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1 **A realist approach to thematic analysis: proposing the use of empirical,**
2 **inferential and dispositional themes**

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.*

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21

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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
38 influential is attributed to Braun and Clarke (e.g., 2006; 2016; 2019a; 2019b). Their (2006)
39 *Using thematic analysis in psychology* paper is highly cited – with over 70,000 citations
40 recorded on Google Scholar – and has become the standard point of reference for TA.

41 Despite this breadth of application, engaging with TA is not entirely unproblematic.
42 Recent contributions from leading proponents have highlighting the existence of paradigmatic
43 disagreements between two broad approaches to TA. Braun et al. (2016) use the terms ‘small
44 q’ qualitative research and ‘big Q’ qualitative research to make this point. ‘Small q’ TA follows
45 largely in line with Boyatzis’ (1998) early version which, with the ambition of being a bridge
46 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.’

65 Despite the initial description of TA in their 2006 paper as an approach that is
66 ‘essentially independent of theory and epistemology, and can be applied *across* a range of
67 theoretical and epistemological approaches’ (Braun and Clarke, 2006: 78), qualitative
68 paradigmatic framings increasingly play a more leading role in the most recent reflections and
69 guidelines. For them, ‘qualitative data analysis is about telling “stories”, about interpreting,
70 and creating, not discovering and finding the “truth” that is either “out there” and findable form,
71 or buried deep within, the data’ (Braun and Clarke, 2019a: 591). More specifically for TA, they

72 reflected that ‘we expressly developed TA as an approach embedded within, and reflecting the
73 values and sensibility of, a qualitative paradigm’ (Braun and Clarke, 2019a: 9). Indeed, these
74 explicit demarcations have been made manifest with the introduction of the label *organic TA*
75 (Braun and Clarke, 2016) and more recently *reflexive TA* (Braun and Clarke, 2019a). Appealing
76 to framings of this kind, Braun and Clarke 2019b: 10) positioned their version of TA as being
77 ‘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
80 – particularly novice researchers – with two ‘incompatible’ paradigmatic options for
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,

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

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

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

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

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

138 The final related point that we raise here is that reflexive TA is unclear about the
139 principles used to sort out more trustworthy 'nuanced readings' of the data from the less
140 trustworthy ones. This is especially problematic if diverse and even contradictory
141 interpretations are offered by analysts. That is, being 'reflexive and thoughtful' is undoubtedly
142 necessary for reaching trustworthy findings, but they are no guarantee of this any more than
143 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
151 of realism, but we acknowledge that much of our understanding is informed by authors
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).

165 After assuming this basic position, many realists draw inspiration from Bhaskar’s
166 ‘stratified ontology’ (Bhaskar, 1975; 1978; 1989). Bhaskar claimed that phenomena in the
167 world can be differentiated into three overlapping domains: observed experiences and events

168 in the ‘empirical domain’ (i.e., things that really exists and are captured in data and noticed by
169 the researcher); unobserved but occurring experiences and events in the ‘actual domain’ (i.e.,
170 things that really exists but may not be captured in data or noticed by the researcher); and
171 unobservable causal powers and potential mechanisms in the ‘real domain’ (i.e., things that are
172 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.

186 Grounded in these metaphysical assumptions, numerous other principles have come to
187 characterise realist approaches. Firstly, realist research recognises the inherent value in both
188 qualitative and quantitative methods through the idea of ‘critical methodological pluralism’
189 (Danermark et al., 2002). In addition, contrary to the qualitative paradigm, realism values the
190 concept of validity, although it is important to amend it for some aspects of qualitative research
191 (Maxwell, 2012). Causal explanation is central to scientific activities in the realist approach
192 and is seen as a demarcation from empiricist research that focuses on predicting observable

193 phenomena (Clark et al., 2007). Indeed, in the context of life-story and biographical research,
194 Steensen (2006: 11) suggested that:

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

198 This emphasis on explanation requires that researchers approach research with an
199 intention to answer explanatory questions which, according to Sayer (1984, 104/5) necessarily
200 invokes causal language such as ‘what “makes it happen”, what “produces”, “generates”,
201 “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:

- 224 • Empirical themes, referring to intentions, hopes, concerns, beliefs, and feelings
225 captured in the data;
- 226 • Inferential themes, referring to inferences and conceptual redescriptions using more
227 abstract language; and
- 228 • Dispositional themes, referring to theories about the properties that must exist in
229 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
239 empirical adequacy, ontological plausibility and explanatory power.

240 The data we are using for illustrative purposes were collected as a part of the second
241 author’s research on athletics (track and field) coaches’ careers and the meanings that coaches
242 assign to their involvement with sport (see 2nd author et al., 2019). The data set consists of 23
243 semi-structured narrative interviews (35-89 minutes, average 59 minutes) with sports coaches
244 residing in Finland and the UK (aged 22-86 years), but only two transcripts were analysed to
245 maintain clarity for the illustrative purposes of this article. The interviews started with the
246 question “please tell me about your story of becoming a coach” and the topics that were
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
263 participants’ intentions, hopes, concerns, feelings and beliefs. This first reading was also a good
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
267 ‘nascent’ empirical themes as we progressed through the transcript using a simple spreadsheet
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;

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

278 This was coded by researcher A as:

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

281 This ‘data-driven’¹ coding was carried out by each of us for the whole of the first
282 transcript before copying the complete list of nascent empirical themes to a master list. This
283 process was repeated for the second transcript but with the additional task of ‘deductively’²
284 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.

307 That said, avoiding the temptation to fetishize the apparent precision that quantitative-
308 type information allows, we also trusted in our natural, empathetic human capacities to
309 recognise more or less significant themes based on the strength with which they were conveyed,

310 irrespective of how frequently they appeared in the data. Both of us sought emotional ‘hot
311 spots’ in the data (Ringrose and Reynold, 2014) to help in this regard and one of us drew on
312 the additional benefit of having conducted the interviews and hence having witnessed the
313 strength of feeling about each theme *in situ* (Ezzy, 2010). Based on this judgement, the nascent
314 empirical themes on the master list were re-phrased again to reflect the presence of the theme
315 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
338 develop empirical themes to instead utilising a dual combination of ‘inductive’³ and abductive
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
347 general/particular indicators (i.e., “male sports coaches...”, “young sports coaches...”) was
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?).

352 Following as we do from existing realist scholarship, we consider the notions of
353 abstraction entailed within abductive thinking to be highly valuable. While inductive and
354 deductive reasoning are useful thought processes, they are of limited value because neither
355 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.

356 deductive statements preserve the knowledge contained in their assumptions and inductive
357 statements produce generalisations of the properties that are already observed in the data
358 (Danermark et al., 2002). Abduction, in contrast, is a conceptual ‘redescription’ (Fletcher,
359 2017; Hoddy, 2019) or ‘recontextualisation’ (Danermark et al., 2002) of empirical data that
360 gives a more abstract and general form to the phenomenon in a way which acknowledges the
361 early presence of conceptual framings while also allowing empirical data to inform such
362 conceptual framings (Lusted, 2018). As Danermark et al. (2002: 91) explained,

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

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

371 In with the crowd: Data show that some participants in this study felt like coaching kept
372 them ‘in’ the sporting community.

373 Thinking both inductively and abductively, this was eventually developed into the following
374 inferential theme:

375 Belonging to a community: The practice of coaching [could/often/is likely to] provide
376 coaches with a sense of belonging, feeling cared for, a social identity and way to
377 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,

380 this emphasised the importance of researchers' specialist knowledge as well as being able to
381 access literature that opens up and clarifies key concepts. That said, we again used the notion
382 of interpretive validity to resist the temptation to over-extend our abductive thinking because
383 we noticed a potential risk in being drawn to interesting (and popular) concepts at the expense
384 of fairly representing the experiences of participants.

385 As with the empirical themes, we used a consensus document to compare and combine
386 our ideas in order to move from nascent inferential themes to mature inferential themes (see
387 Figure 3). The main value in this process was to adding concepts that were missed by a single
388 researcher and further exposing ideas to disputes about empirical adequacy, ontological
389 plausibility and interpretive validity. Additionally, it was possible at this stage to collapse two
390 or more of the empirical themes that were underpinned by a shared concept. This resulted in a
391 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.

411 In our illustrative example, we again worked independently on nascent dispositional
412 themes before bringing our ideas together in a consensus document (see Figure 4). Thinking
413 primarily from memory and secondarily from scanning the literature, various theories, concepts
414 and propositions were put forward using the following sentence starter to structure our
415 thinking: "The inferred phenomenon is dependent upon the existence of...". For example, one
416 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.'

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

423 In service to others: It is plausible to claim that coaches [could/often/are likely to] feel
424 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 of
428 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').

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

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

446 the existentialist notion of the human disposition to make lives meaningful through
447 serious commitments and concerned involvement...

448 **there may be a tendency that...**

449 coaches [could/often/are likely to] believe that commitment is important to coaching
450 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 be
453 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**

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

467 Given that reflexive TA (Braun and Clark, 2006; 2016; 2019a; 2019b), as the most
468 widely used approach, is increasingly framed in qualitative paradigmatic terms as being
469 incompatible with the assumptions of quantitative research, we hoped to develop an approach
470 that is – in principle – compatible with a diverse range of methods and researchers. As realism
471 is methodologically pluralist (Pawson, 2013; Danermark et al., 2002) we believe that the
472 approach developed in this paper provides an effective platform for integrating TA into broader
473 interdisciplinary projects. Specifically, it is feasible that empirical themes could be used in the

474 development of cross-sectional surveys, inferential themes may be particularly helpful in
475 designing interventionist programmes for different social groups and dispositional themes
476 could be further explored in participatory action research or case-studies in order to refute or
477 refine theoretical explanations.

478 Additionally, having initially problematised the apparent binary distinctions between
479 the characteristics of current approaches to TA (e.g., surface/deep, nuance/consensus,
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.

501

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