질적연구, 제19권 제2호, 2018년 11월
J Qual Res Vol. 19 No. 2, 61-76, November, 2018
ISSN 1229-8417
https://doi.org/10.22284/qr.2018.19.2.61

# A Phronetic Iterative Approach to Data Analysis in Qualitative Research

Sarah J. Tracy

**Jeanne Lind Herberger Professor, Honors Faculty**
**The Hugh Downs School of Human Communication, Arizona State University-Tempe, USA**

This essay lays out a pragmatic and easy-to-understand method for analyzing qualitative data. First, I provide an overview of the phronetic iterative approach to qualitative data analysis, distinguishing it from other approaches and showing its unique value as an umbrella framework that can be utilized by a range of qualitative researchers. Then I explain and provide examples of key steps of the phronetic iterative approach. These include how and when to: 1) iteratively code data into descriptive first-level codes and analytic second-level codes, 2) craft a qualitative codebook, and 3) engage in intercoder reliability practices. Finally, I overview techniques for synthesizing and focusing the analysis, through writing analytic memos, engaging in practices such as theoretical sampling, negative case analysis and parameter setting, and writing a loose analysis outline. The phronetic iterative approach-which can be used on its own or in complement with other data analysis methods-is designed to encourage researchers to jump into their analysis activities sooner rather than later and to feel comfortable in learning by doing.

**Key Words:** Qualitative research, Methodology

In December 2017, I had the pleasure of visiting Ewha Womans University and presenting a two-day workshop related to data collection and analysis in qualitative research to a meeting organized by the Korean Center for Qualitative Methodology (KCQM). In addition to meeting many wonderful scholars and having the opportunity to tour the beautiful (chilly and snowy) city of Seoul, it was a pleasure to share insight on how to collect and analyze qualitative data so that it has practical impact and builds significantly toward theory. This article manifested, in part, due to the connections I made and the information I presented during that workshop. In this essay, I review key issues of a phronetic approach to qualitative research and analysis (Tracy, 2013).

First, by means of scholarly introduction, I come from the field of organizational communication, and am particularly interested in ways that qualitative research may illuminate problems such as organizational burnout, workplace bullying, stress, work-life conflict, and emotional labor. More recently, I've turned to the bright side of organizing, studying compassionate communication, human flourishing, and leadership. My qualitative research experience includes fieldwork, interviewing, focus groups, close analysis of conversations, arts-based approaches, narrative analysis, discourse tracing, and metaphor analysis. In this research, I aim to not only extend theory in topics such as human communication and emotion, but also illuminate and potentially transform problematic situations so that we might best create thriving organizations and strong relationships. I share this background with you in the spirit of self-reflexivity. My past shapes the way I approach research and what I emphasize as valuable in qualitative inquiry.

This essay unfolds as follows. First, I provide an overview of phronetic iterative analysis, distinguishing it from other approaches and showing its unique value. The heart of the paper lays out pragmatic and easy-to-understand methods for analyzing qualitative data using a phronetic iterative approach. These include how to code data into descriptive first-level codes and analytic second-level codes, craft a codebook, outline a loose analysis plan, write analytic memos, and engage in negative case analysis and

**Corresponding author: Sarah J. Tracy**
Jeanne Lind Herberger Professor, Honors Faculty The Hugh Downs School of Human Communication, Arizona State University-Tempe, Address: P.O. Box 871205, Tempe, AZ 85287-1205, USA.
Tel: +82-00-000-0000, Fax: +82-00-000-0000, E-mail: Sarah.Tracy@asu.edu

Received: Sep 29, 2018 / Revised: Nov 3, 2018 / Accepted: Nov 6, 2018

parameter setting. Much of what I discuss here draws upon a larger treatment of the phronetic iterative approach as developed in my book, "Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact"(Tracy, 2013). I substantially expanded the discussion of this method in the 2nd edition of this book, which will be released in 2019. As such, I encourage interested readers to seek out this 2nd edition book for additional explanation (Tracy, 2019, Inpress).

## I. A Phronetic Iterative Approach

I take a phronetic iterative approach to research (Tracy, 2007). Phronēsis is an ancient Greek word that is typically translated to mean "prudence" or "practical wisdom" (Aristotle, 2004). Phronēsis prioritizes examination of contextual knowledge. Social action is always changing; therefore, situated meanings are crucial for making sense of any given social phenomenon. Phronēsis also focuses on the way that data can be systematically gathered, organized, interpreted, analyzed, and communicated so that it illuminates significant problems and can contribute to transformation and improvement in relationships, organizations, and societies.

I recommend that researchers begin their qualitative inquiry by pinpointing a specific issue, dilemma, or concern that is of interest. This contrasts with starting, for example, with a general topic, theory, or subject. Beginning, instead, by identifying a *problem-to-be-transformed* provides a built-in rationale for why the research is significant and why it is relevant to conduct at this time. In other words, an identified problem serves as a pointer and guide. As the study progresses, the research focus may change, but focusing in on a problem from the beginning helps to answer the question of "why should anyone care about this study?" Furthermore, starting with a problem provides guidance about when/if the inquiry has been successful (e.g., research may be considered valuable and "finished" when it helps illuminate or partially solve a problem or concern of the relevant parties).

So, a question arises regarding where to identify such a problem. Some researchers first choose a specific contextual site or group of people to study. For instance, health care researchers may observe people sitting in a hospital waiting room, and depending on what they witness, may then choose to focus on problems regarding inordinately long wait times, improper staffing, or the annoying noise of buzzers, beeps, or loudspeaker announcements. This *inductive* approach is valuable for researchers new to qualitative research or those who have a lot of flexibility in terms of their exact topic. Other researchers begin with a specific problem in hand, one that has been identified in past literature or directed for study by a research grant. In these cases, researchers take a *deductive* approach, with a specific research question and clear expectations regarding how to answer or test the issue.

A middle option, and one that I advocate for, is an *iterative* approach (Miles, Huberman, & Saldaña, 2014). An iterative analysis asks as follows (Srivastava & Hopwood, 2009, p. 78)(Box 1).:

Such activities are connected to grounded theory (especially its most recent versions delineated by Charmaz, 2014), but contrast from the purely inductive version of grounded theory introduced by Glaser & Strauss (1967) and the more positivist prescriptions recommended by Strauss & Corbin (1998).

The purely grounded approach (Glaser & Strauss, 1967) creates meaning primarily from emergent data, with the researcher coding for a wide span of activities, events, practices, participants, or relationships. In contrast, an iterative phronetic approach focuses on more narrow aspects of the data that have the potential to extend specific theories or address practical problems. In an iterative approach, researchers are encouraged to actively reflect on and capitalize upon their previous interests, past literature, and directives from external funders. Past literatures and research interests are *sensitizing concepts*-theories or interpretive devices that serve as conceptual lenses for qualitative study (Bowen, 2006). And, active reflection and use of past knowledge can streamline and focus the data analysis process. That said, even with sensitizing concepts in hand, researchers using an iterative approach should "hold on loosely" and avoid imposing past research or concepts onto the data set. Sensitizing concepts serve as

**Box 1.** Iterative Analysis

Q1: What are the data telling me? (Explicitly engaging with theoretical, subjective, ontological, epistemological, and field understandings)
Q2: What is it I want to know? (According to research objectives, questions, and theoretical points of interest)
Q3: What is the dialectical relationship between what the data are telling me and what I want to know? (Refining the focus and linking back to research questions)

lenses, not as hammers.

In this approach, the researcher tags back and forth between 1) consulting existing theories and predefined questions and 2) examining emergent qualitative findings. In an iterative approach, researchers may come up with a general idea of the problem to study and then explore several potential sites of study or talk with various types of potential interviewees. The focus of research gradually narrows as researchers alternate between emic, or emergent, readings of the data and an etic use of existing models, explanations, and theories. Theory and the direction of the study is built using *abduction,* in which researchers construct a hypothesis, carry that hypothesis into the field of investigation, and revise it when or if the hypothesis is negated by the emergent data (Peirce, 1960). The following figure illustrates the way I conceptualize the phronetic iterative approach (Figure 1).

Something that is unique and valuable about the phronetic iterative approach is that it serves as an umbrella framework for qualitative inquiry and does not require that researchers recognize, from the beginning, the exact direction or methodology their research will take. Certainly, when researchers *know* from the beginning that they want to engage in a specific qualitative approach (e.g., narrative analysis, case study, grounded theory, ethnography, or phenomenology), there are a wealth of resources that can help researchers follow the specific guidelines and concepts of the approach all the way from data collection through analysis (e.g., Creswell & Poth, 2018; Wertz et al., 2011).

However, many people (especially those who are new to qualitative research) are not certain about which methodological approach or qualitative territory is best to guide their research. In such cases, they may have a certain research question in mind, but have little idea of whether it should be best addressed using a case study, phenomenology, or narrative analysis. Over and over, I hear from people who feel frozen and anxious when they get to the stage of analyzing qualitative data. Rather than tinkering with the craft practices of analysis, they instead spend too much time *reading about* methodology. Reading about analysis will only get you so far. As a metaphorical equivalent, imagine someone who knows she wants to create music, but does not yet have enough background or experience in the whole range of musical genres (e.g., "jazz", "classical," or "pop") to know which genre she will excel in or will work best. One of the best ways to find out is to start making music. Likewise, one of the best ways to learn qualitative research methods is through practicing them.

Reading about different qualitative territories (things that I cover in Tracy, 2013) can certainly provide illuminative insight. However, researchers need not be proficient, say, at specific qualitative methodology (e.g., phenomenology or narrative analysis) to practice the steps of a phronetic iterative approach described herein. Certainly, researchers may bolster and extend their analysis using concepts from a wide range or specific qualitative territories and theories. However, the phronetic iterative approach provides a framework for researchers to engage in qualitative data analysis even if they do not yet have a sophisticated metatheoretical background.

## II. Analysis: When and How to Start

I recommend that researchers begin reviewing their data as soon as possible, and along the way during a research project. Doing so will help them to identify promising directions and places to focus. The findings will suggest that

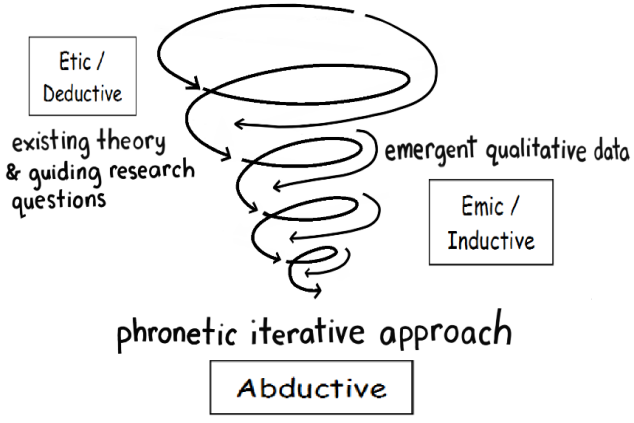


**Figure 1.** A phronetic iterative approach alternates between considering existing theories and research questions on the one hand, and emergent qualitative data on the other (Source: Sarah J. Tracy, commissioned from Sally Campbell Galman).

some interview questions or qualitative practices should be expanded upon while others may be dropped. The emergent insights will encourage researchers to explore the theories that best illuminate their project and may point to future work. Furthermore, reviewing the data early on facilitates a focused and efficient analysis process. After every data analysis session, researchers can valuably create a "to do list" for questions to ask in the next interview, or issues to really focus upon in the next fieldwork session.

As they are gathering data, researchers should also create an organization system. I recommend creating digital copies of data whenever possible. Hand-written records from fieldwork should be transposed within 36 hours into typed formal fieldnotes (Emerson, Fretz, & Shaw, 2011). Interviews should be transcribed or summarized, and the audio file uploaded. Arts-based materials such as collages, clay models, or drawings (Barone & Eisner, 2012) should be kept safe and preserved for in-person presentations, and they should be photographed, labeled, and digitally uploaded for use in later analysis and publication. Textual and mediated files should be transformed to digitized documents-and may benefit from organization via online capture software (e.g., see Bhattacharya, 2015).

As researchers create labels for various data files and place them into different computer folders, they should make careful and thoughtful decisions about how each file will be organized. Organization and filing choices are more than simply logistical in nature, as they will fundamentally affect how data analysis unfolds. For example, if all the interviews with *male participants* are placed in one folder, and interview transcripts with *female participants* are placed in another, this will implicitly encourage comparison between men and women. Researchers should carefully think through the distinctions in their data that make a difference vis-à-vis the project's larger research question or purpose. For example, perhaps the best way to organize is not based on participant gender but instead based on age, or geographical region, or some other characteristic. Or, for researchers interested in cause and effect processes, it might be best to organize the data chronologically. There is no single "correct" way to organize, but researchers should be mindful that *their organization process is part of the analysis.*

Researchers should also thoughtfully consider the type of technologies that can best assist with their analysis. Many people use manual methods of color-coding, cutting up pieces of paper, and placing them in piles. And, this approach may be especially appropriate for those who are new to qualitative research methods, have little data, or if qualitative research will not be a principal part of one's career. However, for many researchers, qualitative data analysis software (QDAS) is a worthwhile investment, the most popular of which include Atlas.ti, Nvivo, MaxQDA, and Dedoose (Silver & Lewins, 2014). Qualitative software allows researchers to code the same data excerpt with different and multiple labels and allows for Boolean searches (those that use words such as "and", "or," or "not" to achieve more specific search results). However, mastering such software does have a learning curve. And, the software does not conduct the analysis itself, but simply facilitates the coding and organizing that researchers guide themselves.

Even if data review and organization are accomplished little by little along the way, about three-quarters through the data collection, I recommend that researchers begin systematically immersing themselves in the range of the project's data and begin a more formal process of analysis. In contrast to Glaser's (1992) take on grounded theory, I recommend that, as researchers read and listen to their data, they also talk to others about what they believe are the most promising directions. This type of verbal articulation is very useful in finding one's own scholarly voice and inviting feedback earlier rather than later.

This is also a prime time to begin *coding*-which is the process of labeling certain excerpts or chunks of the data as representing or fitting into some type of phenomenon. Codes are words or short phrases that can be drawn from everyday language or disciplinary terminology. One can think of a code as conceptual bucket and coding as finding examples of data that belong to that bucket. For instance, the code/bucket might be the phenomenon "complaining" and an excerpt coded to this might be an interviewee exclaiming, "It is ridiculous how much work I have to do!" Coding data serves to distill empirical materials down to a handy number of conceptual categories. After data is separated into its "main ingredients," the researcher then returns to the codes and expands them into a unique and significant contribution.

Some researchers choose to code based upon ideas that emerge through the data or empirical materials themselves. Others prefer to begin with some motivating questions or domains, such as analyzing: 1) behaviors, acts or activities, 2) ways of being, 3) routines, rituals, events, 4) character types or roles, 5) contexts and settings, 6) rules, structures, constraints, ideologies, 7) key time periods (Tracy, In Press, 2019). As I will describe below, coding can usefully unfold in a primary cycle in which segments of data are identified as relating to a code and a secondary cycle in which researchers consult past theories and create

analytical codes that attend to their research purpose(s) and question(s) while also extending past literature.

## III. Primary and Secondary Cycle Coding with First-Level and SecondLevel Codes

Many qualitative researchers thrive during the data collection phase but dread the research phase where they must analyze and make sense of the materials they have collected. Indeed, fieldwork and interviewing happen in what is considered to be the "hot summer" of the four seasons of ethnography (González, 2000), a time when the research is exciting, unpredictable, and social. Meanwhile, analysis and interpretation are more sedate, solitary, and for some researchers, constitute an almost paralyzing stage of the qualitative research process. Researchers often feel overwhelmed by the sheer expanse of their empirical materials and are unsure where to start.

The phronetic-iterative approach suggests that, after clearly organizing their materials, researchers begin with descriptive primary cycle coding. This begins by engaging in what grounded theorists have called "open coding," "line-by-line coding," and "initial coding"(Charmaz, 2014; Glaser & Strauss, 1967). Whereas the research may have been guided by a priori questions or purposes, this is the time to set those aside, and allow the empirical materials (rather than past theories or predetermined concepts) drive the coding. During this time, it is useful to stay open to multiple meanings and stories. One of the great values of qualitative research is that it can alert researchers to issues or ideas that "they did not know that they did not know." In other words, the empirical materials may reveal surprises that were never expected or intended. Open coding provides a space to notice these surprises.

Such coding begins by choosing a sub-section of data to read and analyze closely. How might you best choose the data? Many researchers first code material that they personally find particularly interesting, and then move onto contrasting materials (Tracy, 2013). So, this might look like first analyzing a favorite interview, and then moving onto an interview that was more typical or mundane. Early coding will influence the rest of the analysis process. As such, I recommend choosing about 20% of the data that best illustrate a maximum variation of meanings across the study-regarding participants, contexts, and types of data (e.g., fieldnotes versus interview transcripts).

The next step is to closely analyze the material and assign words or brief phrases that capture the essence of a portion of that data (e.g., a line or two of an interview or fieldnote transcript). Those researchers using manual coding approaches may use a colored marker to make a note in the margin, whereas those using QDAS would highlight the excerpt and create a code/bucket/file into which the excerpt would be digitally categorized.

Here is an example of first-cycle coding from my cruise ship research. The prose on the left are fieldnotes from the scene. The words on the right are codes that distill what is happening in the scene. In the discussion that follows, I refer to this data excerpt and codes multiple times to serve as an example (Box 2).

Many researchers wonder how detailed they should be in these first runs through the data. Indeed, the entire excerpt above could also be summed up by a single code such as MEAL-TIME CONVERSATION rather than split into the more detailed codes. Both "lumping" data into large categories or instead "fracturing" it into smaller slices can work, depending on researcher goals (Bazeley & Jackson, 2013). Fracturing takes more time and attention to

**Box 2.** Example of First-cycle Coding

| | |
|---|---|
| In the passenger areas, the cruise staff members are the picture of hospitality. They consistently smile, say hello, and watch their language. In the officer's mess at dinner, though, they can become very crude. Examples: William will graphically speak about passengers onboard he finds sexually attractive. People talk badly about naturalist Susie, saying she is gross and disgusting. In fact, one cruise staff member went so far as to imitate her ever-present nose boogers by stuffing a bit of bread up his nostril. This, of course, brought gales of laughter from the other members of the table. Sexual jokes and innuendo, inside jokes, and cussing dominate mealtime discussion. Today at lunch, cruise director Tim and assistant director Pedro were joking about something that I didn't understand. Pedro looked over and said, "Look, Sarah doesn't even get it... good Sarah, don't come down to our level." | PASSENGER AREAS<br>HOSPITALITY<br>OFFICER'S MESS<br>CRUDE<br>GRAPHIC SPEAKING<br>TALKING BADLY<br><br>IMITATING<br>LAUGHING<br>INUENDO<br>CUSSING<br><br>JOKING<br><br>"DOWN TO OUR LEVEL" |

detail early on, but it results in a richer understanding. And, the smaller codes can be valuably lumped together later, providing insight on causation and how various aspects of meaning unfold. A lot of detail, though, early on does *not* mean that the codes, themselves, should be complex.

Indeed, in the primary cycles of coding, I recommend that researchers start with "first-level" codes that capture simple descriptions of "who, what, when, where"(Tracy, 2013). As indicated in the example above, these types of codes are descriptive, summarizing the basic ingredients of the context or issue at hand (e.g., PASSENGER AREAS, TALKING BADLY). One of the great values of qualitative research is that it can capture action, so it is valuable to use gerunds (words that end in "-ing" like JOKING rather than JOKE) (Charmaz, Thornberg, & Keane, 2018). A good rule of thumb is that coding at this level should be simple enough that it does not require understanding specific theories or scholarly literatures or complex interpretation beyond what is immediately evident in the text. For example, regarding my research on the cruise ship, I could ask a research assistant who knows little about the research project at hand to go through the data and highlight any references to OFFICER'S MESS.

First-level codes may also be the exact words or phrases used by participants (e.g., as illustrated by the code in quotation marks above "DOWN TO OUR LEVEL"). These are called "in vivo" codes (Strauss, 1987) and refer to language that emerge from the life and mouths of research participants. In vivo codes provide insight into the vocabulary, jargon, and slang used in the context and by the participants in the study. In vivo codes may also sum up an entire research project, such as was the case with a study that found how informal workplace norms and practices make it very difficult to fully implement or use work-life balance policies (Kirby & Krone, 2002). When asked about using the work-life balance policy, a participant said, "The policy exists but you can't really use it". The authors of the study ended up using this in vivo language as the title of their entire analysis, and the study has gone on to be one of the most influential and highly cited articles in *The Journal of Applied Communication Research.*

When open-coding a portion of data, researchers may compile a coding "start-list" that may range from 30 to over 300 codes (Miles et al., 2014). Researchers should continue open coding until such time that few new codes are emerging. At this point, it is time to examine how the codes are grouping together, and how they may relate to an already developed research question, or are connecting to a new or unexpected research direction that the researcher is interested in pursuing.

In "secondary-cycle coding"(Tracy, 2013), researchers begin to interpret, organize and synthesize codes. They move beyond descriptive first-level codes to more analytic "second-level codes", also known as "focused" codes or "themes"(Gioia, Corley, & Hamilton, 2013; Saldaña, 2016). More than boiling down the data at hand, second-level codes require interpretation, theoretical considerations, and synthesis.

Secondary cycle coding is where having a rich understanding of past theory and literature is useful. For example, considering the cruise ship fieldnote excerpt above, the researcher might consider the codes of PASSENGER AREA and OFFICER'S MESS and, in secondary cycles of coding, begin to group these locations of the scene in relation to Goffman's (1959) ideas of FRONTSTAGE and BACKSTAGE. These analytic codes illuminate how employee behavior is largely determined by context and the context's given audience at any one time (Goffman, 1959). Perhaps the researcher may begin to see that cruise ship employees who spend much of their workday "frontstage" with passengers tend to be especially crude in the officer's mess; whereas cruise ship employees who spend most of their workday "backstage", for instance, working in the ship's engine room rather than with passengers, might be more polite in the officer's mess than they are in their typical work interactions. It requires understanding Goffman's (1959) theory about the presentation of self to identify and then effectively practice this second, analytic and interpretive level of coding.

When applying disciplinary concepts as second-level codes, it's important to make sure the analytic concepts chosen as second-level codes are the most precise and appropriate for attending to the topic at hand. Sometimes choosing the right name or concept for a code requires additional research. For example, in one past research project, my colleague and I noticed the way that one speaker seemed to repeat and imitate the other. At first, we coded such excerpts as "conversational mirroring." But after more research, we realized that there existed in the literature a variety of more exact terms (e.g., "communication convergence" and "entrainment") that more precisely identified the phenomenon at hand (Tracy & Huffman, 2017). By employing these already established terms as codes (rather than simply making up our own code of "conversational mirroring"), we were able to enter conversation with other scholars who might find our research valuable.

At the same time, there may be times when the established scholarly terminology may not work precisely. It does not make sense to lay a term on top of the current data

when that term does not capture the phenomenon at hand. Consider a project related to the way that 911 emergency call-takers deal with upset citizens calling the police (Tracy & Tracy, 1998). At first, my coauthor and I used the established term "emotional management" (Hochschild, 1983) to code situations in which call-takers had to control their emotions in conversations with very upset citizens. However, we realized that we were also seeing something in the data that was not encapsulated in the past research. Namely, the call-takers were not only managing their own emotions, but they were also doing work to manage the callers' emotions. Rather than using the established term of "emotion management," we called this phenomenon, "double-faced emotion management." In doing so, not only did we more precisely identify the phenomenon in the data, but we also extended theory, as other researchers in the future could take on and further explore the concept of "double-faced emotion management" (e.g., Cecil & Glass, 2015).

Code names oftentimes change along the way, in part due to the "constant comparative method" (Charmaz, 2014), a technique drawn from grounded theory. In such a practice, researchers examine the data excerpts that have been connected to a specific code, and then modify or add code explanations or labels so that the codes more precisely applies to the range of data. For example, consider the code HOSPITALITY noted in the cruise ship fieldnote excerpt. This code may originally be used to describe moments in which staff truly care for and serve clients. However, examples may emerge that do not fit the original code definition (e.g., an instance when a staff member only *pretends to* but does not really *try to* be nice to a passenger and mocks the passenger when out of earshot). Through the constant comparative process, the researcher may decide that this instance instead should be called PRETEND POLITENESS. This process of revision is reflexive and iterative, requiring review of codes and data to avoid "definitional drift"(Gibbs, 2018).

In secondary-cycle coding, researchers also begin grouping codes together within the data, something that is called "axial coding"(Charmaz, 2014) or "hierarchical coding" (Tracy, 2013). This includes making or devising an umbrella code to lump together several fractured codes (e.g., the researcher might devise a larger hierarchical code called MOCKING PASSENGERS to encompass smaller codes like INNUENDO, JOKING, TALKING BADLY, GRAPHIC SPEAKING). Researchers might also weave together codes into a network or map. For example, in my research with correctional officers, I began seeing how the code of SERVING INMATES were often coupled with JOKING and MOCKING of prison inmates (Tracy, 2005). Eventually, in putting these codes in connection with one another, I was able to show in my analysis how correctional officers, especially when enacting low-status service activities like delivering food, were likely to joke with, mock, and accidentally punish inmates as a way to manage the identity threat of essentially serving as a "glorified maid" to convicted criminals (Tracy, 2005).

A good way to synthesize codes through hierarchical coding and code weaving is to write each code on a separate small slip of paper, place them together in various groups or orders, and then devise arguments about how the codes make sense together. After grouping them in one way, the researcher can invite input from another researcher (even one who may have little understanding of the scene) and experiment with alternative groupings or orderings-and the respective arguments or theories that emerge from such a grouping. Researchers, as human beings, tend to fall in love with their original theories, so it helps to have a peer or colleague who can play devil's advocate and suggest alternative (but perhaps even better) arguments or theories of what is happening in the scene. Like good novelists, qualitative researchers must be prepared to "kill their darlings"(King, 2000).

As should be evident from these examples, secondary cycle coding benefits from interpretive creativity and theoretical knowledge. As such, researchers cannot simply use qualitative data analysis software and key word searches to effectively engage in second-level coding. Nor can they simply outsource such coding to low-skilled research assistants who know little about the scholarly literature related to the project at hand. Secondary cycle coding and second-level codes are essentially theory-building activities. The researcher is the instrument!

## IV. Focusing: Crafting a Codebook and Considering Intercoder Reliability

Traditional grounded analyses tend to encourage open, line-by-line coding of *all* the data, and incorporation of all codes into the resulting analysis to show the full emergent story of the context studied. However, the phronetic iterative approach suggests that after open coding about 20% of the data, researchers take a break from open coding, engage in some focusing activities, and make choices about incorporating those selected codes that will most usefully attend to the research questions, be of interest to desired audiences, and/or extend theory. Some data (and codes) will be unrelated to the research question or purpose while others will constitute findings that are duplicative of

what is already well known and demonstrated in the existing research. Rather than trying to tell the "whole story", the phronetic iterative approach calls for choosing codes to focus upon that can be expanded into significant news that key audiences will deem useful, significant, and interesting.

A metaphor may help clarify. Imagine that a research project's original research question is akin to a food recipe. Researchers set off to conduct the study, always remembering the desired recipe, but also collecting and placing in their shopping cart any promising food (data) that crosses their path along the way. The open coding process described above serves to label the "main ingredients" in the shopping cart (data collected). After open coding, and now at this focusing moment, researchers must analyze their shopping cart and determine whether these ingredients (codes) are appropriate for the research project ("recipe"). If they *are* appropriate, fantastic. In such a case, researchers can focus in on and perhaps gather even more material, bracket off other ingredients that do not fit the recipe at hand, and move onto the next stage of analysis.

However, researchers often find that the ingredients (codes) in their shopping cart do not match the original recipe. This mismatch between research questions and data typically happens in one of three forms (Box 3).

In the example above, given the codes of JOKING, INNUENDO, and TALKING BADLY, a good research question might be something like: "How do cruise staff employees manage their emotion at work?" Each of the three codes serve to help answer this question (e.g., backstage, staff make fun of passengers as a way to let off steam and keep up their smiling and pleasant façade frontstage) (Tracy, 2000). Of course, when combined in different ways, the same group of codes could attend to a variety of research questions. Researchers should choose questions (and corresponding codes) that are of the greatest significance, interest, and value to the relevant audiences.

## 1. Crafting a Codebook

After choosing these codes, I encourage researchers to develop a formal codebook that can guide the rest of the analysis. Codebooks are essentially data displays that list key codes, definitions, and examples-the main "ingredients" of the data that are of interest. Codebooks vary in their intricacy and may be especially detailed if a collaborative team wants to ensure that each researcher is consistently using the same definition or conceptualization for coding. Codebooks may include one or more of the following (Bernard & Ryan, 2010, p. 99; Guest, Bunce, & Johnson, 2006, p. 64) (Box 4):

The detail of the codebook depends on how well the researchers can keep codes in their short-term memory, and how many different people are collaborating in the coding process.

Table 1 contains an excerpt from an unpublished codebook used to analyze communicative behaviors in a leadership scenario (Town et al., 2018). This journal-article length study uses a total of 20 codes: 13 first-level and descriptive codes, 7 second-level and more analytic codes. Most researchers find it difficult to feasibly and reliably use more than 25 codes during any one research project. This number will vary depending on any single researcher's cognitive complexity and familiarity with the data. If you (or members of your research team) cannot remember codes in short-term memory, the coding process can turn into a tortuous process.

For research projects that draw from a range of different types of data (e.g., interviews, fieldnotes, arts-based materials, online texts), researchers must choose whether to

**Box 3.** Mismatch between Research Questions and Data

1. First, researchers may have come across rare ingredients that are unneeded in the original recipe, yet these new ingredients are very valuable and should not be wasted. In a phronetic iterative approach, the original research questions only serve as a guide, not a mandate. Occasionally, the ingredients gathered suggest an even better recipe (research focus). In this case, researchers should reassess and modify the guiding research question (s) so that they fit the ingredients available.
2. Second, due to a supervisor mandate or funding directive, other researchers are locked into and must stick with the original recipe (or research focus). In this case, they must keep shopping (gathering data) until such time that they can attend to the recipe at hand.
3. Third, some people end up with way too many ingredients (codes) and are confused on where to go next. Researchers need not, categorically, use all the ingredients (codes) in a single recipe (project). Forcing all the ingredients into a single recipe may, in fact, result in an unappetizing and incoherent mess. Instead, researchers can valuably bracket off a subset of ingredients (codes), each grouping of which might create a different tasty dish (significant research project).

**Box 4.** Elements included in the Codebooks

- Short description/definition of code (to jog memory);
- Detailed description/definition of code (that fully explains);
- Inclusion criteria (features that must be present to include data with this code);
- Exclusion criteria (features that would automatically exclude data from this code);
- Typical exemplars (obvious examples of this code based on the data);
- Atypical exemplars (surprising examples of this code);
- "Close but no" exemplars (examples that may seem like they belong with the code but do not, perhaps because another code would be more appropriate).

create separate codebooks for each source. Indeed, in the ontological leadership project (Town et al., 2018), we created one codebook for scenarios in which students practiced leadership behaviors in real-time, and another codebook for interviews in which students reflected on leadership and their class that semester. In this case, two codebooks were appropriate because the research questions that we developed for each area of data differed from one another. That said, in most of my past qualitative research projects, I have stuck to only one codebook. A good rule of thumb is this: if the different data sources are being used to contribute to the same research question(s), and if you can keep the codebook to 25 codes or fewer, then I recommend creating a single codebook for the entire project. Doing so will facilitate parallel comparisons and parsimony.

In the process of focusing the analysis, it is useful to frequently return to research interests/questions and the literatures to which the current project may contribute. This might look like writing down your research questions and guiding theories on a scrap of paper and pinning them to a bulletin board near your computer screen (Bhattacharya, 2015). Some emergent codes may be fascinating, but if they do not relate to your research question or relate to scholarship that you are willing to learn, then it is better to bracket off some aspects of the emergent data. Given the needs of feasibility and efficiency, researchers can valuably focus on a direction that provides fresh insight yet connects with the literatures in which they have some background and expertise. That said, one of the great values of qualitative methods is their ability to point to salient emergent issues that are not evident at the beginning of the project. Suffice it to say that, multiple times throughout the analysis process, researchers should (re)consider best directions, modify research questions/foci, and educate themselves on literatures that frame new directions.

Practically speaking, this also means that the codebook will change over time. The codebook excerpt listed in Table 1, for example, is the result of 12 different rounds of coding and revision over the course of six months. Our research team kept copies of the many different codebook versions, which together serve as a chronological reminder of how the codes and our analysis emerged and transformed over time. Along the way, code definitions were modified and clarified, new codes were added, and some codes were split into two. When substantial changes in coding emerge, researchers should return to data already coded and consider how and if earlier coding choices should change as well. Researchers may also usefully create one or two ambiguous and large bucket codes in which to simply place "interesting material to return to," "good quotations," or "examples to use in the conclusion." In the leadership study, for instance, our team created a code called "magic moments" to indicate interactional behavior that seemed leadership-oriented but did not fit into one of our tighter and more clearly defined codes.

## 2. Considering Intercoder Reliability

When researchers are working in teams, they may also engage in intercoder reliability practices that help ensure consistent analysis. Intercoder reliability can be calculated by percent agreement, Scott's pi (p), Cohen's kappa (k), and Krippendorff's α (a) (see Lombard, Snyder-Duch, & Bracken, 2002, for a review). In the leadership study noted above, we desired to analyze the number of times students engaged in specific communication activities, such as making promises, or inviting strategic input. As such, we engaged in intercoder reliability via percent agreement, a system that typically unfolds using the following general steps (Tracy, 2013)(Box 5):

Is intercoder reliability absolutely necessary? Some researchers argue that intercoder reliability is useless for creating high quality qualitative research (Smith & McGannon, 2017). I say that it depends. From my vantage, studies that benefit from intercoder reliability are those that make realist claims about the frequency or existence of behavior. As an example, consider a potential study that examined the different types of humor expressed in a group. Codes

**Table 1.** Excerpt of Code Book

| Level | Code Name **Abbreviation** | Code description | Examples ((nonverbal)) | Close but not it |
|---|---|---|---|---|
| First-level analytic codes | Relational invitations **Rel-Inv** | Significant utterances and/or nonverbal actions that warm up and invite the others into a relationship or team. These statements may have the result of others feeling included. May be in form of self-disclosure or question. | "Hi, I'm Jason. How are you doing today?" "Are you ready for this ((with a wide smile))?" ((Initiating a warm handshake)) | Nervous small talk. Just saying hello as if it is an obligation. |
| | Inquiries for information **InfoQs** | A question designed to get at established information. The question may have the consequence of others feeling like their information is useful and helpful. | "For publicity, what needs to be done?" "Where are you guys at on your tasks?" | Mere clarification if done after already asked and answered. E.g., "What did you say?" "Where did you say you were again with publicity?" |
| | Request **Request** | Utterance, usually in a form of a question, that asks someone to do something. Might also come in the form of discussion about reaching out to others to ask them for something. | "Do you want to ask your friend about volunteering for photography?" "Will you write that on action form?" | A simple expression such as: "I would really love it if you asked your friend about photography." |
| | Promise **Prom** | A statement that confirms that something will be accomplished. It could be a declaration or it may come in the form of offering. Usually includes word "will" or "am" | "I will put up posters." "I am happy to take that on." | |
| Second-level analytic codes | Task ignition (or re-ignition) for collective **Tsk-Ignite** | An utterance that moves the collective group from relational introductions into planning, or moves them back on track. | "So, let's get this thing figured out." "Let's get back on track." | |
| | Inviting strategic input **Strat-invite** | Statement or question that invites another's input, judgement or opinion on the conversation direction. This statement may have the consequences of: 1) others feeling included 2) plan being smarter. | "Where do you think we should start?" "What do you think about that idea?" "How do you feel about that?" "What should we budget for it now?" "Anything else about the event?" | Simple one-word inquiries that seek affirmation. E.g., "Right?" "Am I right?" or "Sound o.k.?" Asking for it but not listening or giving space for it. |

might include: 1) SARCASM, 2) GAME-PLAYING, 3) SUPERIORITY HUMOR. A realist research question such as, "Which type of humor is most common in this setting?" would benefit from intercoder reliability to ensure trustworthiness that all team members were defining the codes similarly and applying them consistently in the data.

Intercoder reliability would be less applicable to a research question such as, "How do participants *explain* their performances of sarcasm, game-playing, and superiority humor?" This interpretive question explores how employees narrate their stories and does not intend to objectively record realist behavior. A team of researchers may come up with a whole range of interpretations, and these multiple viewpoints could enrich the analysis. Given that *the researcher is the instrument* in qualitative research, different interpretations can be expected due to researchers' age, race, gender, or experience-and these multiple viewpoints provide crystallized insight to the topic at hand (Ellingson, 2008).

As should be clear from this discussion, codebooks

**Box 5.** General Steps for Engaging Intercoder Reliability

1. Team members collaboratively devise a codebook and decide how to unitize the data (e.g., by line; or by incident).
2. Team members work together to code a data excerpt, talking through differences, updating the codebook, and coming to agreement about how to understand a certain code.
3. Team members separate and, working independently, analyze the same subset of data (usually at least 10%).
4. Team members come back together to compare their coding and to compute intercoder reliability.
   a) This is calculated by taking the number of codes that the researchers agreed upon (e.g., 9) and dividing it by the total number of pieces of data coded (e.g., 10).
   b) The higher the agreement rate (9/10), the more reliable (or consistent) the analysis will be. An agreement rate of 90 percent or higher is generally considered appropriate (Neuendorf, 2017).
5. When collaborators reach an appropriate agreement rate, they can assume that they are coding the data similarly, and therefore they can break up the rest of the data and analyze them independently.

themselves are iterative. In contrast, for example, to deductive content analysis where codes are primarily predetermined by past literature (Neuendorf, 2017), the phronetic iterative analysis begins with open-coding a maximally variant selection of the data, starting with first level descriptive codes, and then adding more interpretive second level analytic codes. After doing so researchers should develop a preliminary codebook, "road test" it on additional data, and repeat this recursive process until the codebook answers important questions and, if appropriate, until such time the research team reaches an appropriate level of intercoder reliability. When these things are accomplished, the codebook can be laid on top of the data to guide the rest of the analysis.

## V. Synthesizing Activities in Qualitative Analysis: Memos, Theoretical Sampling, Negative Cases, Parameter Setting, & Loose Outlines

Qualitative analysis is more than coding. It also requires interpreting, thinking, list-making, choosing additional areas to sample, and writing as a method of inquiry (Richardson & St. Pierre, 2018). Such activities allow researchers to focus the analysis and move from gut-feelings about the qualitative project to explanations that will contribute significantly to the research question and extend or complicate existing knowledge. Analytic insights can be fleeting, and by writing them down, it's more likely they can guide and impact the final project.

In the process of working through various analytic synthesizing activities, I strongly recommend that researchers keep a frequently updated chronological list of their analysis practices. Researchers may erroneously believe that they will never forget a 12-hour coding session that ruined their holiday break. However, memory fails, and it can be next to impossible to remember how, exactly, the analysis moved from hundreds of pages of interview transcripts to a perfectly crafted research paper. This chronological list of analysis activities need not be fancy, and could simply include the date and a summary of the practice-for example, "week of June 5, read my fieldnote data and made notes in the margin; week of June 12, organized interviews into three folders and began first-cycle coding; week of June 19, organized open coding into these 20 first-level codes" (Tracy, 2013, p. 196). Having this record is instrumental for describing and justifying the analysis in later reports. In what follows, I provide explanations and examples of a range of useful analysis activities, including analytic memos, theoretical sampling, negative case analysis and parameter setting, and loose outlines.

### 1. Analytic Memos

Like grounded research, a phronetic iterative approach to data analysis encourages researchers to consistently create analytic memos, considered to be "sites of conversation with ourselves about our data"(Clarke, 2005, p. 202). Analytic memos ask the researcher to think carefully about key stories and meanings and are often characterized by one or more of the following characteristics (Charmaz, 2014):

1) they define the code as carefully as possible;
2) they explicate its properties;
3) they provide examples of raw data that illustrate the code;
4) they specify conditions under which it arises, is maintained, and changes;
5) they describe its consequences;
6) they show how it relates to other codes;
7) they develop hypotheses about the code.

Analytic memos are very helpful for making hypotheses about how codes relate to each other and for better understanding issues of process, action, chronology, emplotment, explanation, and causation (Tracy, 2013). Furthermore, they serve as a key intermediary step between coding and writing. Format wise, analytic memos can be written in regular computer software, appended to tables or codes in QDAS, or written long-hand in a journal. This is not a time to worry too much about form, function, or consequence. Instead, analytic memos provide an opportunity to write creatively and freely-a place to "dump your brain" (Saldaña, 2016, p. 44).

Brandon Ferderer, a past doctoral student, developed one of his qualitative project's most important insights in the process of writing an analytic memo. By way of background, Brandon's study examined brief interactions between strangers from disparate geographic cultures as they virtually met and talked with one another. These meetings were facilitated by Shared Studios (https://www.sharedstudios.com/), a technology and art collective that repurposes old shipping containers with videoconferencing software, paints them bright gold, and deploys them as "Portals" to various places around the world. Local people nearby the Portals are encouraged to visit inside and interact audio-visually with a stranger who is connecting through another Portal far away (oftentimes in another country).

As Brandon began to analyze his data, it became clear that a primary source of delight and significance for Portal participants was learning, through their Portal interaction, that they shared simple and mundane parts of their lives with a distant stranger. Even if they lived in completely different cultures, participants found, for instance, that they both loved ice cream or the ballet. At first, this code of SHARED INTERESTS seemed somewhat obvious and mundane to Brandon. However, as he wrote analytic memos, the significance of this code emerged. An example of one of his unpublished analytic memos is below.

> SHARED INTERESTS / "WE'RE ALL THE SAME"
> - Throughout the data there seems to be a focus, often a sense of surprise, that people are "SO ALIKE" to their Portal partner. This gets expressed in a number of ways, such as people saying, "WE ARE ALL HUMAN," and that we share a "COMMON HUMANITY." What is really interesting is how surprised people are that they might have similar interests or things in common (including a shared humanity) with people from other countries. I am struck by this level of wonder and awe that people wish, hope, and dream of similar things regardless of country. This is especially the case with Americans interacting with participants in Erbil, Iraq/Tehran, Iran/Herat, Afghanistan. Have media's narratives of division become so entrenched that we can no longer imagine a shared sense of humanity, let alone shared interests with folks in other countries?

Within this memo, Brandon is slowly discovering the importance of everyday chit-chat for creating avenues toward empathy. Writing this analytic memo launched a series of additional theorizing and focusing activities, the result of which was a final paper that illustrated the exquisite power of everyday talk for forging human connection across great divisions (Ferderer, 2019). The analytic memo-where Brandon wrote first and understood later-was a fundamental technique for moving from coding to crafting a significant and interesting analysis.

## 2. Theoretical Sampling, Negative Case Analysis, and Parameter Setting

In the process of writing analytic memos, qualitative researchers also focus the analysis by noticing the types of emergent codes, claims, or arguments that seem most interesting and/or puzzling, but would benefit from additional data collection. Researchers who are aiming toward empirical realist claims (e.g., "X *is* happening") should keep gathering data related to their emerging grounded theories and codes-via a process of "theoretical sampling"-until such time when new information is unsurprising and adds little value to the emergent analysis-a state called "theoretical saturation" (Glaser & Strauss, 1967). For interpretive researchers who are less interested in realist claims, a good rule of thumb is to continue gathering and analyzing data until such time the emerging analysis attends to the research question or purpose at hand and does so in a way that key audiences will find significant and interesting.

Some data will strengthen early hunches. However, researchers should avoid falling in love with their initial hypotheses to the degree that they choose to focus only on supporting data. In other words, researchers must hold on loosely to early interpretations, and invite consideration of material that might negate their favorite explanations of the scene. As a method of sharpening and strengthening the ongoing analysis, researchers can purposefully seek out discrepant voices or materials. This type of "negative case analysis" strengthens the trustworthiness of the analysis and helps ensure that the resulting analysis

represents a multiplicity of viewpoints (Creswell & Poth, 2018; Huffman & Tracy, 2018).

Researchers should also play devil's advocate with themselves, where they try to poke holes into or consider weaknesses in their emerging argument. Consider the SHARED INTEREST theme that emerged in Brandon's study of strangers' interactions in Portals. Such a theme can be strengthened via a logical exercise of abstracting larger conclusions yet placing borders or parameters around the emerging claim by using "except when" or "especially when" language. This practice, called "parameter setting", uses the following basic formula: "Theory X describes, predicts, or explains Social Phenomenon Y *especially* when, or *except* when, Context Z arises"(italics added, Keyton, Bisel, & Ozley, 2009, p. 155). Considering Brandon's study, parameter setting might unfold in this way:

Theory / Concept X: Everyday talk is

Social Phenomenon Y: effective in creating human connection

Parameter: especially when these connections are mediated by an exotic context

This parameter makes sense because Brandon's study showed that the ethereal and cozy atmosphere of the gold-plated Portals sparked interactions and participant emotions that were unique to the context. Arriving to this conclusion required Brandon to creatively think through his data, consider how emergent codes worked together, and put boundaries around emergent claims. In all synthesis and theorizing activities, researchers must think logically about the project's various strands and how they might best contribute to relevant ongoing scholarly conversations.

## 3. Analytic Outlines

Another key synthesizing activity in the phronetic iterative approach is creating a "loose analysis outline" (Tracy, 2013). Like analytic memos, researchers should not try to be perfectionists when creating these, but rather view them as a brainstorming activity that will serve as a rough guide as they craft the resulting research report.

At the top of the outline, I recommend that researchers note main research questions or purposes. Then, I encourage them to look at their emerging arguments and codes (found in analytic memos and codebooks) for ways that their data are serving to answer key research questions and purposes. Not all codes or arguments must be included in this outline. Rather, the researcher should think carefully and choose to focus on the emerging directions of their analysis that will be most interesting and significant to the intended audience or related issue.

For example, in a research project that analyzed interviews with male executives about work-life balance (Tracy & Rivera, 2010), myriad codes and themes emerged including OFF-RAMPING O.K. (that referred to how participants applauded mothers who chose to stay home after they had children); CHOICE (that encapsulated how women's, but not men's, public work is a "choice"); and, RELIGIOSITY (any talk about religion).

As we developed the outline for the resulting paper, we placed our guiding research paper at the top, and then expanded upon codes that usefully illuminated and helped explain why women continue to face challenges managing work-life balance. In the process, we arranged and then rearranged the order of arguments so that the resulting paper might be the most coherent and persuasive possible. We realized in this process that the code of RELIGIOSITY did not clearly attend to the research focus at hand, and therefore chose not to focus on it in the final analysis. Meanwhile, the codes of CHOICE and OFF-RAMPING O.K. did closely connect. After settling upon an outline, we returned to the raw data (interview transcripts that were coded in QDAS) and wrote about the powerful examples that evidenced our emergent themes. The loose analysis outline unfolded as follows (Tracy, 2013, p. 198):

### 4. Issues Motivating the Study [Already Demonstrated from Past Research]:

1) Women's advancement in organizations has stalled.
2) We have little research about work-life balance from men's viewpoints.
3) Men espouse as important work-life balance policies and family; however, we don't know how/if their viewpoints about gender and work-life in the private sphere intersect with public work-life considerations.

### 5. Guiding Research Questions Motivating the Analysis:

What are male gatekeepers' attitudes about work-life balance and male and female roles in regard to life and work? How might their talk about gender and work-life in the private sphere and about their own family help us understand their attitudes and practice of work-life policies in the public sphere?

### 6. Potential Themes that Emerged in Coding that Might Answer These Questions

1) Men privatize work-life policy (when asked about policy, they answer in relation to their personal beliefs and situation). Therefore, it makes sense to look at their private views on these things…
2) Myth that flexibility=sufficient work-life policy.
3) A conflation of child care with doctor's visits and child care.
4) An absence of understanding as to how the (uneven) division of domestic labor at home (negatively) affects women's ability to be productive at work.
5) How does a spouse effect one's own career success?
   (a) spouse needed for daughter;
   (b) spouse needed for son;
   (c) the idea that a daughter's spouse (the future son-in-law) might be valued in terms of how much he supported her in her career was a bit foreign - many interviewees did not even answer the question as it was intended.
   In some interviews, it seems that just hearing about the connections between these issues increased interviewees' sophistication of understanding work-life.
6) Women were appreciated as nurturers, supporters, sounding-boards (how does this align with description of best employee?):
   (a) what participants appreciate from wives;
   (b) what participants appreciate from employees (generic);
   (c) what participants appreciate from female employees.
7) Working women are often framed as adopting a "choice" rather than acting from an economic necessity; assumption that most female employees are like the interviewees' own (quite privileged) wives.
8) Interviewees have fairly gender-specific viewpoints on what their children will do:
   (a) career future for girls;
   (b) career future for boys;
   (c) how they imagine offspring will manage work-life balance.
9) Women off-ramping to be at home with children - this is something to be applauded.

The loose analysis outline essentially serves as a map for the larger paper, even as researchers may digress and make changes along the way. It helps researchers envision the journey before them, break up the task into manageable smaller chunks, and, if working on a team, make choices about which authors will draft which sections of the research report.

## VI. Conclusion

This essay reviewed the phronetic iterative qualitative data analysis process (Tracy, 2013), an abductive, problem-based approach that tags back and forth between emergent findings from the data on the one hand, and existing research interests and literatures on the other hand. As a summary, the process roughly unfolds as follows:

1) Organizing the data (topically, chronologically, or based upon some other intentional design feature) is a key first part of analysis. Depending on skill level and comfort, this can be accomplished manually, or through typical types of computer programs, or via special qualitative data analysis software (QDAS).
2) Using the general question, "what is happening here," researchers then engage in primary cycle coding, which includes using first-level descriptive codes that capture the main ingredients of the data (e.g., who, what, when, where). Codes can include salient behaviors, action, and "in vivo" codes that use contextual language.
3) In secondary cycle coding, researchers consider scholarly theories and literatures and how concepts from them might be relevant via second-level codes. Doing so begins to answer more complex questions of "how," "why," or "because." This is also the time to begin identifying codes that are antecedents or consequents of another and grouping together smaller first-level codes in a larger hierarchical category.
4) Along the way, the constant comparative method is useful for making modifications in the coding scheme and for creating new codes.
5) After about 20% of the data is coded via an open, line-by-line process, researchers should reflect on which emergent codes are most interesting given the research question (s) or purpose (s) and create a codebook that names, defines, and provides examples of codes.
6) If researchers are working in a team asking realist questions, they should work with the codebook until intercoder reliability is achieved. Researchers asking interpretive questions achieve less benefit from intercoder reliability yet still need to ensure the chosen codes illuminate significant meanings in the data. When researchers are satisfied with the codebook, they can use it to deductively guide the rest of the analysis-returning to and modifying the codebook if necessary.
7) Writing, itself, is a method of inquiry, and researchers

should consistently craft analytic memos about their emergent codes, hunches, and their meanings. This is a place for free-writing, but this material often finds its way into the final report.

8) As researchers devise salient hypotheses and potential claims, they should engage in theoretical sampling to gather additional information to fill out interesting directions and engage in negative case analysis and parameter setting to ensure that their emergent claims are credible, nuanced, and appropriate.
9) Crafting a loose analysis outline based upon all the preceding activities can map out and facilitate the writing process of resulting papers and reports.

The iterative phronetic approach to qualitative data analysis is designed to be useful for a range of qualitative researchers-both to those whose are new to qualitative research, as well as those who are experienced in data analysis. The approach may be used on its own or employed in tandem with more advanced types of qualitative data analysis, such as metaphor analysis (Malvini Redden, Tracy, & Shafer, 2013), discourse tracing (LeGreco & Tracy, 2009), narrative analysis (Labov & Waletzky, 1997), or even when using postmodern (or poststructural) theory, like Derrida's (1982) *différance*.

In overviewing various analytic practices, I have tried to be as clear as possible and to use non-technical language. That said, analysis is not a simple step-wise set of techniques, and no two researchers will coduct analysis in the same way. As researchers take up and practice the activities described in this paper, I encourage them to experiment and pay attention to what feels right given the project at hand. Qualitative data analysis can be isolating and cognitively taxing. As such, researchers should feel free to let their gut feelings and passions play a part in the process. Doing so helps make analysis enjoyable and intellectually invigorating. Along the way, there will invariably be moments of boredom, uncertainty, or paralysis. However, the phronetic iterative strategies discussed in this essay can facilitate the crafting of qualitative research that solves problems, extends theory, and catches the attention of key audiences.

## REFERENCES


Aristotle. (2004). *The Nicomachean ethics* (J. A. K. Thomson, Trans.). London, UK: Penguin Books.

Barone, T., & Eisner, E. (2012). *Arts based research.* Thousand Oaks, CA: SAGE.

Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo* (2nd ed.). Thousand Oaks, CA: SAGE.

Bernard, H. R., & Ryan, G. W. (2010). *Analyzing qualitative data: Systematic approaches.* Thousand Oaks, CA: SAGE.

Bhattacharya, K. (2015). Coding is not a dirty word: Theory-driven data analysis using NVivo. In S. Hai-Jew (Ed.), *Enhancing qualitative and mixed methods research with technology* (pp. 1-30). Hershey, PA: IGI Global.

Bowen, G. A. (2006). Grounded theory and sensitizing concepts. *International Journal of Qualitative Methods, 5,* 1-9. https://doi.org/10.1177/160940690600500304

Cecil, P., & Glass, N. (2015). An exploration of emotional protection and regulation in nurse-patient interactions: The role of the professional face and the emotional mirror. *Collegian, 22*(4), 377-385. https://doi.org/10.1016/j.colegn.2014.06.002

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Los Angeles, CA: SAGE.

Charmaz, K., Thornberg, R., & Keane, E. (2018). Evolving grounded theory and social justice inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (5th ed., pp. 411-443). Thousand Oaks, CA: SAGE.

Clarke, A. E. (2005). *Situational analysis: Grounded theory after the postmodern turn.* Thousand Oaks, CA: SAGE.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches.* Los Angeles, CA: SAGE.

Derrida, J. (1982). *Margins of philosophy* (Bass. A, Trans.). Chicago, IL: University of Chicago Press.

Ellingson, L. L. (2008). *Engaging crystallization in qualitative research.* Thousand Oaks, CA: SAGE.

Emerson, R. M., Fretz, R. I., & Shaw, L. (2011). *Writing ethnographic fieldnotes.* Chicago, IL: University of Chicago Press.

Ferderer, & Brandon B. (2019). Affective elsewheres: Technology and everyday talk as mediators for human connection. *Advocating with Evidence.* Conference conducted at the meeting of The Western States Communication Association, Seattle, Washington.

Gibbs, G. (2018). *Analysing qualitative data* (2nd ed.). London: SAGE.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods, 16*(1), 15-31. https://doi.org/10.1177/1094428112452151

Glaser, B. G. (1992). *Basics of grounded theory analysis.* Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory.* New York, NY: Aldine de Gruyter.

Goffman, E. (1959). *The presentation of self in everyday life.* Garden City, NJ: Anchor Books.

González, M. C. (2000). The four seasons of ethnography: A creation-centered ontology for ethnography. *International Journal of Intercultural Relations, 24*(5), 623-650. https://doi.org/10.1016/S0147-1767(00)00020-1

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews

are enough? *Field Methods, 18*(1), 59-82. https://doi.org/10.1177/1525822X05279903

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling.* Berkeley, CA: University Of California Press.

Huffman, T., & Tracy, S. J. (2018). Making claims that matter: Heuristics for theoretical and social impact in qualitative research. *Qualitative Inquiry, 24*(8), 558-570. https://doi.org/10.1177/1077800417742411

Keyton, J., Bisel, R., & Ozley, R. (2009). Recasting the link between applied and theory research: Using applied findings to advance communication theory development. *Communication Theory, 19*(2), 146-160. https://doi.org/10.1111/j.1468-2885.2009.01339.x

King, S. (2000). *On writing: A memoir of the craft.* New York, NY: Pocket Books.

Kirby, E. L., & Krone, K. J. (2002). "The policy exists but you can't really use it": Communication and the structuration of work-family policies. *Journal of Applied Communication Research, 30*(1), 50-77. https://doi.org/10.1080/00909880216577

Labov, W., & Waletzky, J. (1997). Narrative analysis: Oral versions of personal experience. *Journal of Narrative & Life History, 7*(1-4), 3-38. https://doi.org/10.1075/jnlh.7.02nar

LeGreco, M., & Tracy, S. J. (2009). Discourse tracing as qualitative practice. *Qualitative Inquiry, 15*(9), 1516-1543. https://doi.org/10.1177/1077800409343064

Lombard, M., Snyder-Duch, J., & Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communication Research, 28*(4), 587-604. https://doi.org.10.1111/j.1468-2958.2002.tb00826.x

Malvini Redden, S., Tracy, S. J., & Shafer, M. (2013). A metaphor analysis of recovering substance abusers' sensemaking of medication assisted treatment. *Qualitative Health Research, 23,* 951-962.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook.* Thousand Oaks, CA: SAGE.

Neuendorf, K. A. (2017). *The content analysis guidebook* (2nd ed.). Thousand Oaks, CA: SAGE.

Peirce, C. S. (1960) *Collected papers of Charles Sanders Peirce. Vol. 1: Principles of Philosophy; Vol. 2: Elements of logic.* Editor, A. W. Burks. Cambridge, MA: Harvard University Press.

Richardson, L., & St. Pierre, E. A. (2018). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds), *Handbook of qualitative research* (5th ed., pp. 818-838). Thousand Oaks, CA: SAGE.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Thousand Oaks, CA: SAGE.

Silver, C., & Lewins, A. (2014). *Using software in qualitative research: A step-by-step guide.* London, UK: SAGE.

Smith, B., & McGannon, K. R. (2017). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology, 11*(1), 1-21. https://doi.org/10.1080/1750984X.2017.1317357

Srivastava, P., & Hopwood, N. (2009). A practical iterative framework for qualitative data analysis. *International Journal of Qualitative Methods, 8*(1), 76-84. https://doi.org/10.1177/160940690900800107

Strauss, A. L. (1987). *Qualitative analysis for social scientists.* Cambridge, UK: Cambridge University Press.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: SAGE.

Town, S., Adame, E., Tracy, S., Donovan, M., Clark, L., Kamrath, J. K., et al. (2018). *Would they get the job?: Predicting the hireability of transformational leaders.* Paper presented to Western States Communication Association, Santa Barbara, CA.

Tracy, S. J. (2000). Becoming a character for commerce: Emotion labor, self subordination and discursive construction of identity in a total institution. *Management Communication Quarterly, 14*(1), 90-128. https://doi.org/10.1177/0893318900141004

Tracy, S. J. (2005). Locking up emotion: Moving beyond dissonance for understanding emotion labor discomfort. *Communication Monographs, 72*(3), 261-283. https://doi.org/10.1080/03637750500206474

Tracy, S. J. (2007). Taking the plunge: A contextual approach to problem-based research. *Communication Monographs, 74*(1), 106-111. https://doi.org/10.1080/03637750701196862

Tracy, S. J. (2013). *Qualitative Research Methods: Collecting Evidence, Crafting Analysis,* Communicating Impact. Wiley: Hoboken, NJ.

Tracy, S. J. (2019, In Press). *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact.* Wiley: Hoboken, NJ.

Tracy, S. J., & Huffman, T. P. (2017). Compassion in the face of terror: A case study of recognizing suffering, co-creating hope, and developing trust in a would-be school shooting. *Communication Monographs, 84*(1), 30-53. https://doi.org/10.1080/03637751.2016.1218642

Tracy, S. J., & Rivera K. D. (2010). Endorsing equity and applauding stay-at-home moms: How male voices on work-life reveal aversive sexism and flickers of transformation. *Management Communication Quarterly, 24*(1), 3-43. https://doi.org/10.1177/0893318909352248

Tracy, S. J., & Tracy, K. (1998). Emotion labor at 911: A case study and theoretical critique. *Journal of Applied Communication Research, 26*(4), 390-411. https://doi.org/10.1080/00909889809365516

Wertz, F. J., Charmaz, K., McMullen, L. M., Josselson, R., Anderson, R., & McSpadden, E. (2011). *Five ways of doing qualitative analysis.* New York, NY: Guilford Press.