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Applied Qualitative Data Analysis After the Ontological Turn

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Abstract

In this article we demonstrate the use and usefulness of new materialism as an analytic lens in applied qualitative inquiry. Intended as a possible entry point to applied inquiry after the ontological turn, we draw on Barad's agential realism to analyze three existing transcripts of focus groups conducted with healthcare workers, traditional birth attendants, and mothers to explore the postnatal care referral behavior of traditional birth attendants in Nigeria. We describe elements of our data analysis process including deep reading, summoning of the inquiry, delaying the inquiry, attuning to glowing data, and writing. We explore how the research phenomenon enacted agential cuts that distinguished participants (healthcare workers, traditional birth attendants, and mothers) and relayed their participation in the focus group. We show how the inclusion of the mothers' babies and the transcripts themselves made available some understandings at the possible exclusion of others. Our Baradian, new materialist analysis shows the inextricability of interview materials (things) and language (discourse) and demonstrates that all applied research is bounded and affected by its material conditions. As a point of entry, we hope our illustration sensitizes applied qualitative researchers to how research decisions, research materials, and research cultures produce what can be known and lived within and beyond the research encounter.

Keywords

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In this article we demonstrate the use and usefulness of new materialism as an analytic lens in applied qualitative inquiry. Intended as a possible entry point to applied inquiry after the ontological turn, we draw on Barad's agential realism to analyze three existing transcripts of focus groups conducted with healthcare workers, traditional birth attendants, and mothers to explore the postnatal care referral behavior of traditional birth attendants in Nigeria. We describe elements of our data analysis process including deep reading, summoning of the inquiry, delaying the inquiry, attuning to glowing data, and writing. We explore how the research phenomenon enacted agential cuts that distinguished participants (healthcare workers, traditional birth attendants, and mothers) and relayed their participation in the focus group. We show how the inclusion of the mothers' babies and the transcripts themselves made available some understandings at the possible exclusion of others. Our Baradian, new materialist analysis shows the inextricability of interview materials (things) and language (discourse) and demonstrates that all applied research is bounded and affected by its material conditions. As a point of entry, we hope our illustration sensitizes applied qualitative researchers to how research decisions, research materials, and research cultures produce what can be known and lived within and beyond the research encounter.

Keywords: agential realism, new materialism, post-qualitative inquiry, qualitative data analysis

Qualitative research conducted in post-traditions (e.g., post-structuralism, post-modernism, post-humanism), particularly in the last decade, expanded its attention on discourse (language) to include the material (things). Rather than viewing discourse as the primary or sole focus of analysis, qualitative scholars recognized that research materials (e.g., recording devices, researchers and participant bodies, research settings) exert agential effects on inquiry and, importantly, are inherently connected to language. As such, language and things are inseparable, or "material-discursive," and must be analyzed together. This shift from discourse to material-discourse is often termed the "ontological turn" (Lather, 2016). Within this "ontological turn," many qualitative scholars (e.g., Jackson & Mazzei, 2012) interested in post-theorizing are thinking with new materialist, post-humanist, and anti-humanist ideas to reconceptualize qualitative methodology (Koro-Ljungberg, 2016). Broadly, these theories give as much (if not more) attention to the material world as to human perception of it and the language used to try to represent it.

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The ontological turn is ethically concerned with living responsibly and responsively in a world that is (much) more than human (Braidotti, 2013). It brings into focus oppressive attempts to "dehumanize" certain groups of people, human responsibility for climate change and animal and plant life, and the largely Western oriented hubris that the world is here for humans, rather than the other way around (Bennett, 2010; Braidotti, 2013; Haraway, 2016; Rosiek et al., 2019). These ethical matters inspire applied qualitative researchers (researchers who use qualitative methodologies or methods to address practical issues or problems) to pursue inquiries guided by new materialist theories to explore, for example, mutual involvements of humans and water in light of the global water crisis (Somerville, 2016); children and snow to undermine limited, individualistic notions of childhood (Rautio & Jokinen, 2015); and humans girls and cows to understand sexism and sexualization as a process of "becoming-meat" (Ringrose & Renold, 2016). These inquiries unearth the ways people and things are intimately bound together in systems of meaning, or entanglements, and seek a more responsible human engagement in the world. New materialist theories not only enable applied researchers to understand they are part of the world/nature they wish to study, but also provide them a conceptual framework to analyze this unity–this material-discursive *intra-activity* (Barad, 2007).

New materialist theories also reorient applied researchers to new understandings and practices of qualitative inquiry. If the materials of qualitative inquiry are just as important in meaning-making as language, then objects and processes such as interview recorders (Nordstrom, 2015), researcher and participant bodies (Marn, 2018), interview arrangements (Marn & Wolgemuth, 2017), and data analysis approaches (Cannon, 2019) cannot be separated from the content knowledges they enable. That is, new materialism reveals to applied qualitative researchers that findings are inseparable from research processes. Analyzing the flow of matter allows applied researchers to: 1) understand the contingent nature of research and research findings, 2) come to insights perhaps not available via a purely textual (discursive) analysis, and 3) confront their responsibilities within (rather than separate from) the inquiry design. The result is an account of applied qualitative research that attends to how research decisions, research materials, and research cultures produce what can be known and lived within and beyond the research encounter (Marn & Wolgemuth, 2017).

In this article we demonstrate the use and usefulness of new materialism as an analytic lens in applied qualitative inquiry. Like Jackson and Mazzei's (2012) instructive text, *Thinking with Theory*, we "think" existing qualitative focus group data (i.e., Chukwuma et al., 2017) with key concepts introduced by prominent new materialist theorist, Karen Barad (2007). Sensitized to the mutuality of material and meaning enabled by Barad's new materialism, we attend to how the processes and materials within the focus groups and focus group transcripts produced what can be known and concluded. While we seek to bring into relief the messy entanglements of material and discourse through our analysis, our primary aim is to provide applied qualitative researchers with a relatively clear application of new materialist thinking that demonstrates what new understandings of qualitative research design become possible with a material-discursive analysis. Above all, we see our work as an entry point to new materialist theoretical frameworks notable for their seemingly unwelcoming complexity (Nordstrom & Ulmer, 2017; Ulmer, 2017).

New Materialism: Karen Barad

Theories and theorists (e.g., Deleuze & Guattari, Barad, Haraway) whose ideas may be broadly labeled as "new materialist" are complex and diverse. We draw on Barad's work, particularly as detailed in her 2007 book *Meeting the Universe Halfway* to illustrate *one* possible iteration of data analysis after the ontological turn. We chose Barad because her

concepts reveal *to us* the entanglements of material and discourse in qualitative research. With backgrounds in science, psychology, and philosophies of science we were primed to follow Barad's (2007) logic as she built her concepts through philosophical analyses of experiments in physics and quantum physics. In particular, Barad's (2007) theory of *agential realism* supplied the logic and core concepts of our analysis, including research *phenomenon*, *agential cuts*, and *performativity*. Rather than describing them here, we explain these concepts in the "example findings" section below to better link theory and application and make clear how they informed our analysis. Barad's agential realism recognizes the aforementioned inseparability of matter and discourse—that is, matter and language are inextricably connected and must be analyzed in their mutual articulation. What follows, and most important to our analysis and argument in this demonstration, is Barad's argument that researchers must conduct, analyze, and interpret research through its material conditions. Attending to and detailing research materials and processes is not about "transparency" or "replicability," but about entanglement. Research findings are inextricable from and elicited in the material and discursive arrangements of research phenomena. Our aim is to show how and why research materials and discourses matter in research, and to suggest ways applied researchers might more fully account for them in their designs, analyses, and write-ups.

We also chose Barad because we both worked with her ideas previously to theorize qualitative inquiry, particularly qualitative interviews (Marn, 2018; Marn & Wolgemuth, 2017, 2019). This is the first and perhaps most important of all lessons we want to emphasize about qualitative data analysis after the ontological turn: any new materialist analysis requires deep, engaged, and ongoing philosophical reading (St. Pierre, 2014) and writing (Bridges-Rhoads, 2018). The analysis we demonstrate is enabled by our now more than 5 years of reading, writing, and discussing Barad's (and other theorists') work, which is both inquiry in itself and, not incidentally, something we *enjoy*. As a point of entry, we hope our illustration serves as a spark – an incitement to, curiosity about, and willingness for philosophically engaged inquiry (Kuntz, 2019) that perhaps opens up new and exciting ways of knowing and becoming (in qualitative inquiry) with the world.

Methodological and Data Analytic Approach Overview: Data that Glows

We situate our Baradian focus group analysis within the relatively nascent "post-qualitative" tradition (see Lather & St. Pierre, 2013; St. Pierre, 2014, 2018). While there is no consensus, nor is one desired, on the definition of post-qualitative research, it is an approach that is always in the making, open to the messiness of inquiry and our social world; it does not adhere to tradition or notions of methodological purity. Post-qualitative inquiry is "an assemblage that continues to become" (Nordstrom & Ulmer, 2017, p. 7). Broadly, the label post-qualitative signals qualitative inquiry tuned to post-human, anti-human, and new materialist philosophies. Thusly informed, post-qualitative research, amongst other possibilities, decenters the human, attends to material and material arrangements, and experiments with and reconceptualizes what qualitative inquiry can be and become (e.g., Koro-Ljungberg, 2010). Like post-qualitative research broadly, our analytic demonstration is singular, contingent, and experimental—and we hope useful to those seeking an introduction.

With this in mind, we cannot provide a linear, step-by-step process to the analysis of our focus group transcripts or, beyond this, any type of data for that matter. Post-qualitative inquiry gains its insight through resistance to procedure, resistance to relying solely on what was previously thought or previously possible. Researchers are intimately, inextricably tied to their own data analysis in nonlinear ways and a step-by-step process runs counter to this thought. Rather than attempting to "bracket" out our subjectivities or to just ignore them, a

new materialist analysis allows us to analyze the researchers' entanglement with the focus group data.

Rather than provide a set of procedures, we discuss the *logics* of our analysis–logics that are asynchronous, always becoming, resisting finality, and inextricably tied to our versions of Barad. These logics are found in data that glows. MacLure (2010) describes data that glows as those bits of data (word, phrases, gestures, fragments) that start to "glimmer, gathering our attention" (p. 282). When we become aware of incandescent pieces, time seems to "both slow down and speed up" (MacLure, 2010, p. 282). In these moments, we can be brought out of time and back into our entangled pasts–to previous data analyses, to the times we authors spent in coffee shops discussing materiality in transcripts, to our theoretical orientations that tell us what is of value or what is possible in an analysis. Data glows; we glow back. What glows in transcripts is always a performative entanglement between the researchers, theories, the materiality of the transcript, and the production of that data and subsequent transcripts.

We describe *our* analysis of glowing data in terms of Jackson and Mazzei's *Thinking with Theory* (2012). Following Jackson and Mazzei, we demonstrate how thinking, writing, reading, and dialoguing with Barad's concepts both made focus group data glow and helped us to understand why that data glowed to us. Our analysis also follows Marn's experimental critical qualitative inquiry (ECQI) – an approach that orients us to the focus group as an "experimental" site; as a site in which research decisions produce knowable and livable lives and truths (Marn, 2018). With the focus groups and transcripts as our objects of inquiry, we were able to ask questions about how (glowing) focus group and transcript elements produced specific research relationships and knowledge. Together, Barad's concepts, thinking with theory, and ECQI enabled us to look for data that glowed in moments when relationships were created or disrupted and knowledge shifted from one "truth" to another. We looked for these moments as our intimate connection to Barad and our entanglements (to our personal pasts, to our becomings as researchers, etc.) told us that these areas mattered– that they might hold material-discursive significance.

Data Sources

We used three focus group transcripts for our data analysis demonstration. The focus group data is housed in a repository at Syracuse University and is publicly available (Chukwuma et al., 2017). According to the description that accompanies the data, the three focus group discussions (the focus groups are termed "focus group discussions") were conducted in 2016 by a team of researchers from Harvard University. The team's purpose was to explore the postnatal care referral behavior of Traditional Birth Attendants (TBAs) in Nigeria and factors that facilitated or deterred referrals of mothers and infants to professionally trained healthcare workers. The focus groups were held separately with 8 health workers (74 minutes), 10 TBAs (87 minutes), and 10 mothers (64 minutes) who had recently delivered with a TBA. It was unclear to us how participants in the focus groups discussions were selected. All focus group participants were female and nine of the mothers who had recently delivered brought their infants to the focus group. The transcripts indicated the focus groups were all conducted on the same day (August 3rd, 2016) at the Federal Teaching Hospital in Abakaliki and in this order: first health workers, then TBAs, and last, mothers. Three members of the research team were present during each focus group discussion with one serving as facilitator, one as notetaker, and another as translator. Audio recorders were also used to capture the discussions. In the focus group with the mothers, there was reference to photographs being taken, but it is unclear whether the photos were of the participants or something else.

The focus group discussions were similar in structure for each group. They began with introductions of the research team and its purpose, a discussion about the participants' rights

and procurement of informed consent, and participant introductions and establishment of behavioral norms for the focus group (e.g., no cell phones, take turns while talking). There were also some differences between the focus group discussions. For example, the facilitator of the health worker focus group asked whether the health workers would like to speak in English or in dialect, while this question was not posed to the TBAs or mothers. While it is unclear from the transcripts, it seems likely that all three focus groups were conducted in the same room that may have been a bit crowded with 10 participants (there is reference in the TBA transcript to a researcher needing to stand because they lacked a chair).

The transcripts themselves all began with the title, date, and location of the focus group:

A FOCUS GROUP DISCUSSION WITH THE HEALTH WORKERS
DATE: 3rd August, 2016
LOCATION: Federal Teaching Hospital, Abakaliki
DURATION: 74 minutes
I = INTERVIEWER P = PARTICIPANTS.
[Names of participants have been omitted. Study team member names retained]

After this introduction, the transcriptions reported study team and participant talk, referring to participants by number (e.g., P1, P2…). The transcripts were single spaced and used black font, except in instances of overlapping conversation, disagreement, or when participants spoke in dialect. In those cases, the font was red in color:

I: But do they do antenatal care?
P: Yes.
P: They do.
P: They don't.
(Slight argument)
I2: Please you have to indicate before you start talking.

It is unclear who was responsible for producing the transcriptions and how decisions were made about their formatting, font, text color, and so on. Missing information like this is germane to our analysis as we seek to show how all the focus group materials and research process are active in producing what can be known, and missingness is part of that production.

Analytic Process

As discussed earlier, all post-qualitative inquiries are singular and a step-by-step account of data analysis after the ontological turn is inconsistent with the new materialist theories on which it draws. Yet, our aim is to provide an entry point into new materialist data analysis. As such we describe the following analytic elements, actions, or ideas that arose in *our* analysis and occasionally offer advice from our experiences. We seek to show that the analysis we conducted was a process of wandering; wandering through philosophical and methodological literature, wandering through (in and out of academia) the lives we lead and the relationships we pursue. Our data analysis did not just "happen," but rather, our analysis is an assemblage of bits and pieces gained and lost through years of thought and memory; it is this motley assemblage we have brought to our analysis. These elements and advice could perhaps serve as an inspiration or springboard to other new materialist analyses (of existing data): deep reading, hailing of the work, delaying the work, glowing, and writing.

Deep Reading

If we can say our analytic process had a beginning, we might situate it in our decision over five years ago to read Karen Barad's *Meeting the University Halfway* together. We already emphasized above, but it bears repeating here, post-qualitative research is philosophically engaged inquiry and as such requires deep reading of philosophical and theoretical texts (St. Pierre, 2014). It helped in our reading of Barad that we were both familiar with some of the work on which she bases her theories – Foucault, Butler, Harding, Bohr. Our previous and concurrent readings together swirled in our dialogues with one another, producing conjoint (mis)understandings of Barad's new materialism. This was a labor of love for both of us. We both enjoy(ed) reading theory and philosophy, each other's company, and the coffee that invariably accompanied our discussions. Reading Barad also connected us to/with other co-authors and colleagues and our Barad entangled with their versions of Barad. We came to understand deep reading as far more than just reading and thinking. It was living, breathing, caring, sharing, communing in an ongoing process of becoming (Baradian) scholars.

Our advice for applied researchers new to and interested in new materialist thinking is to start reading. Find a theorist who excites and challenges. Don't expect understanding, anticipate grappling. Find peers and mentors to read with. Remain open to what can be thought (differently) with that theorist and what inquiries, analyses, writings that different thinking might produce. Don't limit reading to one theorist or genre, read widely too, voraciously and with abandon. Perhaps most importantly, find some pleasure in the process. Deep reading is not something that can be forced or faked or short-cut. If reading isn't enjoyable in some way, if theories and theorists don't inspire, find or do something else.

Summoning of the Inquiry

While it is never clear when inquiry begins (or ends for that matter), at some point in deep reading, applied researchers will be summoned to inquire into something in particular. Rarely, from our experience, is qualitative inquiry intentional and planned. Inquiry, sneaks up on us in unexpected ways, inviting us to focus our philosophical reading on this or that problem, topic, phenomenon. Our analysis demonstration, for example, was hailed by a call for papers, sent out via a qualitative listserve. The invitation wormed its way into our reading discussions. We wondered, was it even possible or desirable to demonstrate data analysis after the ontological turn? How could we separate out "data analysis" from other movements and materials in new materialist inquiries – from design decisions, co-creating data, reading texts, writing texts, and...? Yet, sufficiently caught up in the call for papers and troubling questions, we decided to respond for a multiplicity of known and unknown reasons. Maybe we wanted an excuse to work together. Maybe the special issue editor was someone we admired. Maybe we wanted more opportunities to think with Barad. Maybe we had sympathy for arguments that post-inquiry is obfuscatory and alienating. Maybe we were motivated by the challenge. Maybe we needed another publication for that year to satisfy annual review and promotion committee. Maybe we didn't have a choice. Maybe we were carried away by some other unknown or unknowable force that compelled us to respond.

Just as new materialism orients us to the importance of material and language in the research process, so too it heightens our attention to this summoning as a vital force in our scholarship and the multiplicity of reasons we might respond. The sneaky, unanticipated summoning is as much a part of the research as any other element and a full account of any inquiry likely includes its initiations and inspirations.

Delay

Philosophical reading, inquiring, writing – all these research activities take dedicated time, effort. They also take *un*dedicated time and delay. Much to our delight, our special issue paper proposal was accepted and soon followed by electronic access to the focus group transcripts and instructions for writing. At the time we were both working on other projects, or teaching, or running, or taking care of families, or watching a good series on Netflix, or had gotten out of the habit of writing, or…. For all these reasons and more we delayed deliberate work on this project. But we cannot say we were not working. Ulmer (2017) argues for a slow ontology of academic writing, writing through nature, landscapes, and images. This writing is not unproductive but "differently productive," kin with other experimental writing in post-qualitative research that disrupts normative practices of scholarly composition (Ulmer, 2017, p. 201). Slowing down also disrupts the neoliberal academy's fast pace – its "speedy, efficient, commodification of academic activity" – arguably creating breathing room for thought, deliberation, and percolation in research (Gildersleeve, 2017, p. 291). For us, delay offered time for the project to simmer; to pop-up in unanticipated moments, making unanticipated connections; and to build momentum toward a kind of tipping point of maximum anxiety about the looming deadline that impelled us to begin dedicated writing. Like slow writing, delay was not unproductive or inconsequential but vital to our analysis and writing. Too often, we expect, applied researchers step to the pace of academies and research production pressures and experience great distress at the material consequences (e.g., funding, tenure and promotion) when their inquiries follow other, perhaps necessary and slower timelines. Delay can be a luxury and a privilege (especially for tenured professors with light teaching loads), and at the same time, we argue its presence in applied and other inquiries may produce the dual benefit of producing more thoughtful research and a tonic to neoliberal academic anxieties. Our advice: to the extent possible, cherish delay as an essential and ethical part of the applied research process. Delay may create openings, possibilities, sensitivities to data that reaches out and shines to us.

Data Glows

Transcripts are not fixed, static representations of participants' and researchers' words. Each time we read the transcripts, they were seemingly new again, sections connecting within and between transcripts as they had not before. We met to discuss our preliminary thoughts on the transcripts, and perhaps, also as an opportunity to catch up with each other. Our initial conversations flowed between the transcripts, our lives, and back to the transcripts. We pointed to dialogue that stood out to us and began to outline this paper. We returned to our individual analyses.

What we saw in the data was not always there when viewed again–meanings would rise and fall throughout our analysis, throughout our conversations. Data would glow and later dim–its luster gone in revisitation. Data does not glow simply when some part of the transcript was "unearthed"; no, data glowed in stops and starts, in fits and pauses, between moments of inspiration and the tedium of "data analysis" at various points. We poured over Barad. Did what glowed to us connect with Barad? Did our reading of Barad make some data glow and others fade? Did some data glow because we suspected our co-author would appreciate what we found? One of us is a mother, is that why the materiality of the babies stood out? Consensus on what glowed or why it glowed initially was neither required nor needed–we as collaborators, we as former professor and student, we as colleagues followed whatever glowed to one of us– we remained open to the possibilities of the data, the possibilities of the transcripts. Data glowed. We followed the light.

Writing

For most (all?) post-qualitative research, writing *is* inquiry. As Laurel Richardson (1997) said long ago, "I write because I want to find something out. I write in order to learn something I did not know before I wrote it" (p. 87). Our writing as analysis took place throughout our identification and elicitation of glowing data in the focus group transcripts. We wrote individually and shared our writings over email, discussed them on lengthy phone and Zoom conversations. We made connections to other projects, politics, and our personal lives. It mattered that Jenni had given birth to two children (in Australia and the United States, both in hospitals) and breastfed them at work, while working. It mattered that Travis did not have children, no experience with childbirth, and that breastfeeding was an unusual sight for him. These conversations were baked into our analytic writing. We eventually created a shared Google document with the recommended special issue outline and with all our writing appended. We wrote through the outline together, sometimes simultaneously and sometimes iteratively. That is, the outline was agential in our analysis – it directed the focus, content, and length of our analysis. It produced something singular – a new materialist analysis exemplar. We used the comments and track changes functions to edit our writing to the outline so that what we each wrote became almost indistinguishable. We discussed author order, both arguing the other should be first – our writing as inquiry, our thinking with theory, as entangled as they were in this and prior projects, made it difficult (absurd) to assign primacy. We submitted the manuscript and cherished the delay. Because writing (as inquiry) never ultimately ends, let alone with the submission of a manuscript, we continued our analysis as writing in response to editor and reviewer criticism (comments, feedback).

Example Findings

In this section, we present our analysis of the focus group data as a demonstration of a new materialist analysis. As previously indicated, a new materialist analysis requires extensive knowledge of the design of a study, the materiality of the research process, and the conditions and creation of the collected data. As we only had fragments of these elements, our example analysis is similarly in fragments. We present analyses that show how particular material-discursive arrangements enabled and prevented, configured and reconfigured different focus group knowledges and lives. In the following sections, we identify how the focus groups produced its subjects (actors) and available meanings of the focus group talk. We hone in on the babies as material-discursive actors in the focus groups. Finally, we turn to the transcript itself as a research material whose structure, font colors, depictions and omissions also produced available subjects and knowledges, and excluded others. Across these three fragments, we show how the intra-action of research materials and discourses honed the limitless possibilities of the focus groups into the specific emergence of knowable results.

Doctors, Moms, Babies, Recording Devices, Maternal Infant Health...

Phenomenon

We learn from Barad that each research design is a specific *phenomenon*—a specific material-discursive configuration. This phenomenon, the research design and its processes, serves to set initial boundaries (e.g., who is the researcher and who is a participant, who is the "expert" in the research) and to produce particular subjects and meaning-making practices. Material or discursive elements in one interview phenomenon may have vastly different effects in another. As such, each phenomenon must be examined both on its own and in connection

with other phenomenon to analyze how meaning and subjects are produced in research. For this study, each of the focus groups were their own phenomenon and initial boundaries of those phenomenon are analyzed below.

Even as this setting was the same for all groups, the materiality of this hospital reconfigured each focus group in different ways. For traditional birth attendants, this was perhaps an unfamiliar and seemingly hostile environment—one that may not value their skills and experiences and perhaps, as the researchers stated in the focus group for the health care workers, associate them with maternal death during birth (e.g., "I know that sometimes the health professionals say that the TBAs are not doing the right thing, and that they are usually the cause of maternal death."). It is possible that these TBAs would be defensive as a result and subsequently, be unable to perform subjects beyond TBAs. As the researchers introduced themselves as medical doctors and often used their titles in the introduction (e.g., "My name is Chinyere Mbachu, I am a medical doctor working in FETA, and here with me is Dr. Nelson Eze, working in the same department with me."), the positioning of these participants as TBAs and little else was underscored. That they were TBAs was the explicit reason these participants were there and whatever else they could have been (e.g., mothers, grandmothers, students, workers) seemed to be irrelevant.

For the mothers, the effect of the hospital was perhaps less certain. This setting could have materially affected each mother very differently depending on their entanglements (e.g., past medical experiences, cultural attitudes toward medicine versus TBAs). It is possible that the mothers had their postnatal health care provided at this hospital or one similar. The hospital setting could have engendered positive, negative, or both feelings in some of the mothers as a result. It is also possible the mothers could have experienced the setting and researchers as judgmental of their mothering (e.g., did they take their children to get postnatal health care as directed, had they followed the directions of the health care providers, did they have previous children that did not receive adequate health care). Similar to the TBAs, the researchers introduced themselves as medical doctors and drew upon their titles (i.e., "my name is Chinyere Mbachu, I am a medical doctor. Here with me is [Adanna Chukwuma]. She is also a medical doctor, and a PhD student. …We are also here with Dr. Nelson Eze."). As with TBAs, this type of positioning likely rendered subject performances beyond mother less likely. While the mother-hospital intra-activity is not fully knowable, the hospital was probably not a setting the mothers were accustomed to, perhaps leading to the seeming reticence of some of the participants in this focus group (e.g., "Some persons have been quiet. I want them to talk.").

For the health care workers, the hospital was likely a familiar setting. Given the location of the focus groups, these participants would be encouraged to perform their role as health care workers and draw upon discourses that promote health care as provided in hospitals for mothers, perhaps expressing negative views of TBAs. These boundaries were likely reinforced by the introductory words of the researchers when they stated, "I know that sometimes the health professionals say that the TBAs are not doing the right thing, and that they are usually the cause of maternal death." It is also notable that the researchers did not introduce themselves as medical doctors nor drew upon their titles (i.e., "My name is Chinyere Mbachu. Here with me are: Adanna Chukwuma, Eze Nelson."). The word "doctor" does not appear once in the transcript of the health care worker focus group. Unlike with the TBAs and mothers, the researchers did not appear to be positioning themselves as the "experts" relative to the health care workers they were interviewing.

As the researchers directly positioned these participants as "health care workers," held the focus in group in a medical environment, and stated their negative view of TBAs, this research phenomenon was likely to set against TBAs and mothers who do not take their newborns to health care providers for post-natal care. Other possible subjects of these health care workers (e.g., as mothers, community members) were likely impossible to perform during

the focus group. In the hospital, among other healthcare workers, and under a study introduction seemingly stacked against TBAs, would seem a strong deterrent of negative views of postnatal healthcare or approving views of TBAs.

The results of these focus groups must be tied to the material-discursive conditions of the research. The research phenomena all produced a particular manifestation of reality. For example, if the research took place at the residence of a TBA or in a community setting where TBAs are common, other subject performances could have been possible for the participants–the TBAs, health care workers, and mothers may have had access to a more expansive range of subjects. Rather than positioning and being positioned by the researchers as health care workers, these participants could have more easily performed, for instance, a community member subjectivity rather than just as a health care worker. Other subjectivities beyond those imaginable by the authors, as Western scholars, may also have been possible. Other material alterations to the focus groups could have been similarly impactful. How would the research phenomenon be reconfigured if the focus groups were heterogenous instead of homogenous? If the interviewers did not introduce themselves as doctors? If the focus groups were individual interviews instead?

It is not just for the applied new materialist researcher to simply speculate on what could have been possible under different material-discursive circumstances; rather, applied researchers must understand that knowledge is produced in phenomenon that are specific configurations that render some subject performances more likely, some less likely, and some impossible. These phenomena are individually bound instantiations of reality, as perceived, and results are produced in those realities—in other phenomena, different results would have been produced. Changing the boundaries of research phenomenon through material-discursive reconfigurations changes what is possible in that research. Results can then never be severed from the material-discursive conditions of their production.

Agential Cuts, Agential Babies

As previously discussed, materiality flows through the entirety of the research process–the comings and goings of matter, the rise and fall of subjects all shifted what was possible during the focus groups. To analyze the shifting boundaries of the focus groups, we examined agential cuts during the interviews. Agential cuts are the momentary stabilizations of shifting boundaries within a particular configuration; agential cuts mark what is interior and exterior to a phenomenon, what is part of the study and what is seen as external to it. As Barad noted however, "Agential cuts do not mark some absolute separation but a cutting together/apart – "holding together" of the disparate itself." (Barad, 2012, p. 46). Matter and discourses may performatively become exterior to a phenomenon but remain entangled with it. Agential cuts gain recognizability, begin to glow in moments of material discontinuity, when the presence of a cut previously made is challenged within the research phenomenon. We focus here on the agential cut and agency of babies during the focus group with the mothers who brought them.

In the previous section, we described the initial phenomenon of the mothers' focus group and their intra-activity with the hospital interview setting and the introduction of the interviewers as medical doctors. We indicated that the participants were positioned by the researchers as mothers. The focus group introductions also clearly enacted an agential cut between those in the focus group who were responsible for producing data and those responsible for eliciting and collecting it, between researcher and participant. The mothers were not just mothers, but mother-participants. Even as they were invited to speak on behalf of their mother selves (this was the stated purpose of the focus group, to understand mothers' perspectives), we noted at times being a (good) research participant took primacy over being a (good) mother. Or being a certain kind of mother was essential to being a (good) research

participant. For example, the researchers enacted an agential cut through their initial remarks to the mother-participants by stating, "Thank you all for your patience in waiting for us, despite the inconveniences of the children you came with." As these mother-participants were almost all holding their babies, this statement made clear that they are mothers who must deal with the inconvenience of babies in the focus group. This reshaped the boundaries of the interview, marking babies as an inconvenience and casting the mother-participants as having to deal with the "challenges" of childcare–an all too common expectation of mothers in societies and social contexts that are unwelcoming to children.

The researchers directly elicited this expectation of mother-participants when they soon after had the following dialogue:

> Interviewer 1: Thank you. We have to introduce ourselves..... (Interrupted)
> Interviewer 3: The noise from your children will likely interfere with the recorder, so you can all breast feed the babies to make them quiet so that you can get all you are saying in our recorder, and for us to be fast.

This agential cut further reinforced that the participants were there as mothers, were expected to perform a particular kind of "motherhood," and were chastened by the presence of their children. This reconfiguration of the interview solidified the separation of the interviews from the participants and tacitly communicated to the mother-participants that the recording devices were more important than the vocalizations of their babies, the potential wishes of the mothers, or their babies' already full bellies. This agential cut made it nearly impossible for the participants to perform any subject other than mother-participant – no room for them to perform other mothers who might breastfeed because their babies are hungry, breastfeed because it is recommended for infant-maternal health and bonding, breastfeed as an enactment of defiance, a form of resistance to social, business, or government norms and policies.

This agential cut and the attendant positioning of the participants as mother-participants altered what was possible during the interview. As indicated in the previous section, material-discursive configurations influence the content and meaning-making produced in the focus groups. As the babies were breastfeeding, as the researchers asked the participants to quiet their babies for the research, it is possible that the mothers could only voice approval of medical neonatal care and felt unwilling or uncomfortable speaking approvingly of TBAs. Other questions come into relief. How would the interviews have changed if the babies, a constant source of agential "motherhood," were taken away to be watched elsewhere in the hospital? If the babies were entirely absent and their "inconvenience" and loud babbling was gone? What if recording devices were used that were sensitive enough to pick up mothers' talk over the babies' vocalizations? What if the mothers were praised for bringing their babies as welcome participants in the research? What if these interviews were held in a community setting outside of a medical facility without medical doctor interviewers? Would the participants be able to then perform subjects other than mother-participant? How would the interviews have changed? What if the interviewers brought their own babies during the interviews and breastfed them with the other mother-participants?

Each interview phenomenon is its own manifestation of reality, bounded by its material-discursive configuration. These configurations are intra-actively shaped by the flow of material-discursive changes like agential cuts. As agential cuts occur, the reality of the research phenomenon changes. Applied researchers must be aware that these shifting boundaries influenced by agential cuts change what is possible in the research setting. Different agential cuts produce different outcomes–different content, different subjects. By analyzing the agential cuts and the subsequent reconfiguration of the research process, applied researchers situate

their findings within the research contexts that produced them and deeply reflect on the ethics of research decisions made prior to, during, and after inquiries.

Transcripts as Research Performance

In the previous two sections, we discussed how material-discursive configurations set boundaries during the interview process and how the flow of materiality through agential cuts continually alters those boundaries. In each instance, what is possible and impossible during the focus groups is materially contingent. Data must be analyzed through an account of these material-discursive configurations particular to each phenomenon. However, material-discursive intra-actions are not limited to the interview context itself; the materiality of the entire research process is also part of the meaning-making process. Recording devices, researcher bodies, study design plans, emails between researchers, and other materiality beyond the focus groups are inseparable from the results of any study. Data analysis does not simply *happen*. Each step in the data analysis process reconfigures what is possible in the analysis. To illustrate this, we analyze how the transcripts from the focus groups are material reconfigurations of the focus group data and how, as research material themselves, are agentive in the research process.

Data produced in research is always multiple and never singular–the memories of the focus group members, the audio recordings of the focus groups, and the transcripts of those recordings are all performative manifestations of the interviews. As material reconfigurations of the data, each type of data is its own version of the *reality* of the focus groups. Analyzing each type of data could produce very different results. Memories are endlessly fallible and disagreements between those present on what occurred are inevitable–which version would you analyze? The recording devices are subject to failure, low quality audio, and loud babies– if you could not hear something on the recording device, did that something not occur? Those conducting the transcription must determine, from the audio recording, what was said, how it was said, and what should be included or excluded. Regardless of the types of data employed, researchers must make choices that alter the materiality of the data as collected. As we received the transcripts rather than created them, we analyzed the materiality of the transcripts and attempted to mark the possible choices made by the researchers in the production of the transcripts.

The dialogue of the transcript was edited and cleaned of pauses, false starts, and most verbal and grammatical errors. Rather than preserve and analyze the natural spoken language of the researchers and participants, the transcriptions sought to clarify their words. Pauses, language errors, and other spoken artifacts have meaning themselves and are of interest to researchers who analyze language (e.g., Lester et al., 2016). Through this editing, potential data was lost, and new data was materially created. In this way, the language in the transcript is already an interpretation of the recorded dialogue and any analysis of the transcript is materially contingent on the edited transcript. Results from these transcripts are then inextricably linked to the production of those transcripts.

Other research choices guided the construction of the transcript. Written in red at several points in the transcript are the phrases "(Slight argument)" and "(Argument ensued)." It is not made clear in the transcript what counted as an argument, what the argument was about, who was doing the arguing, and, as no time stamps were included in the transcript, the duration of the argument. Without this information, it is not certain how the argument was resolved or how it might have affected the interview. The question becomes, if this information was deleted, what other information might have been deleted?

Also written into the transcript in red are the phrases "(speaks dialect)." "(Dialect)," and, occasionally, a timestamp also written the word "dialect." It is unclear what was said in

these moments, who said it, and why the words in dialect were not transcribed. Perhaps the transcriptionist did not speak the indicated dialect or the researchers could not translate the dialogue into English. Whatever the reasoning, this raises further questions. During the start of the interview with the health care workers, this dialogue occurred:

> I: What language do you prefer that we use in this discussion, English, Igbo or combination of both?
> ALL: Combination of the two.

It is not made clear how much of the focus groups were held in English and how much in Igbo. It is not clear if Igbo was the dialect indicated in the transcript in red or why the Igbo language would be termed a dialect itself rather than a specified dialect of it. Without more information, we cannot know how much of the transcript was a translation. During the interviews with the mothers, the interviewers stated, "I hope you all understand my language or should we use your dialect, we have Nelson here to communicate to you in your dialect." This element from the transcript raises potentially important questions for the interviews themselves. To what extent could all the mothers speak and understand the English employed by the researchers and other participants? If the mothers only partially spoke English, how much editing was done in the transcript to make the dialogue nearly fault free?

The transcript, as with all research material, is a performative enactment by transcriptionists and researchers. The choices they make affect the kinds of results possible in a material-discursive analysis. Given the treatment of language and the uncertainty of its use in the transcript, it is possible a very different type of analysis would be made possible by analyzing the recorded audio instead of the transcripts.

Applications for Applied Research Practices

New materialism has much to offer applied researchers, both those seeking to conduct post-qualitative inquiries and those whose "conventional" qualitative designs may be informed by the insights enabled by a new materialist account. We expect that applied qualitative researchers (including ourselves) may not pay as much attention as they should to the material-discursive configurations of their inquiries. They may not be attuned to the ways research materials and languages make agential cuts and how those cuts produce data and findings. Our point is not that qualitative inquiries are not well-designed, well-thought, carefully crafted and so on. What we mean is that qualitative inquiries are often designed with the sense that research design elements are neutral to inquiries, as if research procedures, materials, actors, scripts are separable from the data they produce.

What we hope our new materialist analysis demonstrates is that all applied research is bounded and affected by its material conditions–knowledge is a materially contingent dance of material and non-material elements. A material-discursive analysis is able to both conserve the complexity of the research process while providing tools to analyze it–something other frameworks are not able to accomplish. Through our demonstration, we see that more typical tools of qualitative inquiry (e.g., coding, thematic analysis, discourse analysis) are not workable for a new materialist analysis, especially when they are used in isolation. These approaches to qualitative data analysis treat data as an objective source of knowledge; a reliable representation of human events, ideas, feelings, perceptions, and so on, rather than as an accomplishment of the research itself (Koro-Ljungberg & MacLure, 2013). While these approaches might enable us to nuanced, themed, or critical understandings of what was said in the focus groups, they would fail our aim to understand how the focus group itself, its materials

arrangements, its set-up and dissolution, and its transcripts were agential forces in what was said in and what could be said about it.

With this sensibility, applied researchers may better understand the importance of research design beyond conventional hallmarks of quality (e.g., member checking, triangulation) and instead understand those hallmarks as part of the research phenomenon. Barad argues that this understanding increases researchers' responsibility within the research design. With it we expect applied researchers would more carefully consider design decisions, be more experimental with research configurations, and more "honest" in reporting to stakeholders.

Regarding stakeholders, we expect a new materialist framing and analysis would yield a research report that reveals the ways in which applied processes (like teaching, learning, treating, diagnosing) are also materially and discursively configured. In Education, for example, different classrooms, teachers, desks, lessons, and so on produce teacher and student subjects and the kinds of things they can teach and learn. Sensitized to the reality-making power of agential cuts, applied researchers may be better able to identify material-discursive practices that produce particular classroom configurations and suggest changes to produce different (more desirable) arrangements. This is not about finding "what works," but about sensitizing practitioners to the boundary making devices in their fields and practices and enabling them to make shifts to see what is made available that perhaps was not before. The teacher might move the classroom outside. The nurse might wear different scrubs. The researcher might hold the focus group in the community, use higher powered recorders, provide childcare for participants, welcome babies as participants.

Conclusions

New materialism brings into applied researchers' awareness the agency of material (e.g., recording devices, researcher and participants bodies) and the contingency of knowledge on that material. It is intuitive to believe that research participants might change what they say or how they communicate ideas when they know they are being recorded–the recording device likely changes what is possible–it enacts an agential cut. A new materialist analysis broadens this intuitive thought to other, perhaps less predictable, materials during the research process. Beyond this, new materialism requires researchers to attend to how materiality affects research during the design of research, during its implementation, and, as we have demonstrated above, during the analysis. New materialism also sensitizes applied researchers to the idea that they are entangled with their "past" and previous thoughts and memories–these pasts, like materiality, affect research and change what is possible.

At the same time, and as we reflect on our process and the agential cuts that made it possible, we are left with questions about the feasibility, vitality, and value of our demonstration. Can a new materialist analysis produce the type of results desired in "applied" research? What does enacting a separation between applied and theoretical (or methodological or conceptual or basic) qualitative research produce? What if a new materialist analysis requires the dissolution of the applied-basic and applied-theoretical binaries. Is that desirable? If not desirable, what would that say about the axiology of research? What agential cuts have to be made to enable a new materialist analysis of existing data collected in a study we had no role in designing or conducting? What other agential cuts are involved in analyzing existing data collected, presumably, within an "interpretivist" qualitative research project instead of one informed by new materialist philosophies from the outset? We approach research and our ability to "know" purposefully with uncertainty–uncertainty that we "know" what materiality has the most agency in a given configuration, uncertainty that we "know" exactly how or when

boundaries change during research practices. With these and other uncertainties, we wonder if uncertainty has limits. If it does, how could one ever "know"?

As a demonstration of "how" to conduct data analysis after the ontological turn, using existing data, we expect we have missed the mark. This is not the kind of work that can be (easily?) separated out from other inquiry work (as if analysis is not ongoing, materially contingent, tied up in all methods). This is not the kind of work that can (or should) have a knowable, proscriptive, linear process. Maybe all the cuts we had to make to produce this demonstration produced something entirely unreal to us – a demonstration that is not quite data analysis, not quite new materialist, not quite applied. But as a possible entry-point to new materialism, a demonstration of what might be doable and thinkable under new materialist framings and the potential value of that work to our entangled communities, environments, organizations, institutions, governments, ecosystems, and... perhaps we can claim some small success.

References

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Duke University Press.

Braidotti, R. (2013). *The posthuman*. Polity Press.

Bridges-Rhoads, S. (2018). Philosophical fieldnotes. *Qualitative Inquiry*, *24*(9), 646-660.

Cannon, S. O. (2019). *Doing science: Data enactments in mathematics education and qualitative research* [Unpublished doctoral dissertation]. Georgia State University.

Chukwuma, A., Chinyere, M., Cohen, J., McConnell, M., & Bossert, T. (2017). *Data for: "A qualitative study of perspectives on postnatal care referrals by traditional birth attendants in Ebonyi State, Nigeria."* (QDR 10078) [Data Set]. Qualitative Data Repository. https://doi.org/10.5064/F67H1GGS

Gildersleeve, R. E. (2017). The neoliberal academy of the anthropocene and the retaliation of the lazy academic. *Cultural Studies ↔ Critical Methodologies*, *17*(3), 286–293. https://doi.org/10.1177/1532708616669522

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

Jackson, A. Y., & Mazzei, L. A. (2012). *Thinking with theory in qualitative research: Viewing data across multiple perspectives*. Routledge.

Koro-Ljungberg, M. (2010). Validity, responsibility and aporia. *Qualitative Inquiry*, *16*(8), 603-610.

Koro-Ljungberg, M. (2016). *Reconceptualizing qualitative research: Methodologies without methodology*. Sage.

Koro-Ljungberg, M., & MacLure, M. (2013). Provocations, re-un-visions, death, and other possibilities of "data." *Cultural Studies ↔ Critical Methodologies*, *13*(4), 219–222. https://doi.org/10.1177/1532708613487861

Kuntz, A. M. (2019). *Qualitative inquiry, cartography, and the promise of social change*. Routledge.

Lather, P. (2016). Top ten+ list: (Re) Thinking ontology in (post) qualitative research. *Cultural Studies ↔ Critical Methodologies*, *16*(2), 125-131.

Lather, P., & St. Pierre, E. A. (2013) Post-qualitative research. *International Journal of Qualitative Studies in Education*, *26*(6), 629-633.

Lester, J. N., Lochmiller, C. R., & Gabriel, R. (2016). Locating and applying critical discourse analysis within education policy: An introduction. *Education Policy Analysis Archives, 24*(102), 1-15. http://dx.doi.org/10.14507/epaa.24.2768

MacLure, M. (2010). The offence of theory. *Journal of Education Policy*, *25*(2), 277-286.

Marn, T. M. (2018). *Performing the black-white biracial identity: The material, discursive, and psychological components of subject formation* [Unpublished doctoral dissertation]. University of South Florida.

Marn, T., & Wolgemuth, J. (2017). Purposeful entanglements: A new materialist analysis of transformative interviews. *Qualitative Inquiry*, *23*(5), 365-374.

Nordstrom, S. N. (2015). Not so innocent anymore: Making recording devices matter in qualitative interviews. *Qualitative Inquiry*, *21*(4), 388–401. https://doi.org/10.1177/1077800414563804

Nordstrom, S., & Ulmer, J. (2017). Postqualitative curations and creations. *Reconceptualizing Educational Research Methodology*, *8*(3), 1-15.

Rautio P., & Jokinen, P. (2015). Children's relations to the more-than-human world beyond developmental views. In B. Evans, J. Horton, & T. Skelton (Eds.), *Play, recreation, health and well being. geographies of children and young people* (Vol 9., pp. 35-49). Springer.

Ringrose, J., & Renold, E. (2016). Cows, cabins and tweets: Posthuman intra-active affect and feminist fire in secondary school. In C. A. Taylor & C. Hughes (Eds.), *Posthuman research practices in education* (pp. 220-241). Palgrave Macmillan.

Rosiek, J. L., Snyder, J., & Pratt, S. L. (2020). The new materialisms and indigenous theories of non-human agency: Making the case for respectful anti-colonial engagement. *Qualitative Inquiry*, *26*(3-4), 331–346.

St. Pierre, E. A. (2014). A brief and personal history of post qualitative research: Toward "post inquiry". *Journal of Curriculum Theorizing*, *30*(2), 1-19.

St. Pierre, E. A. (2018). Writing post qualitative inquiry. *Qualitative Inquiry*, *24*(9), 603-608.

Somerville, M. (2016). The post-human I: Encountering 'data' in new materialism. *International Journal of Qualitative Studies in Education*, *29*(9), 1161-1172. https://doi.org/10.1080/09518398.2016.1201611

Ulmer, J. B. (2017). Posthumanism as research methodology: Inquiry in the anthropocene. *International Journal of Qualitative Studies in Education*, *30*(9), 832-848.

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