FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 3, No. 3, Art. 19
September 2002

Tales from the Science Education Crypt: A Critical Reflection of Positionality, Subjectivity, and Reflexivity in Research

Kathleen St. Louis & Angela Calabrese Barton

Key words: reflexivity, subjectivity, positionality, parents, urban, responsibility, science

Abstract: Over the past three years, we have been working in urban settings to investigate specific understandings that poor minority parents have about science education reform, their role in reform, and how they negotiate their role with other parents, their children, and their children's teachers. As critical qualitative researchers, we understand that because we work with people, methodological issues arise that we had not previously considered as part of our research design. In particular, we found ourselves confronted with questions about subjectivity and the intersections between the parents' lives, our own lives, the research process, and the intended and unintended outcomes of research. One of us (Kathleen) worked more closely with the parents to collect their stories through interviews and focus groups. Using (self-) reflexivity, we examine the meth-odological issues that became salient through two main questions that the research process raised for us. First, what is our responsibility, or to whom should our responsibility be, as qualitative researchers? Second, how do we address assumptions in our research that are uncovered in the process of working with the data? In this paper, we chronicle Kathleen's complex struggle with these two questions to make sense of her positionality, responsibilities, and assumptions as a researcher.

Table of Contents

1. Introduction

Over the past three years, we have been working with poor urban schools, students, and families in an effort to gain a better understanding of what it means to create meaningful and relevant science education for marginalized students. In particular, we have been working with poor minority parents to address how relationships and understandings around education, specifically science education, are negotiated among parents and teachers. Our research team's project sought to address three major questions. First, what are parents' actions and beliefs as they relate to science education and science education reform? Second, what are the relationships that parents have with various players in the school system and how are these roles negotiated between parents, teachers,

and administrators? Third, what are the implications for science education reform? In order to answer these questions, we worked with parents, teachers, administrators, and community leaders in two poor urban elementary schools in a city in the southern United States, which we call Avondale (pseudonyms are used throughout this article). We spent a whole semester getting to know the teachers in the school and observing them weekly. We also conducted individual interviews and focus groups with the teachers and individual interviews with the administrators. We worked with the parents weekly over four semesters and also held individual interviews with a select group of parents. [1]

As critical qualitative researchers, we understand that because we work with people, methodological issues arise that we had not previously considered as part of our research design. In particular, we found ourselves confronted with questions about subjectivity and the intersections between the parents' lives, our own lives, the research process, and the intended and unintended outcomes of research. One of us (Kathleen) worked more closely with the parents to collect their stories through interviews and focus groups. Using (self-) reflexivity, we examine those methodological issues that became salient through two main questions the research process raised for us. First, what is our responsibility or to whom should our responsibility be as qualitative researchers? This question became more prevalent as one of us (Kathleen) struggled between wanting to establish a trusting bond with the parents and acknowledging her position as "other" based on her connection to the university and the research team. Given that many roles make up our lives (i.e., Haitian American, woman, critical science educator), we realize that we need to be aware of how our life experiences shape what type of research we choose to do, who we choose to work with in our research, and how we analyze that process in the end. Second, how do we address assumptions in our research that are uncovered in the process of working with the data? For example, during the initial stages of analysis, themes arose around issues of positionality, power, voice, and action. It became clearer to us during the analysis that there were implicit assumptions (e.g., about race and socioeconomic status) that the parents and Kathleen shared that we believe were material in allowing the previously mentioned themes to become clear. [2]

In this paper, we reflect on Kathleen's complex struggle with these two questions to make sense of her positionality, responsibilities, and assumptions as a researcher. As a researcher in the field, I (Kathleen) am in a constant struggle between two positions. One side positions me as a researcher; the other side as one of "them" (i.e., marginalized people). I want to be an insider, because I am a minority, but for a variety of reasons (e.g., I am also a science educator) I am never completely able to do so. In fact, the dual positions Kathleen takes are contradictory and it is the tensions that arise from living in praxis through these positions that we explore in this paper. We begin with a discussion of positionality. In order to discuss subjectivity it is crucial to position ourselves in the research. Although our positionality is embedded in this paper, it is necessary to pull out a discussion of positionality to "set the stage" for reflection. Afterward, we present a brief description of the setting we worked in, the methods we used in our research, and the parents who participated in our study. Next we discuss our

question related to the responsibility of research and what or to whom our responsibility should be. We then explore the issue of investigating assumptions in our research while working with the data and how these assumptions should be addressed. Finally, we conclude with a discussion of the relevance of the questions for research and what reflexivity and subjectivity mean for the reasons why and the ways we do research. As will become evident, more questions were raised than answered as a result of our reflection on subjectivity in research. In the remainder of the paper, the pronouns I, my, and me are used to refer specifically to Kathleen. [3]

2. Positionality: Setting the Stage

In reflecting on my own positionality, I find that I position myself and am positioned in various contexts. I am a middle class, Haitian American woman, pursuing a PhD at an Ivy League institution (historically these institutions are elite private universities). By using positionality, I also understand that I not only defined by these attributes. I have life experiences, spiritual beliefs, and historical contexts that also factor into my positionality. In my work, I have drawn from the work of others (MAHER & TETREAULT 1994; HOOKS 1984; CALABRESE BARTON 1998) to conceptualize positionality as the relational place or value one has that influences and is influenced by varying contexts (e.g., social, political, historical, educational, and economical to name a few). Understanding positionality is crucial to understanding the subjectivity of researchers. In terms of my research, I see subjectivity and positionality as related yet distinct. Subjectivity, as I define it, refers to the life experiences that researchers have had as well as the social, cultural, and political factors that influence an individual and how those experiences and factors contribute to biases and assumptions in the type of research that researchers choose to engage in. Moreover, subjectivity influences how researchers analyze and interpret their research. Positionality, however, bounds subjectivity because, as defined by MAHER and TETREAULT (1994) positionality is a term used to describe how people are defined, that is "not in terms of fixed identities, but by their location within shifting networks of relationships, which can be analyzed and changed" (1994, p.164). They also define positionality as the "knower's specific position in any context as defined by race, gender, class, and other socially significant dimensions" (p.22). I would argue that historical, political, social, and cultural factors position people even before they are born. Specifically in our research, we are interested in how marginalized people (especially poor minority and immigrant parents) are both positioned and position others. [4]

Bell HOOKS (1984) uses margin and center as descriptors of positionality. She discusses at length the history of members who occupy positions of the center pushing others, such as poor people of color, to a marginal position. HOOKS also refers to a physical position and how as a black woman growing up in a poor environment, she was reminded of her marginality by railroad tracks that separated her community from a more affluent community across the tracks. The conception of margin and center help to make positionality a useful construct because it illuminates the disproportion of power in relationships (parent-school,

researcher-participant). Those in both the margin and center are often very aware of their positionality in relation to the other. Those in the center, however, don't realize the power dynamics as much because they are the beneficiaries of the outcomes of the power relationships and as a result keep those who are in the margin out in the margins. On the other hand, those in the margin either try to find ways to join those in the center or resort to accepting that they will never be able to become part of the center. It is helpful for me to think of HOOKS' definition of positionality as the context that shapes subjectivity, which to me relates more to experiences and factors that affect those life experiences. Thinking about positionality as a context has helped me define my own subjectivity. [5]

I am very aware that my subjectivity has played a role in the way that I position the parents I've worked with and the way that they've positioned me. It is this awareness that not only led to the realization of some of the assumptions in the research that will be discussed later, but also persuaded me to be more reflective about how I viewed my parents' roles in my education. [6]

My parents are Haitian immigrants. They came to the United States over thirty years ago in search of the great American Dream as countless other families did and continue to do. They sacrificed and worked very hard to make a name and place for themselves and their children in New York City. My mother began attending nursing school while my father worked and studied so that he could attend medical school. My parents also tried to achieve a sense of place in their new surroundings by ensuring that their three children succeeded in school. I remember my mother, having limited English ability, making countless trips to school to talk to my teachers about what they needed from her or to find out how I was progressing in my academic work and developing with other children. She often took brochures to her office to help us reach a certain goal in selling chocolate, Christmas gifts, or Girl Scout cookies. Our homework was the most important task on the agenda when my siblings and I arrived home from school. Watching television was prohibited during the week. If we finished our homework early, we either moved ahead or read a book. [7]

As a result of my parents keeping the bar high when it came to my education, I learned to push myself to succeed in school. By this I mean that I enrolled in honors classes whenever possible, joined various academic and honor societies, maintained a high grade point average, and most importantly to my parents, pursued a professional degree. I began to understand the importance of succeeding in a setting that did not value my experiences yet was necessary in order that I might be valued later on in my life. My father, although he may not have been as visible at school as my mother, also made his expectations for us clear. His preference for all of us was that we enter into a scientific field. He believed that with a medical position as a physician or physician's assistant, an engineering degree, or status as a scientific researcher, we would not only be financially secure but also receive validation from mainstream society. I can still hear his favorite aphorism to me, "You're Black. You're a woman. That's two strikes against you. No one is going to talk to you or care who you are unless you

have an education." This harsh statement took some time for me to accept, but I realized very quickly that my father was only trying to soften the blow of the even harsher reality that I would face in later years. [8]

In reflecting more about the relationship that I had growing up with my parents and their respective roles in my education, I realized that although my mother came to school often to discuss what I was learning or my conduct, neither she nor my father were ever involved in major decision making at school. The truth is I'm not sure how they felt about being involved in more integral ways, such as suggesting curricular changes. Did my parents feel equipped with enough knowledge to enact change in the school system? Did the limited English ability of my mother and father prevent them from communicating their needs and desires for my siblings and me? Why did my father push us towards scientific disciplines? Were there spaces created for my parents to express these needs and desires? Were teachers and schools welcoming and valuing of my parents' culture? These questions were crucial to helping me to begin to think not only about the ways my parents were involved, but the ways I thought they should have been involved. In essence, the positionality of my parents in my education—the historical factors that positioned them and the way they positioned me—played a role in my subjectivity with the parents I worked with in Avondale. [9]

Positionality, however, is not only limited to relationships between people. The canon of science, dominated by white, upper class, males, can position people as well. Furthermore, my and others' experiences with science, adds to the positionality issue as well. An example of how positionality is related to science is seen in the work of CALABRESE BARTON (1998). She discusses using positionality as a lens through which to view interactions between teachers and parents. She asserts that it provides "a standpoint from which to explore the ideological foundations of school and science as well as the values and beliefs that [parents] and teachers bring to school" (p.28). Teachers therefore, need to be aware not only of the values and beliefs they bring to interactions and how they position parents, but also of the values, beliefs, and actions that parents use to position themselves. This example can be expanded to include researches. However, before exploring my positionality and subjectivity further, let me first provide some context for the parents in our study. [10]

3. Rockland Elementary: Where, What, Who?

Rockwell and Wyland Elementary are both schools located in Avondale, a large city in the south. Avondale has at times been referred to the Silicon Valley of the south due to the boom in the past decade from the software industry. A large interstate runs through the middle of Avondale, separating the east from the west and maintaining the division the city economically as well as socially. Not surprisingly, most of the wealth that Avondale has is seen due to the increase in its economy, and has benefited those who live in the more affluent areas. The east side inhabitants are mostly poor and immigrant minorities. The houses on the east side are overwhelmingly dilapidated, and peppered with old, non-functional cars parked in the driveways. Far many more liquor stores can be

observed than larger, higher end grocery stores. There is often a constant scene of litter in the streets and on the sidewalks. There are many different churches of many different denominations located on the east side. Most of the congregations in these churches are homogeneous with the members in any church being all African American or all Latino. In contrast, the west side is home to most of the White high-income populace living in Avondale. The houses are set on rolling hills and most cars are higher end luxury vehicles. There is hardly any litter on the ground and there are not as many "corner liquor stores" as are seen on the east side. Similar to the churches on the east side, the churches on the west side are also homogeneous. However, as one would guess, the majority of the members are White. [11]

Rockwell and Wyland are not only on the east but are two of the poorest schools in the entire district. The poverty rate at both elementary schools, which is determined by the number of students receiving free or reduced lunch, is close to 90%. At Rockwell, approximately 45% of the students are African American and 55% are Latino. At Wyland, the African American population is closer to 60% and the Latino population is closer to 40%. Both schools are ranked low performing because over sixty percent of the students have failed the statewide accountability test. [12]

Our research at Rockwell and Wyland spanned over three years. Throughout those years, we conducted weekly observations and individual and focus interviews with parents, teachers, parent specialists, and administrators. As we stated earlier, we were interested in the interactions and relationships between parents and schools. [13]

There were 15 parents and one older brother who had caregiver responsibilities that participated in our research study at the schools in Avondale. The first semester we were only in one school and had two fathers and one mother. The second semester we had five mothers at one school and two couples, three mothers, and one older brother who was the primary caregiver at the other school. All of the parents were African American except for two mothers at each school who were Latina. Since I mostly worked with the English-speaking parents, the preceding descriptions of the parents relate to those with whom I worked. [14]

4. Paying My Debt: To Whom Am I Responsible?

When I began working with the parents in Avondale, I had many reservations. I felt unqualified to talk to them about education or their experiences with their children, science, and schools. My rationalization was that I had been a teacher and a student and therefore felt more equipped to work with and understand issues that teachers and students face in poor urban areas. I also have parents who were engaged in my education. However, I have never been a parent. How could I understand the very complex lives poor minority and immigrant parents lead while they try to establish and maintain relationships with the people both within and outside schools in an effort to help their children succeed in school?

What I came to realize is that poor minority and immigrant parents in urban areas have stories to tell. Unfortunately, their stories are not usually heard. These stories include their many rich life experiences, as well as stories about engagement in schools and science education. So I asked parents to tell me their stories. They did and I listened. Before moving on to a discussion of the dual position tension I experienced as a researcher, I use this next section to discuss the literature that was relevant in shaping my analysis. [15]

The questions in the previous paragraph were critical to shaping the conversations I had with the parents. I wanted to work with parents in poor urban areas. I was only interested in working with people in marginalized areas because they are often ignored in science education research studies and therefore need to be heard the most. This claim is evident in the literature on parental involvement. In our review of the literature, there were three main findings surrounding issues of parental involvement. The first was that many studies examined the relationship between parental involvement and student achievement in science education. Few educators or researchers would disagree with findings that correlate parental involvement with student achievement. The result is that parents often end up with a school-designed list of ways they can be more involved in their children's education. Second, studies reported on "progressive" parental involvement initiatives. These research studies document parents who participate on various boards or as member of school councils. However, a vital component often missing in these reform initiatives is a deeper conceptual framework for understanding the role parents in poor urban settings can play in science education. Third, many studies focused on why there is an apparent lack of involvement of poor, minority, and immigrant parents in schools. The reasons listed often point to a deficit model of understanding parental involvement. Parents are depicted as having multiple barriers (e.g., language, employment, transportation) or just not caring enough to be involved. [16]

The findings in the literature have pushed me to think about how, and by whom, involvement is defined. The use of the term *involvement* is used in contexts that imply a very passive role for parents. In the literature, these roles include activities such as fundraising or assisting in arts and crafts in the classroom. Furthermore, involvement is usually defined by schools and may or may not include the myriad ways that parents engage in their children's education. As a result of this connotation, I use the term parental *engagement* as opposed to parental *involvement*. [17]

One aspect of parental engagement that I believe is important, and missing from the literature, are studies concerning the process of parental engagement. I sought to listen, understand, and analyze parents' complex stories of interactions and involvement in school and science education. The purpose was not to essentialize parental involvement, but rather to understand the processes of parental involvement and push forward the current discourse on the involvement of poor minority and immigrant parents in schools and specifically science education. [18]

Although I may share the academic language of many researchers, I do not necessarily share their discursive regimes. In other words, in my research I have tried to refute the assumptions and deficit models of thinking that are ever present when it comes to thinking about and redefining parental engagement. I attempted to address my critiques of the current literature and overcome my initial uncertainties in working with parents by finding a commonality or a way that I could relate to the parents. Reflecting on my research strategies, I realized that almost immediately and unconsciously, I changed the way that I spoke, the words I used, and my mannerisms so that I could be accepted as an insider with the parents in my conversation groups. As a result, I experienced an internal struggle between feeling responsible to the parents and feeling responsible to the academic community. On the one hand, I wanted to be accepted as an insider for several reasons. First, I wanted to establish trust with the parents. I wanted them to feel comfortable to be able to tell me anything they wanted to. Second, I also felt that I "owed" the parents for taking their time to tell me their stories. On the other hand, however, it bothered me that I might still be considered an "other" in their eyes because of my role in academia. I owed the science education community information about my research with parents. In order to change some of discourse that is common in science education circles, it was my responsibility to re-present all that I had learned from working with minority and immigrant parents in poor urban areas. In what follows, I present several examples of this constant struggle between being an "insider" vs. an "outsider." These examples highlight the tension I felt when thinking about where my responsibilities lay. [19]

Most researchers realize the importance of gaining the trust of their participants. Unless trust is established, participants may not give researchers a full picture of what it is the researchers are trying to understand. Similarly, an important component of my research was establishing trust with the parents in my study. However, I felt an added sense of responsibility. I felt as if my participants would hold me, a Black female researcher, more accountable for my research than they would a white, upper-class researcher. Being a Black female researcher, I would come in and make sense of their struggles in ways that a white researcher could not. To this end, I participated in their lives in ways that I doubt I would have, had they been parents who belonged to the majority group. An example taken from one of the mothers we worked with follows to illustrate this point. [20]

Lisa is an African American single mother at Rockwell Elementary who participated in our final series of conversations. She has one son who was in the third grade during our time at Rockwell. One area she focused on with her son was ensuring that he would pass the statewide accountability test. She enrolled him in various test prep programs and often accompanied him to the Saturday prep program that the school offered for their students. In one of our final meetings at the school, I asked the parents about how their thoughts had changed from the first conversation to the last. Lisa confessed that when she first read the information sheet and saw the word "study," she was skeptical. She told me that too often people from the university came in and tried to conduct "studies." She talked about getting a letter once to participate in a study and she called and told them she would not participate. Lisa felt as if being a single parent

in a poor urban area made her a popular choice for researchers who did not always have her or her son's best interests in mind. The following quote sums up her feelings.

> "I guess because I'm a single parent, I have a tendency of being a little more sensitive to these study type things. It's always like 'How is the family life?' and 'How does that relate to your child in the environment?' It's like the word study got to me" (Lisa, Rockwell parent, Spring 2000). [21]

My response to Lisa was that we had to use certain terminology because of academia. I told her that we wanted to listen to and recount the stories of the parents and their participation in school and science education more than we wanted to "conduct a study." She told me that although she was hesitant at first, she knew that this experience would be different. Because Lisa chose to participate in our conversation groups, I felt added pressure to ensure that the way I re-presented her experience would be empowering for her. How would I now analyze her stories? Did she become less skeptical because she saw that I was a Black woman, and did she feel that because I was Black I would not try to exploit her? After her confession, I could not help but wonder if what she told me was different from what she would have told another researcher who may not have been Black and female. What was the extent of my responsibility to Lisa and the other parents now that she agreed to join our research project? [22]

One father, Jimmy, joined us in our first conversation group. He was a member of the PTA (parent teacher association) and came to the school at least once a week to eat lunch with his son or to talk to his son's teacher about his progress. He would often ask me about the results of studies he had read on how to help children succeed in school. He was never without a question on what I thought were "best practices" for parent-child relationships and academic achievement. He was present every week in our conversations and would often reschedule other engagements so that he could make it to the meetings on time. After the second meeting, Jimmy invited me to an art show at his house. This art show was to highlight African American and Latino artists who would be on hand to discuss their work. Jimmy also extended the invitation to the two other parents in our group. I went to the show, with my friend Jenn, and enjoyed an evening of art, music, and conversation with various people. [23]

While I enjoyed my time at Jimmy's house, I can't help but wonder if his commitment to the group increased because I accepted his invitation. Was this some sort of a test to see if I would actually make an appearance at his house? Was he trying to see if I was truly interested in Jimmy the person and not just Jimmy the research participant? Although, the art showing would probably be an event I would have attended anyway, I did feel more compelled to go because Jimmy was a participant in my study. My experiences with Jimmy in particular have led me to realize that the responsibility in our research was often bidirectional. Jimmy felt as if he needed to put all other engagements aside to help me reach the goals of the research project. In the same vein, I felt indebted

to Jimmy for his time so I made an effort to attend activities he invited me to that were not in the scope of the research project. [24]

While ensuring that I maintained the integrity of the stories of the parents, I also faced another struggle. How could I address both my responsibility to the parents as well as my responsibility to the science education community? I did owe my colleagues a representation of the research I had conducted with parents. However, since we told the parents we wanted to hear their stories, we needed to listen to the stories they wanted to tell and not just the stories we wanted to hear. This struggle is best illustrated through another example. [25]

As stated earlier, the overarching goals of our research project were to gain a deeper understanding of parental engagement in science education. We began our conversations with the parents with general questions. We inquired about the nature of their relationships with their children, their children's school, and their community. When we came to conversations that were focused on their experiences with science, it often became difficult to keep these conversations centered on the science topics. For example, in one meeting we asked the parents if they felt they had a say when it came to suggesting changes in the science curriculum. Inevitably, the conversation would turn back to other issues that the parents either felt they had more of a voice in or were more comfortable discussing. These topics ranged from the manner in which the cafeteria employees treated the children to the problems that some children faced when riding the bus to school. Often, after spending some time on these topics, I felt as if I had to steer the conversation back around to specifically discuss the parents' ideas on science education. This was a difficult task for many reasons. [26]

First, even when the discussion remained focused on academic issues, the parents felt more comfortable talking about mathematics and literacy. One reason for this is that students are tested statewide on math and literacy and as a result parents often were more informed in these areas. As Jimmy told us once,

> "I could moderate my children [by] what I see all the time, which is basically reading and math. Those are probably the only two subjects that I could monitor in a physical sort of way. In math and reading, I do. I compared [my son] to where his cousin is at and where his other cousin is at. [His cousin's] reading at this level and she's this age, [my son's] reading at ... you just kind of make mental thoughts and then go well he's doing good or doing bad, what he can spell, what he can't spell. But probably not on anything else" (Jimmy, Rockwell parent, Fall 1999). [27]

Second, I realized that there was a reason why the parents kept returning to the topics they wanted to discuss. These were not only areas they felt more comfortable discussing, but also, these areas were where their needs were. They needed to know how to make sure their children were getting fed every day and not getting mistreated by the cafeteria employees. They also needed to know how to ensure their children's safety while they waited for the bus in the morning. These issues were of vital importance to the parents. How could I go in and ask them questions about science education? Where did this stack in their list of life

priorities? Was it unfair of us to even think to ask them these questions? In our minds it was not unfair. While we wanted to validate the issues that the parents felt were important, we also wanted to help them become more aware of other very important academic issues, specifically science education. [28]

Third, very often when the parents began talking about a particular topic, a momentum would build. They would get more animated while other parents would echo and support their statements with ideas of their own. I often debated whether or not I should interrupt the flow to get the parents back on the subject of science. Although I usually opted not to interrupt, there were a couple of times when I did. The result was that immediately following my interrupting question, there was an uncomfortable silence. It would take the parents a moment to gain that momentum again. After a couple of these occurrences, I usually opted to let the parents keep talking until there was a natural pause in the conversation or until one of the parents themselves brought the conversation back to science. [29]

The previous example is yet another illustration of how I was continually struggling to find my place with the parents in Avondale. I wanted to be an insider. According to BANKS (1998), insiders are "individuals [who] are socialized within ethnic, racial, and cultural communities in which they internalize localized values, perspectives, ways of knowing, behaviors, beliefs, and knowledge that can differ in significant ways from those of individuals socialized within other microcultures" (BANKS 1998, p.7). However, I also wanted the work I was doing to be validated within the science education community. Working as a researcher is something that I enjoy. I enjoy collaborating with colleagues and discussing various research projects and I felt a need to belong to the science education community. It was as a science educator that I was there in the meetings with the parents. And of course, I was also there as a minority who had faced marginalized experiences. However, during the conversations with the parents in Avondale, I often felt a tension between these two opposing responsibilities. I realize that few researchers are ever lucky enough to answer all of their research questions. But what if the questions were not adequately addressed? Have I somehow let the academic community down? Have I been so focused on the welfare of the parents that I compromised our research? I would argue that the academic community would be more understanding if our questions were not answered than the parents would be if we forced an agenda on them. I would feel much more comfortable explaining to academics than I would to parents in poor urban settings who trust me to have their best interest in mind. [30]

The issues of positionality, insider-outsider roles, and responsibility were all issues that arose not only during analysis, but also during data generation. As these realizations emerged during the data generation process, I often changed what I said or what I asked when speaking with the parents. These changes led me to consider how methodology is affected when assumptions are uncovered while working with data that has already been generated? This question will be the focus of the next section. [31]

5. Addressing Assumptions

As a Haitian-American, I (Kathleen) have faced many instances of not belonging to the majority group. One incident specifically comes to mind. I was an entering freshman at a state university in a suburban town in the Northeast. During the orientation preceding my freshman year in college, I had taken an exam along with the rest of the incoming class to determine in what level of math I would be placed. Out of the three possible scores (1, 3, or 5), I scored a 5, which meant that I placed out of freshman math and would not need to take calculus for an extra semester. When I presented my score to my academic advisor, he questioned the validity of the score. When I assured him that I had in fact scored a 5, he advised me, "Well, you should go ahead and take the freshman calculus class anyway. It will probably be closer to your level and you don't want to do poorly in the higher level." What did I know? I trusted this man, whom I believed had my best interest in mind. He was older and therefore, in my mind, he was "wiser." It was clear to me in retrospect that this was not the case and that his suggestions were biased and based on his assumptions about me. At the time, I did not analyze the situation too deeply and yet it was very clear that I was in the margin of that orientation experience. I was a woman, a minority, and did not have the resources to know how to handle this occurrence. [32]

Reliving circumstances like the one with my freshman advisor seemed to cause an internal struggle for me as to where and how I would fit in with the population of people I work with. I thought, prematurely that I would be able to relate to the struggle of people who are traditionally marginalized, while at the same time pondering if these groups would view me as an insider. However, wanting to be a researcher who is also an insider is not without its conflicts. I realized that my positionality affected the data generation process. I realized, ex post facto, due to the tension in my role that the conversations I had during the data generation process affected my methodology in the type of data that was generated. Depending on which side of the tension I was occupying during data generation, I would steer the conversation one way or another. I found that there were times when the parents would discuss certain experiences that I wanted them to relate to science education. There were times when the parents were not able to do this easily and as a result the momentum of their ideas was lost. Moreover, I also found that there were multiple instances that the parents made a comment that I did not explore further because I, the insider, understood what they meant. It wasn't until after I was reviewing the data that I realized that I could be affecting the authenticity of the data. In the next several paragraphs, I explore these ideas of focus and authenticity in greater detail. [33]

There were several themes that emerged from the conversations we had with the parents. These themes included position, voice, and power and were themes that the parents either explicitly discussed or ones that emerged based on our analysis of what the parents were discussing. For example, the parents often talked about having a voice, but not being heard or listened to. They also talked about the power that certain district personnel had that they as parents could not control. Words such as voice and power were words used by the parents. What

became interesting was that although the parents talked about power and voice, our discussions never explicitly addressed issues of race, culture, or socioeconomic status (SES). This is of particularly interesting because the information sheets we gave to the parents in the beginning stated that we were interested in talking to poor minority parents in urban areas about science education. As I continued to review the data, I realized that my subjectivity (as well as my desire to be an insider) somehow created an assumption, or shared understanding, between the parents and myself about issues that minorities face in a majority-controlled society. [34]

This reflection brings me back to Lisa's comment about not wanting to participate in a "study." Was she initially taken aback by the phrase "poor minority parents in urban settings" and then relieved when she saw that a minority was going to be the main researcher? I can't help but wonder if the race, culture, and SES constructs would have been more explicitly addressed had the researcher not been a minority. In other words, would differences in race, culture, and SES between researchers and participants make it difficult not to discuss these constructs? On the other hand, if I had concentrated our conversations specifically on race, culture, and SES, would these other constructs of positionality, voice, and power have emerged as easily? For example, as I continued to analyze the data, I became more and more aware of specific comments that parents would make about their roles in education and my responses to these comments. In one particular instance, a parent was talking about how her concerns would not be acknowledged by the administration, because "they don't listen to us." My response to this parent was to offer an understanding comment. I didn't realize it at the time, but in retrospect, I was letting this parent know that I understood what she had gone through because I had either experienced this or a similar situation myself. In this example, I did not ask the parent what she meant by "people like us." I was part of that "us," part of that poor minority that is continually marginalized. So rather than look at the construct of race or SES in this instance, I instead focused on the construct of voice by spending more time deconstructing how voice is expressed and acknowledged by parents and school personnel. I am not attesting here that one set of construct leads to better understanding of parental engagement in science education. I am, however, saying that my focus on positionality, voice, and power allowed me a particular lens with which to make sense of the data. I was contributing to the "shared understanding" about the struggles of marginalized people in our society. I am also saying that the authenticity of the data was affected due to what areas of conversation I chose to follow. Clearly, assumptions due to subjectivity in research can be problematic during the research process and later in the larger academic community. [35]

I stated earlier that I prefer to do and re-present research in a way allows the people I work with to be empowered. In other words, I feel more of a debt to the parents I've worked with than I do to the larger science education community. Since this is an explicit statement, it is my assumption that academics will keep this in mind when reading my research. However, the waters become a bit muddier when assumptions are made during the research process and

uncovered during data analysis. In the latter scenario, the academic community is unaware that they have been excluded from a particular shared discourse among members of a marginalized group. In other words, I hold a greater responsibility to make explicit assumptions that are revealed during data analysis. After spending time with the data, I identified where assumptions were made. If I had not discovered these assumptions, there is a possibility that the analysis may not have been as rich as it could have been. In this case, the trustworthiness of the research is compromised. To address the challenges of trustworthiness, it is crucial that researchers remain reflexive throughout the research process so that discoveries that affect trustworthiness can be made and addressed. [36]

6. Discussion

In this paper I have addressed several issues that I faced as a researcher working with parents in poor urban settings. Specifically, I have addressed the tension I face in the field between establishing a trusting bond with the parents and acknowledging my position as "other" based on my role as a researcher. I have used subjectivity and positionality to describe the experiences I have faced and how I then use these experiences to analyze data and the research process. The tension I faced was manifested in two ways. First, I struggled in my responsibilities to both the parents and to the academic community. To whom did I owe more? Second, I realized the many assumptions in my data generation and analysis. How did this affect the focus of my research questions? As a result of the conflict in my positionality, my methodology was affected in the authenticity of my data the way that I re-presented that data. In the concluding paragraphs, I use the FOLEY's (2001) work on reflexivity to briefly explore the implications these aforementioned issues have for research strategies and the writing process. I cannot claim to have resolved my tensions in praxis. However, reflexivity provides ways for researcher to address the conflicts (e.g., tensions, responsibilities, and assumptions) they face in their work. [37]

In his paper on critical reflexivity, FOLEY discusses at length the three different types of reflexivity highlighted in a book by George MARCUS (1998). These are confessional, intertextual, and theoretical reflexivity. Confessional reflexivity occurs when authors "make a serious effort to convey how their subjectivity may be affecting their interpretations" (FOLEY 2001, p.5). Intertextual reflexivity focuses on how researchers "produce truth claims and facts" (FOLEY 2001, p.6). Finally, theoretical reflexivity is set apart from confessional reflexivity and is concerned with producing "as objective and authoritative account as possible" (FOLEY 2001, p.7). Although FOLEY (2001) addresses all three types of reflexivity in his work, I most related to his discussion of confessional reflexivity. I encountered many of the same obstacles he faced in his research. Namely, he discusses at length his struggle with speaking in a "hybrid voice." When he appropriates his "hybrid voice," he is attempting to bridge the gap between the discourse of academics and the language of "ordinary people." I mirror FOLEY's attempts to create this bridge in my own research. A common aim in our research is to constantly reflect on our research before, during and after the research process. This cyclical reflection serves several purposes. First, as researchers we

are maintaining an awareness of our subjectivity, which serves to position our research and writing. Second, if this is our goal, in our re-presentation of the research, we can more easily foreground the experiences of the people we work with over "theoretical commentary." Foregrounding the voice of participants makes a statement about what constitutes valid knowledge. I argue that knowledge claims are richer and more complex if there is a bridge between the personal experience of the participant and academic discourse. It is my belief that this method is more in line with reflexivity, because as FOLEY states, it "helps convey the complex, constructed nature of the authorial self" (2001, p.13). [38]

While backgrounding theory may be a way for many researchers to address their subjectivity in research, how do researchers know where to draw the line? This is a difficult question to answer, but one that is important to consider. Just as some researchers have been critiqued for speaking in a predominantly academic language, I would argue that it is also possible to overrepresent the voice of marginalized others in writing. To expand further, when overrepresentation in writing occurs, researchers are usually "romanticizing the downtrodden and caricaturing their oppressors" (FOLEY 2001, p.18). This type of essentializing will no doubt alienate the exact audience it aims to reach. [39]

In a presentation at a conference, a well-established white male academic boldly asserted to his colleagues that there should be a moratorium of white researchers researching marginalized people. I do not plan to engage in a lengthy discussion of where I stand on this issue, but it suffices to say that I understand the claims he is trying to make about power, others, marginalized people, and subjectivity in research. I understood the ideas behind his statement to imply that the power hierarchy between white researcher and the minority "researched" is great and problematic. Too often the benefits to the researcher far outweigh those to the "other." However, what does this claim mean for minority researchers? Is there more pressure to do research with "our own people" and report back what academia wants to hear? Clearly, I have generated more questions than answers in this paper. While I advocate for reflexivity in research, I also realize that reflexivity will not provide us with all the answers researchers seek in research and re-presentation. What reflexivity can accomplish, however, is a better sense of why and how we choose to do the types of research we do. More importantly, as FOLEY (2001) attests reflexivity can help us to produce stories that are more honest. [40]

Acknowledgments

Kathleen is extremely grateful to her friend and colleague, Erin TURNER, for her insights, support, and friendship. The authors would also like to acknowledge the National Science Foundation (REC 9980592) for support of this research. All opinions reflected in this paper are those of the authors and not those of the National Science Foundation.

References

Banks, James A. (1998). The lives and values of researchers: Implications for educating citizens in a multicultural society. *Educational Researcher, 27*(4), 4-17.

Calabrese Barton, Angela (1998). *Feminist science education*. New York: Teachers College Press.

Foley, Douglas E. (2001). Critical ethnography: The reflexive turn. Prepared for publication in *Ethnography*. Thousand Oaks, California: Sage Publications.

Hooks, Bell (1984). *From margin to center*. Boston, MA: South End Press.

Maher, Francis A. & Tetreault, Mary Kay (1994). *The Feminist Classroom*. New York: Basic Books.

Marcus, George (1998). *Ethnography through thick and thin*. Princeton, New Jersey: Princeton University Press.

Authors

Kathleen St. LOUIS is a doctoral student at Teachers College, Columbia University. Her research interests include critical perspectives and its implication for transforming science education in poor urban settings.

Contact:

Kathleen St. Louis

Department of Mathematics, Science, and Technology
Program in Science Education
Teachers College, Columbia University
Box 210
525 West 120th Street
New York, NY 10027, USA

E-mail: ks428@columbia.edu

Angela Calabrese BARTON is an associate professor of science education at Teachers College, Columbia University. Her research interests include feminist and critical perspectives in science education and its implications in poor urban settings.

Contact:

Angela Calabrese Barton

Department of Mathematics, Science, and Technology
Program in Science Education
Teachers College, Columbia University
Box 210
525 West 120th Street
New York, NY 10027, USA

E-mail: acb33@columbia.edu
URL: http://www.tc.edu/centers/urbanscience

Citation

St. Louis, Kathleen & Calabrese Barton, Angela (2002). Tales from the Science Education Crypt: A Critical Reflection of Positionality, Subjectivity, and Reflexivity in Research [40 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *3*(3), Art. 19, http://nbn-resolving.de/urn:nbn:de:0114-fqs0203196.

Revised 2/2007