are likely to be 496 necessary when applied to different forms of data such as documents, visual data or 497 ethnographic observations, and (b) because we have not yet attempted to produce a research 498 article or report from an analysis of this kind meaning that the expectations for representation

- 499 are yet to be worked through. These opportunities for future development would be welcome
- 500 extensions of this new method.

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