

Article

## Exploiting the Qualitative Potential of Q Methodology in a Post-Colonial Critical Discourse Analysis

Lydia E Carol-Ann Burke  
Werklund School of Education  
University of Calgary  
Calgary, Alberta, Canada

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### Abstract

This conceptual article describes an approach I have taken when exploring the discourse associated with the teaching and learning of high school science in a given Caribbean location. Using a lens of post-colonial theory to guide the entire project, I employed an adaptation of the standard interpretation of Q methodology as part of a critical discourse analysis. In this article, I support and extend Shinebourne's (2009) representation of Q methodology as a means of "expanding the repertoire of qualitative research methods" (p. 93), as described in a previous issue of this journal. Given the challenging nature of the research theme and the analytic perspective that I employed as a researcher, the standard Q methodology protocol was augmented, whilst retaining the essential attributes of Q technique. This approach proved engaging for participants and was fruitful in providing insight into the tensions between shared and particular participant perspectives. The resultant research strategy described in this article would be of particular interest to researchers from a qualitative background, particularly those working within a post-foundational framework, who would value support in conducting a critical discourse analysis.

**Keywords:** Q methodology, critical discourse analysis, interpretive research, post-foundational research, post-colonial theory

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### **The Research Perspective**

My journey toward Q methodology began in my search for an approach that would facilitate a study of the ways in which Western modern science is mobilized in a geographic location that has historically been subjected to European colonization. My study provided a critique of the strategies that facilitate the homogenization of ways of thinking about science across the globe and the way in which these approaches are received and reinterpreted by participants in the field. My desire was to displace the focal point of the “problem” of poor student performance in high school science away from the realm of fixing the cultural inhibitors and “erroneous” understandings of science students by looking at the context within which student subjectivities are constructed and enacted, as described by participants in that context. These participants were students, administrators, and both expatriate and local teachers. Not only was I interested in the themes and perceptions that unified the perspectives presented by my research participants but I was also concerned to hear about the particularities that isolate individuals from certain discourse positions.

Given the centrality of colonizing activities at the core of my theorizations for this project, I used post-colonial theory to scaffold my inquiry and support a form of critical discourse analysis (Foucauldian) that requires a contextualization of contemporary perspectives in light of historical shifts and moves. Here, discourse is defined as “an institutionalised way of talking that regulates and reinforces action and thereby exerts power” (Link, 1983, p. 60 as translated by and cited in Jäger & Maier, 2009, p. 35). A significant feature of a discourse, therefore, is its ability not only to describe social practice but also to define and shape social practice. Thus, power is exerted through discourse, inducing or suppressing behaviour. Post-colonial theory shares much of its philosophical underpinning with the field of critical theory and the oppositional frameworks represented by post-modernism, post-structuralism, feminism, and other post-foundational schools of thought. Defining a distinct, yet highly heterogeneous, niche within the academic sphere, post-colonial theory has embraced personal, political, intellectual, and spiritual milieus, with its focus ever set on understanding the machinations of colonialism and, accordingly, promoting anti-oppressive redirections (Gaztambide-Fernández, Harding, & Sordé-Martí, 2004).

While studying conceptions of high school science education, as presented by stakeholders occupying various status positions within the education system, I paid particular attention to the power-knowledge and complicity-resistance dynamics of post-colonial theory. A number of themes relevant to this study fall under the canopy of post-colonial theory, including those of universality and particularity, agency, representation, marginality, difference, displacement, language, nationalism, and productivity, to name just a few. These themes were not negated in my study but, in the educational context of the study, were conceptualized as being supported by the broader fields of resistance, complicity, power, and knowledge.

Adopting this critical approach led me to question many of the assumptions associated with the field of education research, including those pertaining to the utilization of certain research methods. I was keen to resist the beguiling nature of quantitative or qualitative approaches that seek to persuade by use of large sample sizes, dense narratives, and/or mesmeric triangulation assertions. As a post-colonial theorist, I seek to offset and disturb these taken-for-granted suppositions, exposing bias and actively engaging with it in dialogic fashion. Hence, I was not so much concerned with the qualitative versus quantitative methodologies debate; rather, my focus was set on trying to maintain a coherent and consistent conceptual stance as I transitioned from the theoretical framework of this study through to the methodological framework, methods and analysis. As a consequence, an overarching concern when conducting this research was the struggle to maintain an ethical integrity that remained conscious of, and sought to mitigate, the negative effects of further colonization, which would include speaking on behalf of individuals or essentializing their experiences. This concern is discussed in further detail below.

In my quest for an appropriate research method, I was mindful of the criticism often levelled at post-colonial theorists that, in their dissection of the processes of colonization, they overlook their complicity in terms of making representations of the “other” and conforming to systems that reify the position of the colonizer, continuing to represent a monolithic, non-Western subject (See Mishra & Hodge, 1991, for an eloquent example of one such argument). Elsewhere I have discussed some of the complexities of my positioning as a researcher in this context, particularly my negotiation of the insider/outsider dynamic (Burke, 2014). Put simply, I have taken the opinions expressed by participants to be but a subset of the range of discourse positions that might be present in the research context, and I have sought to avoid the characterization of person types. I had no reason to assume that the perspectives of persons of the same designation would be alike, nor did I wish to gather or analyze the data according to any demographic identifiers (although I was prepared to accept that my findings might reveal such categorization). Instead, I embraced Kincheloe’s (2006) interpretation of selfhood that extends Varela’s (1999) notion of the virtual self where unconscious patterns of structuration contribute to the individual’s interpretation of “self.” These patterns are brought about through relationships with others, the constructions being neither fixed nor immutable and displayed in unpredictable ways as conscious and unconscious interact. That being so, my aim was to gather opinions and depictions of discourse positions presented by my participants at a given moment in time. This stance might be seen as characterizing post-colonial discourse analysis methodologies, “governed always by a temporalizing, narrativizing impulse” (Brock, 2011, p. 102) as accounts of reality and fiction are dismantled, troubled, and complicated.

I have found Richardson and St. Pierre’s (2005) crystal metaphor useful in describing how my data and research findings fit within the context of a larger societal discourse. I find the symbolism of the multi-perspectival crystal compelling: reflecting externalities while refracting within itself, casting different patterns so that “what we see depends on our angle of repose” (p. 963). I identify my research as falling within the interpretive paradigm where my own perspective is described (or, at least, a representation of it) along with the perspectives presented by my research participants. Whilst I have sought to satisfy what Maxwell (1992) defined as interpretive validity: the ability of the research to illustrate the subjective meanings disclosed by the participants, I am ever conscious of my reinterpretation of the explanations presented by the individuals whose opinions are sought; this reinterpretation is never devoid of researcher bias. My interest was to concentrate on hearing the detailed accounts of a number of individuals who were invested in the context of science education in the location of my research, then to take up the issues raised as they pertained to the process of colonization. My interaction with the data was, therefore, an engagement with “alternative propositional configurations” (Stainton Rogers & Stainton Rogers, 1990, para. 20) and my “findings” and conclusions were “provisional formulations” (Brock, 2011, p. 123).

### **Arriving at Q Methodology**

Appreciating that perspectives on Western modern science, as they relate to the process of colonization, may not be readily articulated by my research participants, I sought a research tool that could act to elicit conversations, examples, illustrations and/or stories about how geographic origins, culture, and science education intersect in the research setting. Even though I had conceptualized these intersections as being heavily influenced by colonial thought and practices, I was reluctant to project this perspective onto my participants who might well have had alternative propositions to account for the characteristics of science education in the local context. I decided that my interview approach would utilize a bank of statements to which I would ask my participants to respond. This forum for providing commentary on this nuanced situation needed to be engaging and accessible to participants who would range in age and experience within the education system. I thought it likely that there might be many issues about which the research

participants felt strongly so I was interested to know how these concerns were being prioritised in the articulations of my participants. It was at this point in my musings that I happened across an article detailing teacher perspectives on literacy development (Lim, 2010) and I was instantly drawn to the methodology section that described an approach that closely met the conditions I had already established for my own research. Reading more widely about Q methodology, including Stephenson's (1953) seminal work *The Study of Behavior* and Brown's (1980) *Political Subjectivity*, I felt that, with a little adaptation, the approach could meet the needs of my research project.

Brown (1996) described Q methodology as being conceptualized by its developer, William Stephenson, as a means of elucidating participant subjectivities, role perceptions, attitudes, and experiences. Subjectivity, as it is typically described in Q methodology, refers to a concept that is contrasted with objectivity, that is, the expression of the individual's point of view (McKeown & Thomas, 1988). The broader formulation utilized in post-foundational literature describes the way the individual is conceptualized and constituted as a subject or occupies a given subject position. This alternative definition of subjectivity has been explored in the context of Q methodology by Stenner and Watts (1998).

The research tool is commonly utilized in a range of health and social science fields. In the traditional reading of Q methodology, the researcher compiles a set of statements representing a range of perspectives on a given phenomenon. This Q set, typically consisting of 40 to 50 statements printed on small cards (Van Exel & de Graaf, 2005), is presented to the research participant who then sorts the statements into a pre-set grid (a forced distribution) according to specific conditions of instruction. For example, when asked about their experiences of professional development in the workplace, participants might be asked to sort the Q set by placing statements "most like my experience" at one end of the grid and "least like my experience" at the other end. In this way, the notion that perspectives are developed based on weighing responses to various propositions relative to each other is honoured in the sorting process. A post-sort interview is often conducted so that researchers can record any narrative commentary that participants might want to express about the phenomenon.

Data analysis is usually a matter of using a statistical package to conduct an inverted factor analysis; common sorting or ranking patterns are identified as "factors" that the researcher attempts to interpret based on knowledge of the research field combined with participant interview comments. Shinebourne (2009) emphasized the hermeneutic nature of factor interpretation, "engaging the interpretive perspective of the researcher" (p. 95). This acknowledgement of researcher accountability as an integral part of the interpretation process appealed to my perspective on research. When combined with the prioritization of statements, and the ability to attend to shared as well as particular depictions of the phenomenon in question, I saw the potential for Q methodology (with a few adaptations) to support my study. Shared discourse positions could be used as points of traction around which I could develop a meaningful engagement with the accounts presented by my research participants.

In this article, my aim is to promote one of many alternative approaches to Q methodology that represent "an extension of what went before, and still very much a part of [the] overall endeavor" (Stainton Rogers & Stainton Rogers, 1990, para. 8). I appreciate that, although each of the alterations I have made to the standard application of Q technique, when considered in isolation, is far from unique; the combination of changes I have made may concern a certain sector of the more conservative Q methodologists. Nevertheless, the approach I describe in this article expands the accessibility of Q methodology to those who might be initially deterred by the perceived rigidity with which the technique is applied. It is also hoped that my specific use of Q technique might interest those, particularly from qualitative traditions, who are put off by the prospect of using factor analytic techniques to support their descriptions of shared participant depictions.

In this article, I am not so much concerned with reporting on the precise study for which Q technique was employed as I am to present how Q methodology could be utilized to support a study that is theorized within a post-foundational framework and that is essentially qualitative in nature. Readers familiar with Q methodology should not anticipate the usual format of reporting on a Q study where statement sets, factor arrays, and Z-Scores are presented. The transparency of this article is located in its conceptual underpinning rather than the ability of the reader to trace how specific factors have been derived and interpreted; these details are specific to the study and detract from the purpose of this article.

### **Methods in Detail**

My study was situated within the framework of a Foucauldian critical discourse analysis (utilizing the analytic methods detailed by Jäger and Maier, 2009). The interpretation of the term discourse used in this study began with conversational language-in-use (Gee, 2005), the analytic fragments of which are the sentences and phrases raised by the research participants during each interview, in conjunction with any gestures or other non-verbal communications presented. This discourse is seen as being both a constituent of, and determinant in, the structure of societal activities and behaviors. This larger societal discourse represents the output and fuel of various power struggles and imbalances.

Based on my experience in the location of study, and preliminary discussions with community members, each discourse event (interview) was no more than 90 minutes in length; this seemed close to the maximum level of commitment I could ask for a non-ethnographic study where participants were not being explicitly compensated for their involvement in the inquiry. The 26 research participants (14 students, 9 teachers, and 3 administrators) were recruited using a snowball approach (Cohen, Manion, & Morrison, 2000) where close friends and students, with whom I had previously worked, passed on my name, contact details, and study information to their own friends and colleagues who, in turn, continued the recruitment. I found that the snowball picked up pace after the first set of contacts had been through the interview process and were more able (and more enthusiastic) to describe the procedures to others.

Each interview commenced with a series of open-ended, free-response questions that had been sent to the participants in advance of the meeting. These questions allowed participants to present their ideas about the role of science in modern society, the influence of cultural backgrounds on science teaching and learning, and what expatriate science teachers bring to and take from the given science educational context. Participants were asked to give reasons for the assertions made. As anticipated, some of the research participants had prepared their responses to the questions in advance of the interview, presenting well-rehearsed answers, some even bringing notes to the interview. I considered this preparation to be an effective way of familiarizing the participants with the nature of the inquiry, broadening the scope for them to project their own meanings onto the study prior to the second phase of the interview. Other participants, particularly the younger students (the youngest of whom was 15), presented very little commentary in response to the questions, offering little more than a couple of sentences of explanation.

A card sorting activity constituted the remainder of the interview. The aim of this part of the interview was to facilitate an opportunity for the participants to communicate their understandings of the given topic, based on the way in which a collection of statements resonated with their experiences. In advance of the interview, I had constructed a set of 24 statements based on the theoretical framework I had used in conceptualizing this project, modified by feedback that I received from a series of informal interviews conducted with friends in the research field. In these statements, the power-knowledge and complicity-resistance dynamics of post-colonial theory were offset against conceptions of science, culture, and geographic origin as illustrated in

Table 1. The language style used in the entire statement set was checked for readability level both electronically (using the Flesh-Kincaid readability scale available through Microsoft Word) and with the contacts who initiated the recruitment process. This structured statement set allowed me to define certain parameters within which to explore the phenomenon in question (Brown, 1980) in a way that addressed the following research questions:

1. What understandings of the nature of science do the research participants express?
2. How do the research participants describe the relationships between scientific knowledge and other culturally valued knowledges?
3. What meanings do the research participants associate with the various geographic origins of science teachers in this context?

Table 1  
*The rationale for generating interview statements*

Themes represented in the research questions	Themes from post-colonial theory	
	Power-knowledge	Complicity-resistance
Nature of science		10. It is okay for students to disagree with facts that are taught in the science class. (Adams, Luitel, Afonso, & Taylor, 2008; Apple, 2004)
Interaction of science and other cultures	18. People from different backgrounds have different ways of thinking about science. (Jegade & Aikenhead, 1999; Matthews, 2009; Zembylas & Avraamidou, 2008)	
Geographic origin of the science teacher	1. British science teachers could learn a lot from Caribbean ways of understanding the world. (Lamming, 1960; Spivak, 1990)	

*Note.* An illustration of the schema used for the generation of statements for the card sorting exercise. Four statements were generated for each box in the table; three sample statements are presented. Citations refer to references used in the conceptual framework of the study that influenced generation of the statements; these were not printed on the cards presented to the participants.

I endeavoured to satisfy the recommendation, described in Watts and Stenner (2012), to ensure that the items of a statement set “cover all ground smoothly and effectively without overlap, unnecessary repetition or redundancy” (p. 59). Nevertheless, for me, the themes of post-colonial theory repeat themselves in the interpretations and explanations of individuals, making the objective of maintaining balance especially challenging. Fortunately, participant responses did not indicate that overlap was an issue, but interviewees were able to connect ideas expressed in one explanation to subsequent thoughts and motivations expressed in other explanations, supporting my ability to derive relatively holistic participant perspectives.

The numbered statements in the card set were printed on rectangles of buff-coloured card of uniform size and laminated for visibility, ease of handling, and durability. An additional laminated card containing five printed headings was placed in front of each participant. The headings were “strongly disagree”, “disagree”, “neutral”, “agree” and “strongly agree” (when read from left to right). The card set was shuffled and presented to the participant who read each

card out loud then placed the cards in columns under the five headings. I asked participants to use a think aloud strategy (Lewis, 1982) while sorting cards so that some form of explanation was presented after categorizing each statement. Participants were told that cards placed in the neutral column could represent points of uncertainty or ambivalence that they were encouraged to describe or explain.

After participants had sorted the statements under each of the five headings, and had a chance to make any additional comments based on a survey of the statements arranged within the same field of view, I asked the participants to prioritize their strength of feeling by considering one response category at a time. So, for example, if participants had placed statements 11, 17, 4, and 2 under the “agree” column, they were then asked to rank the cards in that column, placing the card that would have almost made it into the “strongly agree” category at the top and the one that is closest to “neutral” at the bottom with the others ranked in between. In this example, the re-sorting might result in a rank of statements in the order 2, 17, 11, and 4. Although this re-prioritization may sound like a challenging task, there was sufficient variation in the statements and a small enough number of cards that all participants were able to complete the re-ranking in under 10 minutes, many taking only a couple of minutes to formalize comparisons they had been considering throughout the card sorting process. Further commentary was provided by participants at this stage where the challenges of prioritizing a number of complex considerations were explicated. The result was a full rank order of prioritization produced in an assisted fashion so that the activity remained engaging and pacy (see Figure 1 for an illustration of the production of a full rank of statements).

Readers might interpret the initial card-sorting component of the interview as representing an elaborate use of the Likert scale, I emphasize the distinct difference between the functions of the statements in the card set of this study and Likert items. Unlike the process used in Likert scale questionnaire analysis, it is the ranking of the full set of statements, and not a five-point score, that is used in conjunction with participant commentary during the process of analysis. In the convention of qualitative research, the statements in the card set act as triggers to encourage the participants to speak freely. Each statement could easily have been framed as a question rather than a statement, but in this study I was interested in prioritizations so it was important to know about strength of agreement. Thus, the five-level heading system supports the participant when giving an account of his or her reasoning and is used qualitatively to augment the ranking correlations derived during Q analysis.

I completed my own card sort prior to conducting the interviews and analyzed it along with the other sorts so that my own discourse position would be more evident to me, supporting the interpretive nature of the study. By understanding a little more about my own motivations as they related to those of participants, and thinking about how I would represent these in my study, I found that I was able to be more generous in my examination of the perspectives presented by participants, appreciating how contingent responses are on the particularities of the time of expression. All components of the interview were audio-recorded and later transcribed. The transcripts were used to support the interpretation of factors as well as being analyzed for emergent themes (independent of the Q analysis) with the assistance of the NVivo 10 software application.

Although I describe my data *collection* approaches, it would be more accurate to state that, in this iteration of the interpretive research paradigm, data is generated rather than being collected, illustrating the key role of the researcher in determination of what is asked, observed, and valued during the interview process (Nhalevilo, 2013). Hence, I describe this study as representing my interaction with participant perspectives rather than trying to depict or represent the individuals who have participated in the study. Given that my research intention was to gather insights and perspectives from my research participants, identifying these as discourse fragments, I resisted

the reductive practice of focusing on representing participants by their perspectives; instead, I acknowledge the complexity of personal identities and maintained the ethical stance of minimizing the potential for precise identification of my research participants by only disclosing relatively generic information about each participant.

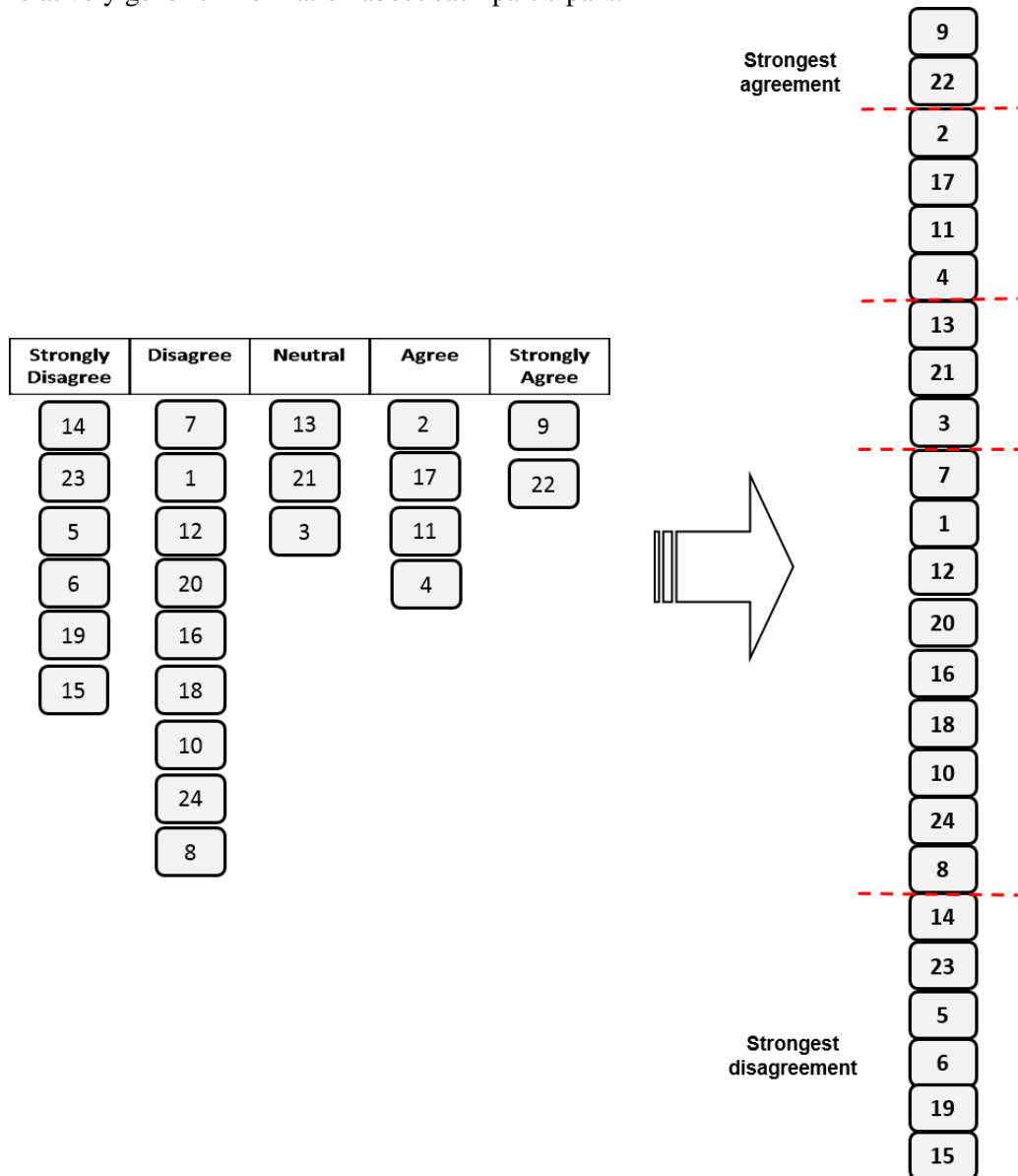


Figure 1. Production of a full rank of statements for each participant. After the cards were sorted under each heading, cards in each category were re-ranked, allowing the production of a full rank of prioritized statements

### Data Analysis

The first phase of my analysis was to identify shared perspectives described by my research participants. The statements from each Q sort were entered into the PQMethod software application (Schmolck, 2011) in rank order. Because I do not believe that the ranking pattern produced by each individual is the reliable reflection of a fixed perspective, that is, I think it is likely that a Q sort reflects the feelings of the participant on the day of interview rather than a constant trait of personality, I used Centroid analysis rather than the alternative Principal



Components Analysis factor extraction method. According to Newman and Ramlo (2010), Centroid analysis incorporates a degree of mathematical indeterminacy that is compatible with the assumption that individuals will not rank statements in precisely the same way on two consecutive occasions. This fits my research paradigm because my aim was to collect stories that are told rather than drawing particular conclusions about individual identities or making broad generalizations about the population at large.

Participants with similar ranking patterns were grouped within the same factor and the software produced a “best approximation” of the ranking array that would unify all participants in a given group; however, I did not interpret the ranking patterns of individuals within a group as being shared until or unless interview transcripts (from both the question and answer, and card sort sections of the interview) had been analyzed and found to contain particular consistencies. For each viewpoint, a set of 8 to 10 distinguishing statements (out of the full set of 24 statements) characterized the group, representing ways in which participants, who had been clustered into the same group, had sorted cards and described their reasonings in ways that were similar to each other but quite different from the rankings of participants outside of the group. I used these statements to derive the characteristic name of each group as described below in the brief discussion of the research findings, and the various transcripts provided the explanations and rationales for the placement choices made.

The final stage of the discourse analysis utilized the transcripts derived from the free response question-and-answer phase of the interview in combination with the commentary produced during the card sorting exercise. Here, the NVivo 10 software application was used to facilitate a quasi-grounded approach in identification of discourse subtopics. In this phase of the study, I removed all focus on the themes I had used from post-colonial theory and grouped participant commentary according to emergent foci. I identified these subtopics as recurring “contents, symbols and strategies” (Jäger & Maier, 2009, p. 38) that I traced as they were woven within and between discourse positions. These subtopics were explored in both synchronic and diachronic dimensions (what is said and sayable at this moment in time as it relates to the historical treatment of this topic), with particular attention focused on how the various subtopics promoted the interaction of discourse positions in cooperative and antagonistic ways. The full outline for data collection and analysis is illustrated in Figure 2.

To illustrate some of the outcomes of this process, I present a simplified summary of the findings of the research project. Three common “stories” were derived from the shared ranking patterns of participants. These accounts were named *The truth value of scientific knowledge*, described by 10 participants: 2 administrators, 4 teachers (3 expatriate, 1 Caribbean), and 4 students; *The pragmatic use of science to promote progress*, described by 8 participants: 6 students and 2 teachers (both Caribbean); and *The priority of cultural preservation*, described by 4 participants: 2 teachers (both Caribbean) and 2 students. A thematic analysis of full transcripts, independent of the Q analysis allowed for the identification of subtopics that exposed the tensions within and between these shared accounts: the contingent nature of facts, the compelling nature of scientific knowing, the bounds of scientific knowledge, resolving personal belief conflicts, personal rights, national independence, global competitiveness, and the value of diverse knowledges. The rich, multilayered capacity of this research approach is supportive of the qualitative researchers’ “emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency” (Denzin & Lincoln, 2011, p. 8). Below, I outline the ways in which the research approach described in this article could facilitate an expansion of the range of academic disciplines that could find an opening for their work within Q methodology.

### **Expanding the Bounds of the Q Community**

As stated earlier, I did not approach Q methodology from a practitioner's perspective. This afforded me the freedom to enact a relatively guilt-free exploration of its bounds. Reflecting on my research perspectives, pilot studies trialing forced and free card sorting distributions, and various iterations of the conditions of instruction, have led to the approach outlined above. I was particularly happy with the high level of participant engagement and focus during the card sorting stage of the interview, and was even more pleased when participants affirmed the significance of the statements, and the exercise as a whole, in their experience of this context. Interviewees seemed to enjoy the puzzle of providing insights into their perspectives in an interactive activity and then being able to stand back from the picture they had portrayed to comment on the challenges and incongruities of certain prioritizations that they had made. The key adaptations made to the more traditional Q methodology approach included the following: the smaller than usual Q set, the incorporation of participant commentary made during the sorting process, and the assisted full ranking of statements.

The small Q set was required so as not to tire the participants during the sorting and commentating process, whilst covering the key themes from my research questions. As a result of the reduction in the number of items in the Q set, I followed an approach endorsed by Watts and Stenner (2012) in making the phrasing of the statements more generic than would usually be the case. I appreciate that this is likely to enhance the ability of the sorter to provide their own interpretation of each statement, injecting their own meanings that will not necessarily align with the a priori meaning proposed by the researcher (Brown, 1993), and provide the potential for greater depth and breadth of commentary. In the absence of this in-sort commentary, I feel that I would have lost so much of the depth of insights into the process of decision making that this approach facilitated, leaving me prey to the pretension Brown (1980) warned against when we resort to our own understandings as being right or correct.

In addition, given my interest in certain themes of post-colonial theory, I was keen to be exposed to the tools of persuasion used by the participants when presenting their viewpoints. Participants seemed to call upon a range of ways of knowing when providing explanations for the responses they selected during the Q sort exercise. Interviewees would often refer to past experiences, and physical interactions with objects and individuals to present evidence for assertions made. At other times, they appealed to logic as a means of explaining their perspectives. At yet other times participants used a more ephemeral but nonetheless just as passionately espoused form of certainty: knowledge based on something essentially visceral or intuitive. Deng and Luke (2008) presented "three alternative notions of knowledge – disciplinary, practical, and experiential – [that] constitute analytically distinctive, though not practically separate, modes of human knowing" (p. 69). A single interview would often reveal a switching between these alternate ways of knowing as the participants attempted to make sense of the statements and their own responses to the statements. Participants often tried to appeal to a sense of morality or ethics as a means of persuading me that their responses not only held meaning for them but perhaps should also hold meaning for me and other conscience-driven individuals. These nuances in the sorting process are liable to be lost if the interview is left until the sorting process is complete. I envisage that such revelations might present an interesting angle of inquiry for those whose work is located in epistemological concerns.

During the assisted ranking process, the use of distinct headings for the initial categorization allowed me to determine whether participants were actually expressing agreement with the statements that were ranked in the upper half of the ranking sequence (a determination that is not usually possible within the typical approach to Q methodology unless such details happen to be revealed during a post-sort interview). In my analysis, prioritization of statements is important but

so is the individual’s agreement or disagreement because I do not conceive of agreement as merely being “less disagreement.”

One key limitation that I was unable to address in this iteration of my research was my concern, as a post-colonial theorist, about participant agency in shaping the research design and outcomes. Although the statement set, participant interview transcripts, and discourse position descriptions were member checked by my research participants and other contacts in the research context, such consultation does not go far enough in support of the rights of individuals to influence the shape and direction of research that is, ostensibly, conducted on their behalf. Although I was aware of this fundamental deficiency in my research approach, I was unable to address it in the study reported in this article. I am, however, encouraged by the work of researchers such as Janson and Militello (2012) who have actively demonstrated the centrality of participant engagement in the research process of a study utilizing Q methodology, particularly at the data interpretation stage.

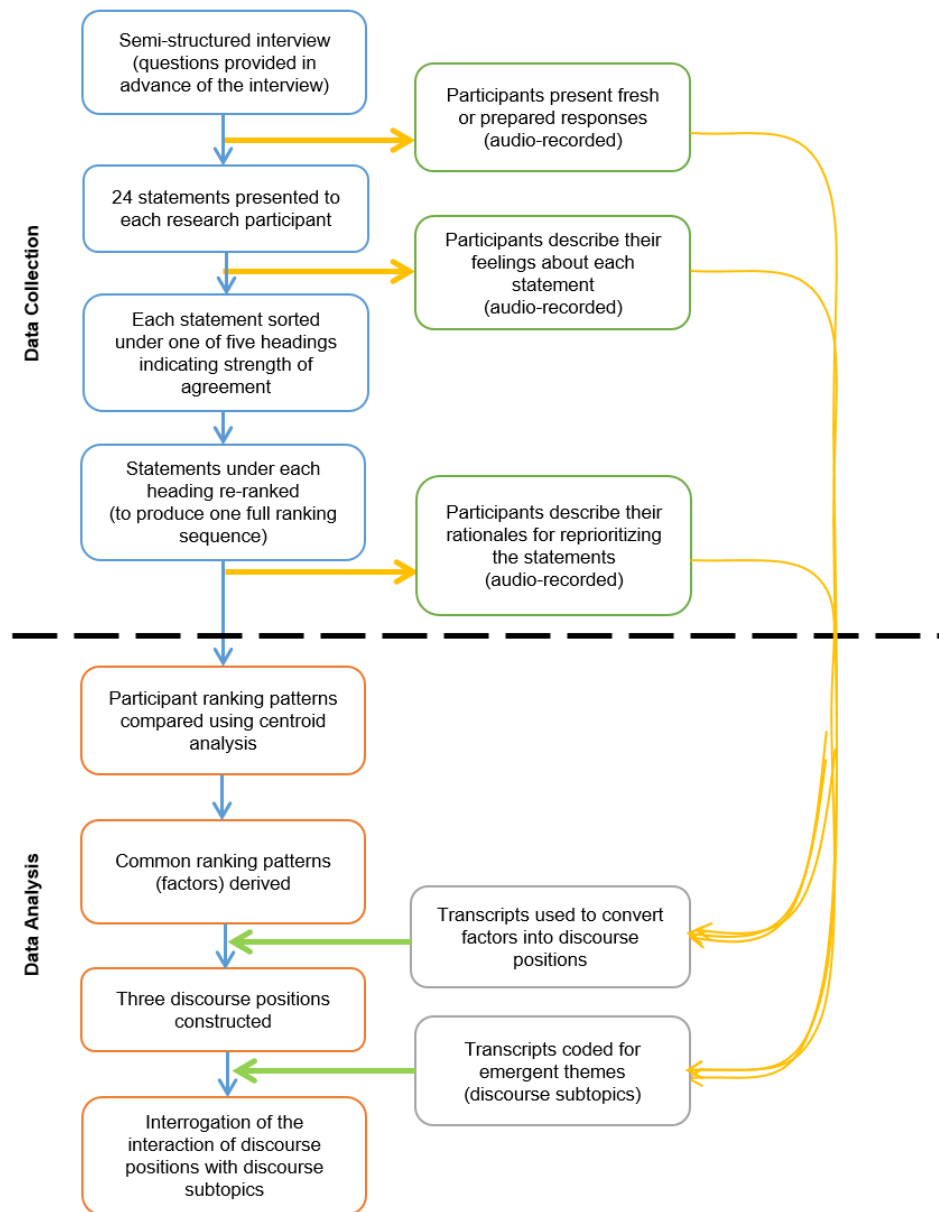


Figure 2. Sequencing outline for the collection and analysis of research data.

### **Final Remarks**

Taking my example from Stainton Rogers and Stainton Rogers (1990), I feel that I must describe myself as a user of Q methodology rather than a Q methodologist because I recognize that my use of the Q technique is a little unorthodox. In writing this article, I have sought to support efforts to expand the scope and applicability of Q methodology, particularly as it relates to discourse analyses conducted in the qualitative realm. Each of the modifications I have suggested to the standard approach toward Q methodology is not new but, in combination, I believe that they add to the efficacy of this approach when applied to qualitative, post-foundational fields of research. I end this article as I began, in agreement with Shinebourne (2009) who stated that “for both researchers and participants Q methodology provides an opportunity to engage with the research topic in a novel and creative manner” (p. 96); that has certainly been my experience in this study.

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