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## Opening the Ears that Science Closed: Transforming Qualitative Data Using Oral Coding

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### Abstract

The purpose of this article is to describe an alternative method for transcribing and transforming (analyzing and interpreting) oral data collected from interviews. Rather than record and then immediately transcribe data, the “oral coding” approach relies on a Three-Phase Approach. Phase One involves extended and reflective listening to the original interview data. This extended time with data in its original oral form enables researchers to construct both propositional and tacit knowledge in relation to the phenomenon being investigated. Intensive encounters with the original data are continued during the Second Phase of analysis and interpretation by re-recording on another device those segments that are thought to be potentially thematic as well the researcher’s own reflective and interpretive comments in relation to these segments. Finally, in Phase Three, using a combination of keyboarding and optionally voice recognition software, both in vivo quotes and researcher reflections are transcribed to text and organized by research question. This entire Three Phase process is intended to transform raw data into understandable accounts by allowing researchers to “hang on” to the original oral data for an extended time thus delaying reduction to text and thereby enabling researchers to capture participant nuances conveyed through tone, inflection, volume, pause, and emphases. Consequently, this method may have the potential to promote a higher degree of credibility and trustworthiness. Experience to date provides limited support for this process based on a previously published article (Bernauer, Semich, Klentzin, & Holdan, 2013) that used both traditional and oral coding and another article (Bernauer, 2015) that used only oral coding. It is hoped that colleagues try out this method and “transform” it based on their own creative insights.

### Keywords

Coding, Oral Coding, Tacit Knowledge, Transforming Data

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## Opening the Ears that Science Closed: Transforming Qualitative Data Using Oral Coding

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*The purpose of this article is to describe an alternative method for transcribing and transforming (analyzing and interpreting) oral data collected from interviews. Rather than record and then immediately transcribe data, the “oral coding” approach relies on a Three-Phase Approach. Phase One involves extended and reflective listening to the original interview data. This extended time with data in its original oral form enables researchers to construct both propositional and tacit knowledge in relation to the phenomenon being investigated. Intensive encounters with the original data are continued during the Second Phase of analysis and interpretation by re-recording on another device those segments that are thought to be potentially thematic as well the researcher’s own reflective and interpretive comments in relation to these segments. Finally, in Phase Three, using a combination of keyboarding and optionally voice recognition software, both in vivo quotes and researcher reflections are transcribed to text and organized by research question. This entire Three Phase process is intended to transform raw data into understandable accounts by allowing researchers to “hang on” to the original oral data for an extended time thus delaying reduction to text and thereby enabling researchers to capture participant nuances conveyed through tone, inflection, volume, pause, and emphases. Consequently, this method may have the potential to promote a higher degree of credibility and trustworthiness. Experience to date provides limited support for this process based on a previously published article (Bernauer, Semich, Klentzin, & Holdan, 2013) that used both traditional and oral coding and another article (Bernauer, 2015) that used only oral coding. It is hoped that colleagues try out this method and “transform” it based on their own creative insights. Keywords: Coding, Oral Coding, Tacit Knowledge, Transforming Data*

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This article is based on a paper presented at the 6<sup>th</sup> Annual Qualitative Report Conference on January 9, 2015 at Nova Southeastern University. It also draws on the article *Reflections on Catholic Education in the USA: A Dialogue Across Generations from the 1950s to the 2000s* (Bernauer, 2015) where I first formalized the steps in “oral coding.”

The first part of the title of this article (“Opening the Ears that Science Closed”) is intended to convey the changes that have occurred in the way that I now approach phenomena based on my journey from quantitative to qualitative researcher. I previously described this journey elsewhere in detail (Bernauer, 2012) so I will draw on it here only when it seems appropriate. However, I am finding that new manifestations of these changes arise as this journey continues in real time and I have come to think that the development of “oral coding” is the most recent manifestation. Apparently, the effects of having been “trained” to conduct research using quantitative methods based on the rationalistic paradigm (although I was not aware at the time that I was under this or any other paradigm nor that an equally valid naturalistic paradigm even existed!), has had a more powerful and persistent effect on my way of thinking and acting than I thought. I have most recently become aware of the impact of this paradigm based on what I now perceive to be the often mechanical application of the “scientific

method” and its consequent narrowing effect on our capacity to appreciate the complexities that exist in the social “sciences” especially with respect to trying to further understand that most complex of phenomena – human beings and the organizations and societies that they create.

I first began to recognize my emerging paradigmatic transition from quantitative to qualitative methods a few years ago and I used “twists” to mark important turning points (Bernauer, 2012) as exhibited in this segment.

*Although Twist 11 describes the most significant writing effort in terms of its impact on identity, I came to recognize another interesting but-until-the time-of-this-writing, unknown, subconscious behavioral characteristic that I adopted in relation to collaboration with colleagues. I now realize that when I worked with colleagues who were primarily of the “quantitative mindset” I found myself developing precise problem statements and statistical methods. I now think that perhaps a quantitative mindset does not necessarily mean an exclusive focus on numerical data but rather the need to use a more scientific approach to both problem finding and problem solving. (pp. 9-10)*

I cite this particular segment because it sheds some light on my recognition of the concept pointed out by Guba (1981) and that is that the essential difference between qualitative and quantitative traditions is not the methods that are used but rather the paradigmatic assumptions underlying them. In particular, I now recognize that I unconsciously relied on the “scientific approach” (with its underlying “rationalistic paradigm”) as my pathway to “truth.” As noted previously, I am still uncovering how much of what I think and do is based on this paradigm. However, let me be very clear that just as Guba envisioned a rapprochement between the two traditions, I too do not see differences as an irreparable chasm – whether one looks at a phenomenon based on the naturalistic or rationalistic paradigm depends both on the purpose of the study and the nature of the problem. And certainly, most phenomena admit of multiple ways of looking at them. In fact, I believe that it is in a respectful conversation among those who look at phenomena from different perspectives that the interdisciplinary approach to both problem finding and problem solving can be fully developed and form the foundation for designing quality studies that use an artistic mixture of quantitative and qualitative approaches. This reflective and reasoned approach contrasts with the sometimes faddish propensity to use “mixed methods” simply because they may be currently in vogue. However, even if one accepts Guba’s position that the conflict between paradigms should not be focused on methods it is also true that some of us are simply pre-disposed to looking at things in a certain way.

To be fair, my perception of science and the scientific method is based on my own educational experiences, level of maturity, and understanding as I traversed through high school and college. I am sure that there are thousands of individuals worldwide who appreciated science early on as creative, open, and inclusive and who therefore do not later in life find themselves criticizing its shortcomings. One need only look at the lives and accomplishments of some of our greatest scientists (Gardner, 1993) to see that “science” need not be perceived as a narrowing influence but rather as an illuminating force. My point is rather that when it comes to appreciating how human beings learn, feel, and act both individually and in concert with others in organizations and societies, that a narrow application of the rationalistic paradigm and the scientific method with its attendant analytic methods (design, measurement, and statistics) is woefully lacking in its ability to capture and appreciate the essence and complexity of some of the most important human phenomena. It is my belief that an over reliance on the rationalistic paradigm and the kind of evidence that it produces has led to the development of programs and approaches in education, psychology, and other behavioral

and social science areas that are based on both a faulty epistemology and faulty methodology. Indeed poets, novelists, musicians, storytellers, artists, actors, playwrights, and filmmakers may come the closest to being able to effectively capture those aspects of the human experience that, “at the end of the day” we know to be the most important.

In contrast to my negative assessment of the impact of the scientific method and the rationalistic paradigm in the social sciences, its impact in many other areas of human concern has been nothing less than spectacular! One need only think about human health, transportation, communication, and the capabilities of computers, smartphones, and other advanced technology to take us, as *Star Trek The Next Generation* reminds us, where “no one has gone before.” It is only when we stop and let ourselves be awed by the changes that science has made in our lives that we can truly appreciate its tremendous impact. Nonetheless, I still think that an over-reliance on science in areas of individual and social concern has led to its misapplication and the narrowing of what is considered valid knowledge. Perhaps Alfred North Whitehead (1861-1947) had it right when he said that “fools act on imagination without knowledge, pedants act on knowledge without imagination.” I think that now is the time to find that “magic middle” where research and learning draws on both perspectives.

The second part of the title of this article draws on Harry Wolcott’s *Transforming Qualitative Data* (1994). In addition to “borrowing” for the title, I have also borrowed much of Wolcott’s approach regarding how to think and write about qualitative inquiry based on his emphasis on “description, analysis, and interpretation.” The specific purpose of this article is to introduce a method for describing, analyzing, and interpreting interview data (and thus transforming it) that relies more on oral processes compared to traditional transcription and coding methods. The title also owes a debt to Jerome Bruner who focused on curricular, language, and learning theory. One of his most important contributions is his conception of learning that highlights three processes (acquisition, transformation, evaluation) for making sense of complex phenomena (Bruner, 1977, pp. 48-49). Here again, we see that *transformation* is given a pivotal role and where I found further inspiration for developing my ideas about oral coding and its relationship to description, analysis, and interpretation; in fact, to the overall process of critical thinking.

The challenge of making sense of qualitative data is especially poignant and frustrating for those of us who were initially trained under the rationalistic paradigm using quantitative methods, but who now find that the naturalistic paradigm and qualitative methods offer a better match to phenomena of most interest especially teaching and learning. This frustration stems, I think, from the fact that we are accustomed to being able to identify the appropriate method of analysis simply by choosing a statistical test that is consistent with the “underlying distribution and level of data.” Want to compare the effectiveness of three instructional methods based on the results of a standardized achievement test? No problem, simply use ANOVA - analysis complete and interpretation pretty much complete. However, when we come up against qualitative data, something strange confronts us – algorithms used for making sense of quantitative data are impotent – like trying to turn a screw with a hammer!

Wolcott (1994) described how he settled on the phrase “transforming qualitative data” by beginning his book with the following quote by Michael H. Agar.

*It is time now to worry about something that has been implicit throughout the discussion of methodology ... those mysterious procedures by which you transform what you see and hear into intelligible accounts. (p. 1)*

Let’s focus for a moment on the three key terms from this Agar quote – *mysterious procedures*, *transform*, and *intelligible accounts*.

Let's start with the terms *mysterious procedures* and *transform*. Because I now tend to make sense of human phenomena based on the naturalistic paradigm and unabashedly assume the "posture" of using qualitative rather than quantitative methods, (Guba, 1981, p. 78), I have been faced at times with the quandary of actually trying to figure out how to go about analyzing and interpreting qualitative data. Generally, I have found a conflicting array of "mysterious procedures" from which to cobble together a defensible strategy for analyzing and interpreting qualitative data. This has led me (and I'm sure others) to search for what might be thought of as heuristic strategies rather than specific pre-codified procedures.

I would like to explain my current approach for transforming qualitative data first from a metacognitive perspective and then from a writing perspective. Regarding a *metacognitive* perspective, I have found that one of the most difficult things to explain to doctoral students is that, while the written dissertation is very often organized by "chapter", that the creative, reflective, and critical thinking processes that necessarily underlie the production of the dissertation are often quite "un-organized"! What I mean by this is that the complex higher-order thinking and reflection, especially the sometimes unconscious construction of tacit knowledge (Polanyi, 1958), that enable the entire process to proceed is sometimes very dissimilar to the organized linear results as displayed in the final written report. Non-linear "intrusions" such as multiple iterations, looping, flashes of insight, talking to oneself, new and recalled experiences, self-doubt, physical, emotional, and moral considerations, all somehow work in a rather unknown way to help us wrestle with what it is we are trying to discover. As a result of this seemingly haphazard process, we often find that we know more than we think we knew and that those components that we previously may have viewed as unconnected facts, feelings, perspectives, and experiences are now seen in a more integrated way. This integrative experience often yields a higher level of understanding much like when the pieces of a jigsaw puzzle coming together and providing an incrementally better visualization of the emerging picture.

From a *writing* perspective, while the final research report often hides the underlying dynamic interaction of mental, emotional, physical, and spiritual "intrusions" related to metacognition and presents a rather matter-of-fact recount of results, the *process* of writing mixes in some magical way with all of these "intrusions." It seems that writing and metacognition become intertwined. Similar to the metacognitive processes described earlier, the writing process itself also reveals that we do indeed know more than we believe we know. Perhaps we actually learn as we write due to the merging of the physical, linguistic, and metacognitive exercise of capacities and movement during the writing process – is writing indeed another type of thinking?

From both of these perspectives (metacognitive and writing), we can link to Wolcott's emphasis on "description, analysis, and interpretation" in a fairly cohesive manner to round out our discussion of transforming data. While Wolcott points out that there are distinctions among these three elements, he is also quite aware that when we actually go about transforming data, that there is a great deal of overlap especially between analysis and interpretation. While we need to take things apart in order to study a phenomenon, unless we somehow hermetically seal our creative potential during data collection and analysis, we humans start to simultaneously "get a feel" for the data and begin the "solve" the jigsaw puzzle using divergent methods. Not to go too far afield, but don't we see a similar process unfold weekly on TV programs that depict how crimes are solved using an almost simultaneous admixture of physical evidence, psychological analyses, interviewing, note taking, and plain old detective work?

Now that we have had this brief foray into discussing the "mysterious procedures" for transforming data, let's look briefly at Agar's "intelligible accounts." Much like the need to re-story in narrative research (Clandinin & Connelly, 2000), we need to keep uppermost in our

minds that, notwithstanding the wonderfully edifying insights that we may have experienced during both our metacognitive and writing efforts, that our research is simply not complete until it is made available to others in a clear and understandable way. It is much like “if a tree falls in a forest...” At least in regard to scholarly inquiry, the evidence is quite compelling that until “intelligible accounts” are constructed (including efforts to begin to identify acquired tacit knowledge that may yet remain impervious to complete expression in language form), then the transformation process is incomplete. The contention that “writing is thinking” (process) can be now placed alongside the proposition that “writing is evidence” (product). While the process of writing the account may be isomorphic with creative thinking, the written product serves to engage others in this thinking and to serve as a repository that the original inquirers can revisit in order to extend and enrich their creative efforts. The imperative to transform data into “intelligible accounts” means that until we have done our best to present clear descriptions and explanations of what we did, why we did it, how we did it, and what we make of it as revealed by our metacognitive thinking and the process of writing (or increasingly by alternative means such as poetry, dance, and dramatization), then we have not yet completed the task that we initially set out to do.

Another underlying influence on my development of oral coding as introduced earlier is Bruner’s explanation of learning where he describes learning as “three almost simultaneous processes” of acquisition, transformation, and evaluation (Bruner, 1977, p. 48). While *acquisition* seems most closely allied with Bloom’s “knowledge” level of the Taxonomy of Educational Objectives (Bloom et al., 1956), and *evaluation* with the “evaluation” level, the term *transformation* seems like an integration of the comprehension, application, analysis, and synthesis levels as described in the original version of the Taxonomy. Bruner defines *transformation* as the way that “we deal with information in order to go beyond it” (p. 48). And, isn’t that what we all feel compelled to do – to get beyond the information that we collect so that the descriptive and perceptual becomes “higher order” knowledge that is infused with insight, nuance, and an awakening excitement – our transformational “aha” moments?

### **Why Another Method of Coding?**

The most fundamental influence for developing another method of coding can be found within the context of my journey that took me from the rationalistic to the naturalistic paradigm. In addition, both Bruner and Wolcott exerted an underlying strategic influence on the development of oral coding because they described concepts and theories that aroused in me a sense of unease that traditional coding was somehow impeding my “aha” moments as I worked to unravel the meaning of oral data. However, while I felt the need to develop an alternative way to go about analyzing oral data, I also fully recognize that most researchers find that traditional transcription and coding methods yield valuable insights and therefore oral coding should in no way be considered as a replacement for traditional methods. Just as there are multiple realities to be discovered, there is a need for multiple methods to discover these realities. For me, however, oral coding provides a better fit with my current way of making sense of and writing about the kind of social phenomena that I find to be of interest.

Notwithstanding the rationale for developing and using oral coding as described thus far, this rationale would simply be incomplete if I did not disclose a more immediate and pragmatic reason for developing this method. Although one of my colleagues once advised me “don’t start a paper with an apology,” it would be less than honest if I didn’t share all of the reasons for developing oral coding as an alternative to recognized transcription and coding methods (see Saldaña, 2009). In addition to the influences of Wolcott and Bruner, I was driven to develop an alternative method due simply to my feeling of tediousness that arose as I

dutifully transcribed and coded. I got bored and tired with coding segments that were transcribed from recorded interviews. There, I said it and made my confession!

However, one final reason for developing this alternative method is that I have learned over the years to pay more attention to my sense of tacit knowledge (Polanyi, 1958) including feelings of being “bored and tired”! Isn’t finding oneself in a state of boredom, a sign that something is not right with ourselves or the world? For those of us who teach, don’t we do our best to engage students through various instructional strategies so that boredom is minimized or eliminated? It was only after I developed and used oral coding that I recognized its benefits in relation to traditional coding which leads me to at least three alternative explanations:

- 1) I am the victim of rationalization and perceive “benefits” as a way to justify my laziness;
- 2) There really are benefits using oral coding;
- 3) Boredom, laziness, and rationalization actually led to recognizing real benefits of using oral coding and therefore should be viewed as positive attributes.

Since I barely passed logic as an undergraduate student, I cannot vouch that these arguments are valid, exclusive, or exhaustive so in a spirit of rationalizing, I think it best now to move on to describe oral coding!

### **Description of Oral Coding**

Ever since I transitioned from being a quantitative methodologist to a qualitative one, I was bothered by a vague sense of the probable existence of what I now recognize to be (thanks to Agar and kindred thinkers) those “mysterious procedures” for transforming qualitative data into accounts that can be understood by others. Perhaps partly through fear of appearing not to know how to make sense of qualitative data in front of my students (God forbid that we admit not knowing everything about everything in front of our students!), I silenced this small voice of uncertainty by parroting phrases such as “coding to find themes” while really still feeling both unsure of what to do and inadequate in relation to others who wrote and spoke with authority about coding and analysis. While I have studied and sometimes applied traditional qualitative analytical methods, I concur with Lichtman’s observation that as far as analyzing and making sense of qualitative data that “with the exception of grounded theory, you are pretty much left on your own” (Lichtman, 2013, p. 245). I also resonate with Feldman’s introduction to interpreting qualitative data when she described sitting in her office “up to my eyeballs in data”, being surrounded by various source documents, and ending her lament with “how am I to make sense of them” (Feldman, 1995, p. 1). Isn’t this indeed what we have been warned about by our teachers and peers – finding ourselves with mounds of data and then not knowing quite what to do with them? While I find Wolcott’s emphasis on “description, analysis, and interpretation (Wolcott, 1994) to be elegant in its simplicity for trying to make sense of qualitative data, eventually we must do *something* concrete to render intelligible accounts of what we see and hear. And so, with all of this as a backdrop, I hereby offer one possible way to try and make sense of oral data recognizing that others use journaling and other divergent ways to effectively transform data. After all, if there are indeed multiple realities, then it makes eminent sense to me that there are multiple ways and capacities for individuals to construct meaning and achieve excellence by “going beyond the data” (see Gardner, 1983, 1991, 1993).

### Steps in Oral Coding

The “steps” that follow were codified only after I used the oral coding procedure to analyze data for a study on Catholic schooling (Bernauer, 2015). That is, it was only later that I formalized in words what I had previously done in practice. And so the emergence of the following steps seems consistent with a transformation from tacit to propositional knowledge (Polanyi, 1958).

Here are the steps as listed in the Catholic schooling article --

- 1) Conduct and record interviews in the traditional manner using tape or digital recorders.
- 2) As soon as possible after recording the interviews, listen carefully to them in order to get a feeling or gestalt of data. As you listen, carefully and critically reflect on what you hear and *don't* hear. Do not take written notes; rather make “mental personal notes” in relation to participant pauses and emphases and be sensitive to your own awareness of both propositional and tacit understandings that emerge from data.
- 3) In the days that follow, listen again to the tapes in relation to the research questions and identify and document those terms, themes, codes, and concepts that begin to emerge. This step constitutes first round coding.
- 4) Based on steps 1-3, listen once again to the original recordings but stop and re-record salient segments from participants on a second recording device as well as your own reflections and observations as they pertain to the research questions. This step in the coding process not only helps to identify initial themes across participants but also facilitates the simultaneous interplay of description, analysis, interpretation, and reflexivity. This step constitutes second round coding.
- 5) Based on Steps 1-4, write an initial Abstract where you describe the purpose of the study, what you were trying to discover, how you went about trying to make these discoveries, what you found, and what these findings mean in relation to the research questions. This step may be somewhat controversial since neither findings nor interpretation have been completed. However, at this point in the process, researchers know more than they think they know and even though there may be changes based on further analyses, writing an Abstract helps the researcher begin to harmonize the report in terms of purpose, questions, procedures, results, and interpretation.
- 6) Using the “reduced” recording completed in Step 4, transcribe participant responses and your own reflections using a combination of keyboarding and voice recognition software (such as Dragon Dictate) to create a “consolidated file” where each salient participant response and your comments are listed under each research question and its corresponding interview question or “conversation prompt.” This step constitutes the third and final round of coding using the oral coding process.
- 7) Using the “consolidated” file (Step 6), begin writing the final report by comparing, contrasting, and critically analyzing participant data and researcher comments both within and across research questions. Modify the Abstract based on what you found. This process exemplifies data analysis and synthesis as critical thinking. (see Bernauer, Lichtman, Jacobs, & Robertson, 2013)

I concur with my anthropologist colleague that these seven sequenced steps are “too wooden” and “not agile” (R. Skovira, personal communication, November 11, 2014). However, it is the best that I can do at this time to describe in words how to transform data using oral coding. What I like most about this method is that it postpones reduction to written text and thus provides more time for exposure to the actual conversations including pauses, inflections, humor, etc. The phrase “something has been lost in the translation” comes to mind whenever we immediately go from talk to text and this seems to be another advantage of the oral coding process. In addition, *in vivo* quotes can be easily captured within the context of the interview simply by recording the informant’s dialogue on the second microphone while analysis, interpretation, and reflection can be immediately juxtaposed to the analyzed oral text. Whether this latter attribute will be viewed positively by others is uncertain although Wolcott’s (1994) question of whether analysis and interpretation can indeed be separated is worthy of serious consideration. If the intent of “coding” and interpretation is to critically examine and present the perspectives of informants in relation to research questions (both initially posed and those emerging as the study progresses), then writing the final report based on this almost continuous exposure to the actual words and inflections of the informants seems to offer a more transparent window to get to the “truth value” (Guba, 1981) of what was said and then re-storying it in order to make the account both more appealing and “intelligible” to readers.

I also noticed that as I listened to the “reduced” second taping and began to write responses to each research question that it captured the ambience of the informant—tone, intonation, emotions that was not as “real” when using usual transcription methods. Paulus, Lester, and Dempster (2014) also make the case that repeated reading of the transcript in conjunction with the audio file allows the researcher to stay closer to the data compared to traditional methods. Finally, as noted previously, I fully concur with Wolcott (1994) that research is not completed until it is written up and that writing the final report is the necessary final leg in the journey along the path of Description, Analysis and Interpretation (DAI). I found that connecting this last stage of the journey to DAI using oral coding seemed to provide a more natural progression and, in my view, resulted in findings that I think to be trustworthy.

### **Future Directions**

In addition to using oral coding for the Catholic schools article (Bernauer, 2015), there is other preliminary evidence that the findings obtained using oral coding are not too far afield from those obtained using traditional methods (see Bernauer, Semich, Klentzin, & Holdan, 2013). However, it is hoped that oral coding will not only duplicate existing methods but also provide researchers with a tool that enables them to go beyond traditional methods by helping them “transform” qualitative data in a way that promotes more authenticity and trustworthiness of findings. In addition, while several qualitative designs or approaches suggest specific methods for analyzing data such as “horizontalization” (Moustakas, 1994) in phenomenological studies and “open-axial-selective” coding (see Strauss & Corbin, 1990) in grounded theory studies, I have found that the “general inductive approach” (Thomas, 2006) to be a useful and understandable way to analyze most qualitative data especially when coupled with a powerful software package such as NVivo (Bernauer, Lichtman, Jacobs, & Robertson, 2013). Exactly how oral coding “fits in” with this approach and perspective has yet to be examined.

In addition, I am not sure how others feel about the Description-Analysis-Interpretation (DAI) triad suggested by Wolcott (1994) or their experiences with trying to integrate or compartmentalize the functions of data collection, transcribing, coding, describing, analyzing, interpreting, and reporting. I find that my colleague Robert Skovira’s use of the terms “descriptive analytic” and “reflective analytic” helps to bridge these seemingly separate tasks

(R. Skovira, personal communication, November 11, 2014). I have also found that I am ready to write a draft of the Abstract after the first few interviews or observations and I suggest to my doctoral students that they do the same thing as they go about collecting data. I'm not exactly sure how this process works but I subscribe to the belief that the human mind and its capacity to generate insight and creative synthesis exceeds the limits imposed by a perceived linear sequence from data collection to writing up the report. However, I also am humbled by the fact that my first impressions are not always the most accurate and that thoughtful and reflective analyses after time has elapsed often provides additional context and perspectives that often alter first impressions and contribute more richness to both findings and their interpretation.

Finally, I am quite sure that if colleagues try out oral coding (and I sure hope they do), that it will evolve based on their insights and adaptations especially as it is applied using different paradigms and in different contexts. Perhaps through collegial collaboration, these seven steps will become less "wooden" and more "agile" and probably ≠ 7! My inbox is always open at [bernauer@rmu.edu](mailto:bernauer@rmu.edu) -- thanks in advance for any comments!

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