

RUNNING HEAD: IT'S DIFFERENT PEOPLE WHO ARE DOWN HERE

“It’s Different People Who Are Down Here”:
Portraits of Three Young Women of Color Who Work in a Science Museum

Andrea M. Motto

Dissertation submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Curriculum and Instruction

Gresilda A. Tilley-Lubbs, Chair
Jim Garrison
Susan Magliaro
Jennifer Sink McCloud

March 30, 2016

Blacksburg, VA

Keywords: portraiture, critical pedagogy, autoethnography, science museum, students of color

IT'S DIFFERENT PEOPLE WHO ARE DOWN HERE

“It’s Different People Who Are Down Here”:

Portraits of Three Young Women of Color Who Work in a Science Museum

Andrea Motto

Abstract

Eldora, Neethi and Seraphina are three young women who work as science interpreters at a large metropolitan museum. Each woman began her tenure at the age of 15, as part of an employment program for low-income and minority youth, and have since grown to become leaders within the program. Using autoethnography (Ellis, 2004) and portraiture (Lawrence-Lightfoot & Hoffman Davis, 1997), I explore the rich cultures and histories that each woman brings to her work, present stories that counter the dominant deficit narratives around diversity in informal science education, and reflect on connections to my own practice. Through a critical pedagogy framework (McLaren, 2009; Kincheloe, 2008), I analyze power and privilege within the institution, and the roles that race, language, and culture play in the dynamics of the workplace. This includes examination of workplace microaggressions, physical barriers to cross-cultural interaction, and technocratic ideologies that limit advancement and sense of belonging. From facing subtle acts of racism to taking on life-changing opportunities for growth, I examine the complex relationships that the women have with the institution, and explore ways that they are becoming agents of change.

Keywords: portraiture, critical pedagogy, autoethnography, science museum, students of color

Acknowledgements

First of all I thank my talented students and staff in the EVOLUTIONS program, who give me reasons to love my work. Don't worry, I didn't do research on you. Thank you to my colleagues Jennifer Correa, Preeti Gupta, Azuka Mumin, Joe Heimlich, and Rufus Wesi for teaching me that science centers and museums can and should do more for youth, for communities, and for social justice. Thank you to David Heiser for hiring me into my current position, and for trusting that I could work full time, finish my dissertation, and do both things well.

Thank you Jim Garrison for giving me the opportunity to teach Social Foundations of Education and Schooling in American Society. It made me a better negotiator, a better teacher, a more critical thinker, and most importantly, more understanding of the ways that worldviews are deeply embedded in family, school, and society. Thank you to Susan Magliaro and Jennifer McCloud for jumping in to this project at the last possible moment. Your willingness to participate and to trust that this is worth your time is something for which I will be forever grateful.

Thank you to Brian Bailey, who has spent the last 13 years supporting and encouraging my career, moving from state to state, and listening to my rants about how we can make the world a better place.

Thank you to Kris Tilley-Lubbs, who helped me to find my voice. You became my champion, encouraged me to keep going, inspired me with your writing, pushed me to look at my work in an entirely different way. This would have never been possible with you.

Most of all, thank you to Eldora, Neethi, and Seraphina. I wish I could use your real names so that everyone can know about your talent, inspiration and strength.

Table of Contents

Chapter 1- Introduction	
Introduction.....	1
Theory & Methods.....	8
Structure of this Paper.....	12
Chapter 2- Literature Review	
Inequity in Formal and Informal Education.....	13
Critical Pedagogy.....	19
Summary.....	26
Chapter 3- Methods	
Research Aims and Objectives.....	28
Theoretical Perspective.....	29
Methodological Approach.....	30
Data Collection.....	35
Data Analysis.....	39
Conclusion.....	45
Chapter 4- Portraits	
Portrait 1- Eldora Ruiz.....	47
Portrait 2- Neethi Joseph.....	67
Portrait 3- Seraphina Persaud.....	84
Reflecting on the Portraits.....	106
Chapter 5- Discussion	
Overview of the Chapter.....	108
Research Question 1.....	112
Where We Come From.....	112
How We Belong.....	118
What We Know.....	123
Summary.....	127
Research Question 2.....	128
You Talk So Proper.....	128
Subtle Reminders.....	133
Outsiders At Home.....	137
The Upstairs People.....	142
Summary.....	149
Chapter 6- Conclusion	
Eldora's Painting.....	151
Eldora, Neethi and Seraphina.....	153
Becoming Agents of Change.....	155
Critically Analyzing Museum Practice.....	157
References and Appendix.....	161

Chapter 1

Introduction

Ten years ago, I worked as the manager of a youth employment program in a science museum. The program offered a structured hierarchy of paid work experiences as science educators to teens from primarily low-income communities. Through content workshops, academic support, and professional development, youth discovered talents and skills that they had never known they had; and they gained understanding of career opportunities in education, communications, and STEM (science, technology, engineering and mathematics fields). In turn, the museum gained employees who bring to the workplace a diverse set of skills, histories, and perspectives. I worked with some of the most dedicated and hard-working young adults that I had ever met. Though some of these youth faced homelessness, language barriers, and family trauma, they had tremendous hope for the future. Many were brilliant future scientists and engineers, working their way through a mediocre public education system to get to college. Some were so painfully shy that they could go months without speaking to another person at work, but they learned to perform on stage. I had the privilege of helping facilitate their paths.

The staff of other museums would come to visit us, and admire the diversity we possessed. I would visit their museums to offer advice. In the summer of 2007, my colleague Dezy and I served as consultants to the staff at a museum in a small college town regarding the development of their own youth program. The museum staff wanted help identifying structures that would accommodate both the affluent children of faculty who volunteered as docents, and the youth who were placed through a social service agency that served low-income families. The latter group of youth, because of their short-term work placement, or their lesser expertise in science, had thus far fulfilled janitorial and animal care roles. There was a distinct and visible

line. White teens occupied the stages and interpretive stations, where they performed demonstrations, read books to children, and led tours through the galleries. Black teens emptied trash cans, fed fish, and swept feces out of the bottoms of hamster cages. After two days of observations of staff and teens, Dezzy and I scheduled a meeting with Shannon, the director of the museum.

A Fortuitous Meeting

Shannon is a tall white woman, in her forties, with short brown hair and a heavy navy blazer over her white blouse. She has been in the director position for just a few months, having come from a fund-raising background. Now, she is looking for ways to fund a youth program. As we sat in two plush green chairs in Shannon's office, we discuss the reasons that these youth, placed through social services, have a more limited palette of roles.

"Shannon," I ask, "I noticed you have a few different branches of the youth program. What's the reason for that?"

"Well," she replies, "we have a great core group of teens from campus. Their parents are on faculty and this gives them a great opportunity to give back, help the community, and make some friends."

"Yeah, they seem to be really enthusiastic. What roles do they fill?" I inquire.

"Oh gosh, they do everything," she gushes. "They work in the story time zone, they do the science carts, and they lead the puppet shows."

"How about the other group? The kids who work downstairs? They are mostly in the animal lab? I didn't notice the two groups of kids interacting much."

"Oh they are super helpful, you know, with basic stuff. They come from social services. It's just a short-term thing. They have to do so many hours of work placement. They don't come

in at the same level as the other kids, so we have to be careful about what we give them to do. They seem pretty happy helping out downstairs.”

I ask if she would consider placing some of the kids in the teaching positions, or keep them around longer to learn some of those things. She makes an “ehhhhh” sound, and then pauses.

Shannon leaned across her oak desk and in a hushed tone, explained her dilemma. “*Some of these kids,*” she confesses, “*are just too ghetto to work in my museum.*”

She gives me a knowing glance. I nod a few too many times while I search for words. I look at Dezzy, and her eyes widen. I felt nauseated. I readjust in my plush green chair and lean in. I play dumb and inquire further.

“Oh!” I feign confusion. “What are some of the issues you’ve noticed?”

With a matter-of-factness that vexes me, she elaborates. “Well, you know, my visitors might be a little intimidated by some of the older looking boys. They don’t look like boys.”

“Ahh, okay, so you think they might make visitors uncomfortable?”

“Yeah,” she says as she laces her fingers together. Her eyebrows drop. “I mean, with the sagging jeans and the big t-shirts, they can be scary to little kids. We have lots of moms with preschoolers who come here. It’s hard to picture those boys trying to read them a story or build a block tower. It just doesn’t fit our demographics.”

Dezzy fidgets in her chair. Her right knee bounces up and down. Dezzy is the director of the youth program at our museum, and has been working there for more than a decade. She is a kind and gracious spirit, but in this moment she appears anxious and flustered. Shannon does not notice. Shannon may not have known that Dezzy was Latina. She probably did not know that Dezzy began working in the museum at the age of 16, just after the birth of her son, and would

wear sweatpants and big t-shirts to work because she did not have any other clothes. I look at Dezy. She shakes her head furtively and tips her head toward Shannon, indicating that I should continue. I want her to speak, but she was speechless. Shannon was still looking at me.

“Do you think you would be able to provide these students with some professional development so that they can better meet the needs of your visitors?” I inquire.

Shannon lets out a half-sigh and half-groaning sound and leans back in her chair, pressing her palms against the edge of her desk.

“I mean, that would be a pretty big investment. Odds are we won't have those kids around very long. We have limited resources here, and I can't justify putting lots of training dollars into kids who are going to leave in a few months anyway.”

From Shannon's perspective, it was far more fiscally responsible to offer these teens roles that required minimal supervision and limited exposure to visitors. MY visitors. OUR demographics. THOSE kids. I feel a flutter in my chest. I sit silently. Dezy sits silently, and then swiftly changes the subject, complementing the visitor interactions she noticed earlier in the week. A few weeks later we send some recommendations, but that was the last we spoke to Shannon.

That moment haunted me. If Shannon was willing to say this to us, people she barely knew, how might she be conveying that idea to those teens? Who else on her staff shared that point of view? Who, in other museums, felt this way? That some of you don't belong here; that museums are for us and not you?

Not a Place for Me

Michelle Obama noted at the Whitney Museum opening in 2015, “You see, there are so many kids in this country who look at places like museums and concert halls and other cultural centers, and they think to themselves, ‘Well, that’s not a place for me, for someone who looks like me, for someone who comes from my neighborhood’” (Whitehouse.gov, 2015). In my years of working in museums, I have heard plenty of excuses for lack of participation by students of color in museums; “those” kids were rowdy, more difficult to teach, louder, less interested, their schedules were too complicated, or transportation was an issue. It was simpler to blame lack of participation on perceived deficits in student interest, professionalism, or work ethic. It was easier to work with students who already knew the advanced science content, could work for free, or even pay to work, and who looked, talked, and behaved in ways that aligned with the culture of the institution. Ultimately, it meant that the institutional norms were unwilling to shift to accommodate different ways of being. The people who came were the people who already fit. Understanding the broader implications of this assumption that museums are not “for” a large portion of the population thus became central to my research goals.

The cultural landscape of the United States is changing. By 2050, white residents of the United States will for the first time since the 1700’s no longer be the majority (Jayakumar, 2008). As society changes, museums and cultural institutions have an obligation to change. The goal for museums, however, should not be simply increasing the number of black and brown faces that enter the museum grounds. More energy should be spent addressing what museums are missing out on by interacting with such a small segment of the public, and understanding what is happening in the museum that attracts such a narrow band of visitors in the first place. However before museums can attract diverse audiences, leaders must first attract diverse personnel.

Museum Youth Programs

While science museums have for many years used both volunteer and paid facilitators to interpret science experiences, the Exploratorium in San Francisco and the New York Hall of Science in Queens were among the first to establish employment programs as a form of youth engagement. These initiatives were designed to improve the visitor experience and provide teen and young adult staff with valuable professional skills and science knowledge. By providing meaningful opportunities to engage with STEM fields, interpreter programs attempt to encourage awareness of STEM careers and enthusiasm for science learning. Evaluations suggest that participants gain confidence, develop communication skills, and are more likely to pursue careers in science or education (Diamond, St. John, Clearly, & Librero, 1987; Storksdieck, Haley-Goldman, & Jones, 2002).

With funding sources focused on the leaky STEM pipeline (Cannady, Greenwald & Harris, 2014) and on increasing diversity in science fields (NSB, 2014), youth programs are at the forefront of conversations about diversity in museums. Today, approximately one-third of the science museums in the United States have some form of youth employment program, and many others have volunteer programs (ASTC, 2009). There is a dearth of literature, however, regarding who participates in these programs and in what capacity they work. From my experience consulting youth interpreter programs, a large number of institutions recruit from a relatively elite pool of students who have middle class backgrounds, an aptitude for science, and an existing desire and enthusiasm for teaching in a museum. Despite the growing popularity of a model that addresses the interests of a broader and more diverse youth audience, much remains to be learned about effective and ineffective practices for these programs, especially those designed to meet the needs of youth who may not talk, dress, or think about science in the same

ways as the scientists, curators, teachers, and exhibit designers with whom they work (Adams, Gupta, & Cotumaccio, 2014; Dawson, 2014).

Deficit models for youth engagement are often applied to museum youth programs. Rather than capitalizing on the rich perspectives that youth from varied backgrounds can bring to the institution, these models often work under the assumption that museums can offer poor, brown children something that they lack. Current research on museum youth programs (both internal evaluation and academic research) tends to use an outcomes-based approach that frames success around academic achievement and changes to participants' knowledge, skills, and attitudes. These approaches rarely engage with the rich, complex histories and narratives that youth workers bring, nor do they account for institutional changes that may result from youth participation.

This research study is of value to a field in which conversations about diversity, institutional norms and values, power, and privilege are still in their infancy. In a field dominated by white, middle-class, highly educated leaders, conversations about diversity provide repetitive and cursory lessons on how to accommodate the “others,” or how to increase the number of brown faces that walk through the front doors. My own experience as a facilitator of diversity and inclusion sessions at conferences has yielded a variety of problematic comments. Some were naïve; *“Your session was fun, but it’s a good thing we treat everyone the same at my museum...except the Muslims, of course. They are hard to work with.”* Some were resistant; *“Why are you trying to make everything about race? I’m not the bad guy because I’m middle class and white.”* And a few were appeals for more; *“I’m tired of every LGBT session telling us to just put a rainbow flag sticker in the window. How do we engage in a deeper discourse, and with people other than gay and ally museum professionals?”* The science museum field is sorely

lacking in research that addresses issues of diversity, or that provides substantive representation from communities of color.

Theory and Methods

To address these concerns, I embed this work within critical pedagogy. Critical pedagogy demands that we reconsider the ways that culture and politics influence identity, the relationships between education and community, how the structure of schooling affect students from marginalized groups, and what we believe young people are capable of achieving (Kincheloe, 2008). Wanting to help poor students is not critical pedagogy. Instead, critical scholars and practitioners must radically rethink how, where, and why power is wielded in an educational setting; must acknowledge that privilege exists; and must enact change that dramatically shifts power dynamics in a way that combats oppression. Critical pedagogy works to create safe spaces for youth to embrace and become comfortable with their identities as members of marginalized groups, realizing in the process why and how they have been marginalized (Duncan-Andrade & Morrell, 2008). It addresses the lived experiences of students as they navigate power dynamics while they connect to other people.

Critical educators recognize that knowledge is socially constructed and that people bring their life experiences to school, to the workplace, and to social interactions with others (McLaren, 2016; Kincheloe, 2008). Life histories, culture, schooling, and families are relevant to interpreters' workplace experience. Workers' lives do not begin when they walk into the building, and do not become irrelevant when they leave for the day. Through a critical pedagogy framework, I can focus not on what museums offer to youth within the workplace, but how museum culture and the lives of participants intersect.

I use Sara Lawrence-Lightfoot's (1997, 2004) portraiture approach combined with critical autoethnography (Ellis, 2004; Ellis & Bochner, 2000; Holman Jones, 2005; Tilley-Lubbs, 2014) to construct an interpretation of the experiences of three young women of color who work as interpreters in a science museum. Through interactions with these young women in and out of the workplace, I present a narrative account of the relationship they have with the institution and the people within it. Drawing from their youth, their heritages, and their life experiences, each brings a unique perspective to their work.

In portraiture, the researcher is "seen not only in defining the focus and field of inquiry, but also in navigating the relationships with the subjects, in witnessing and interpreting the action, in tracing the emergent themes, and in creating the narrative" (p. 13). It rejects traditional quantitative standards of reliability in exchange for an authentic voice and demonstrative narrative. My lens is clearly positioned within the work, and is used as a tool for understanding the experiences of participants. I bring to this work my own life as a first generation college student, born and raised with pride in a blue-collar, industrial, immigrant community to a poor, multicultural family that struggled with and overcame substance abuse, disabling injuries, and mental health issues. In elementary school, I was the child with knots in my hair and clothes that smelled of stale cigarette smoke. I was the quiet, nerdy, white girl in a high school that was one of the most proudly diverse in the region, embedded within a culturally rich Hispanic immigrant community. In college, I was the student who had never before set foot on a college campus, and had no idea how to pay a bill, buy a book, or sign up for office hours. I was the outsider, as all of us are from time to time, and so the portraits I construct are through the lens of someone who advocates for outsiders. They are designed to assist insiders to museum culture in understanding what the view might look like from the outside.

I also apply my professional experiences, past and present, as a museum educator and a manager of youth programs. During the time I spent on this research, I was (and still am) employed as the director of a youth program at a museum not connected to this project. I am fortunate, in my current position at University Museum, to have a program that is incredibly well supported by my direct supervisor, museum director, and many wonderful faculty and staff who see the value and vibrancy that youth bring to the institution. Nonetheless, I work at an elite university, surrounded by college students who spend more during a summer abroad than I make all year. It is a wealthy campus embedded within a community not dissimilar from the impoverished community of my childhood. This brings a fair share of dissonance between the university and the local community residents, which inevitably penetrates my work. Most recently, the campus community has been under duress to address accusations of systemic racism and intolerance after a fraternity party admitted “white girls only” and a faculty member suggested that students have a First Amendment right to be culturally insensitive.

So while the challenges I present in this research take place at Metro Science Museum, I struggle regularly with many of the issues that emerged in this work. My students are first generation college students. My students are products of a struggling school system in a low-income community, where expectations and aspirations are low. My students are outsiders to the values and norms of middle-class academia. Therefore woven into these portraits are episodes that I shared with participants about my own life experiences as a teacher and as a student. I shared my stories as a way to built rapport with my participants, but inevitably found catharsis in confessing my story to these young women.

I am, however, a white woman, who now rests comfortably in the middle class, with a good job and a house in the suburbs. I therefore speak from a position of power and privilege. I

recognize that, although my own experiences living in poverty allow me a kindred connection to my participants, I no longer bear that burden, nor have I ever understood what it means to be dark-skinned in America. I can never presume to fully understand the lives of Eldora, Neethi, and Seraphina. These portraits are my attempt to provide my account of a moment in their lives.

Creating Portraits

In twenty days of exploratory fieldwork spread over two years and three institutions in three different cities, I learned much about the lives of young people who work in science museums. As I narrowed my focus to one institution, I added nine day-long visits to the Metro Science Museum, where I got to know Eldora, a 20-year-old artist with green and then purple and then blue hair, who was the first person in her family born in the United States. When life became burdensome, she found solace in the museum and in creating joy for others. I met Neethi, an enthusiastic 18-year-old student who changes her major about every ten minutes, and who uses the museum to explore her options, as she navigates pressure to become a doctor from family back home on the islands. Seraphina is a 22-year-old, nearing graduation, with a fierce dedication to social justice. She has an astute awareness of how skin color matters and she wants to spend the rest of her life working in museums to combat structural inequalities. Attempting to summarize their essence in a mere sentence seems discourteous. The portraits barely do justice in conveying the rich and dynamic stories that these young women shared. I hope that the reader will be able to identify ways that his or her workplace experiences may differ from these women because of race, gender, culture, religion, or socioeconomic status. I also hope that the reader will find and embrace commonalities with these women. Most importantly, I call on members of the museum field to engage in conversations about the dominant norms and values that pervade the cultures of museums.

Structure of this Paper

This research is divided into six chapters. This introduction provides an overview and explains the impetus for my work. Chapter 2 is a literature review that acquaints the reader with critical pedagogy and highlights research on institutional norms and values, privilege, bias, and expectations within the context of museums, science, and education. I provide a concise overview of recent literature in museum studies and critical pedagogy that explores issues of privilege and power in formal and informal education. Chapter 3 is a detailed description of portraiture and critical autoethnography, as well as descriptions of site and participant selection, data collection methods, and data analysis methods. The portraits of Eldora, Neethi, and Seraphina comprise Chapter 4. Each story includes a description of the place, an introduction to the participant, and a description of her home and of her work at Metro Science Museum, her relationship with the institution, and her future plans. Throughout these narratives, I weave stories from my own life. Rather than produce a chronological account of participant experience, I use critical autoethnography to examine my story as well as theirs through a lens of critical pedagogy. In Chapter 5, I discuss the themes that emerged across the three portraits, including microaggressions, repressive tolerance, and normative value systems, and suggest topics for discussion within the science museum field. Chapter 6 is the conclusion, and includes some of the next steps for each woman as she reflects critically on the museum and her position within it. This includes an oil and acrylic painting that Eldora created after reflecting on our conversations. The work concludes with an appendix that includes timelines of data collection, sample of interview questions, and table of the participants in this project.

Chapter 2

Literature Review

Inequity in Formal and Informal Education

Museum Visitors

The lack of diversity in museums is well documented. According to a study by the American Association of Museums (Farrell & Medvedeva, 2010), while 30 to 40 percent of United States residents are non-white, only 9% of museum core visitors are of minority heritage. Farrell and Medvedeva found that only 12% of art museum visitors identify as black or Latino. When we consider that many museums are positioned within urban centers and metropolitan areas with much higher black and Latino populations, the disparity becomes even greater.

Commonly proposed barriers to participation include lack of specialized knowledge of the topics, lack of historical traditions of museum-going, lack of interest in academic subjects, and influence of social networks of non-museum goers as some of the reasons (Gurt & Rueda Torres, 2007; Hooper-Greenhill, 2004). These reasons, however, are unsatisfactory because the onus is on the non-visitor to accept blame for their lack of participation. These reasons frame the non-visitor as having a shortfall of appreciation for the art form, or are missing the social capital and habits to choose museum-going as a leisure activity. Using these deficit notions, educational institutions “most often work from this assumption in structuring ways to help ‘disadvantaged’ students whose race and class background has left them lacking necessary knowledge, social skills, abilities and cultural capital” (Yosso, 2005, p. 70).

Museum evaluations fail to acknowledge the structural barriers that make museum-going a discomfoting experience. Farrell and Medvedeva (2010) offer numerous reasons for this growing gap, noting first and foremost, that generalizations of an entire racial group are

somewhat meaningless. More importantly, they recognize that historical legacies of discrimination and subtle reminders of outsider status contribute as well.

The lack of diverse visitorship tends to be addressed by the integration of culturally specific exhibitions, bilingual signage, and free events for the community (Brown, 2004; Hood, 2004). These are excellent steps toward recognizing that cultural relevance, language, and financial constraints are part of the conversation. They do not, however, address the institutional structures, including the workforce, that are inherently white and middle class. It is not the numbers that matter, but the reasons behind the numbers. Rather than ask “Why aren’t they coming?” museum professionals need to ask “What are we doing to push people away?”

Museum Workforce

Only 20% of all museum employees are people of color, and even fewer are in leadership roles. “Too many middle-aged hyper-educated white people are going to limit the degree to which museums incorporate other points of view” (Eric Siegel in Farrell & Medvedeva, 2010, p. 30). When broken down by job category, the distinctions are clearer. A recent Mellon Foundation study of art museum staff (Shonfeld & Westermann, 2015) identified security and facilities staff evenly split between white and non-white while curatorial, education, and research staff are 84% white, 6% Asian, and less than 10% black, Latino or other. In my own place of work, with a hundred or so full-time employees, outside of my student workers, I have interacted with no more than six museum employees who do not identify as white. Two of them are administrative staff and four were custodians.

In the United Kingdom, where “ethnic minorities” make up only 4% of museum workers, initiatives have been met with resistance. Public policy has called for efforts to appoint more minorities to boards and commissions and to offer scholarships for minority undergraduates to

pursue museum studies graduate programs. This approach, however, has been criticized publicly on the left as missing the point of diversity, and on the right as a form of affirmative action, in which “lowering of standards is perceived as an attack on meritocratic principles of selection... in order to fulfill quota requirements” (Sandell, 2007, p. 215). This, according to Sandell, induces a “stigma of incompetence” and polarizes non-minority staff. He also claims that “there has been little direct research to support the claim that museums *require* diversity in their workforce if they are to successfully meet their objectives of engaging with diverse audiences” (p. 218) but concedes that research in other fields may suggest that diversity is a good thing. This supposition is a painful reminder that people of color are “othered” on a regular basis, and in some cases tolerated as a financially necessary shift in the status quo.

In the most comprehensive museum youth program report to date, Chi, Dorph, and Reisman (2014) review literature from the past decade. The study included published research on after school programs, camps, interpreter programs, research experiences, and tinkering spaces. They find, first of all, that the vast majorities of studies focus on outcomes of short-term programs, with only five of the 37 studies they reviewed focusing on long-term programs. Evaluation criteria include conceptual understanding, skills, practices, engagement, interest, and identity (p. 14). The terms *urban*, *disenfranchised*, *at-risk* and *street* were used to describe the students under study in the literature review, implying much of the programming was geared toward black or Latino students. Despite a focus on diverse audiences, critical frameworks were not typically integrated into analysis, and race or culture were not mentioned as core concepts across the literature.

Implications in Formal Education

This issue in museums is symptomatic of a problem throughout formal and informal education and in STEM fields. While museum education has yet to delve deeply into fundamental issues of inequity, formal education has for decades been wrestling with the myriad issues around racial stereotyping, low expectations, deficit approaches, colorblind ideologies, and the troubling disparity between the demographics of teachers and the students they teach. While science education research has, for at least a decade, conducted deeper inquiries into inquiries of inequity, research on science at the undergraduate, graduate, and professional levels are still in adolescence.

There is much to be drawn from existing research on diversity (or the lack thereof) in education professions. The next several pages will provide an overview of studies, both foundational works and recent innovations, in formal and informal education. Because literature on diversity in museum education is lacking, I include works on the experiences of teachers and preservice teachers of color in all-white schools and teacher education programs, and studies about students of science at the undergraduate level. This is followed by an examination of critical pedagogy, and an explanation of the appropriateness of a critical framework for this study, particularly the ways in which institutional structures, values, and norms represent and reinforce participation by members of dominant cultural groups and what teachers and students can do to rise up against these constraints.

Although youth programs are fairly successful at bringing young people from diverse backgrounds into the museum field, those roles rarely translate into careers or full-time opportunities in education. The vast majority of museum educators are white women. Similarly, 84% of classroom teachers are white, and 84% of classroom teachers are female. A mere 13% of

classroom teachers are black or Latino, and only 1% identify as Asian, Native American, or any other ethnicity (Feistritzer, 2011). A number of researchers (Dillard, 1994; Jackson, 2015; Scott & Rodriguez, 2014) have decried this disparity as a product of among other things, a lack of a sense of belonging in teacher education and in the teaching field.

Bryan and Browder (2013) chronicle the lived experience of a male, African American kindergarten teacher. They note that less than a quarter of teachers are male, and only 1% of teachers are black and male. Recruitment and retention are problematic because of the sociohistorical legacy of disproportionate discipline, lowered expectations, and lack of role models. New teachers are finding that “a profession that has degraded, undervalued, and marginalized African American males is not a welcoming and inviting profession in which to work.” The young teacher in this study was regularly questioned about his motivations for working with young children, and had his practice scrutinized by administrators who feared incompetence. As the only black male in his school, he felt alone. He lacked support or friendship from his fellow teachers, and was regularly subjected to comments about how proud his family must be that he achieved so much.

According to Scott and Rodriguez (2015), because of the lack of teachers of color in schools, education is perceived by many students to be a profession for white people, and not a viable career option. Young people cannot see themselves as teachers. In their study of three African American men who entered into teacher education programs, they found persistent stereotypes (surprise that the men had graduate degrees, assumptions that they went to college on athletic scholarships), lack of support and mentorship from faculty and administrators, and blatant bigotry as serious impediments on the path toward becoming teachers.

For young college students enthusiastic about becoming teachers, it can become disheartening to be viewed as inferior or to face hostility by teaching mentors and other pre-service teachers. Similarly, Amos (2010) shares the experiences of two Latina pre-service teachers who faced academic and social struggles throughout their education program. From shock from other students when they passed exams to offhanded remarks about the financial burden of undocumented immigrants, the women faced an onslaught of negativity, culminating in a fellow student demanding expulsion after one of the young women confessed that her parents had originally immigrated to the United States without a legal presence.

Gomez, Rodriguez and Agosto (2008) present the narratives of two students who in their teacher education regularly defended their culture (“I’m not Mexican”), countering assumptions about their socio-economic status, and feeling the need to defend their ways of being. Ultimately, however, they were able to find strength in their differences, using language, culture, and worldview to be more mindful teachers and to intervene in the struggles of their most vulnerable students. Brown (2012) finds that black men are perceived by others as fulfilling disciplinary roles rather than teaching ones. Kohli (2012) found that simple things like names and accents become fodder for stereotypes for student-teachers of color. The list goes on. These researchers ask how we can create teacher education programs that are culturally responsive to the needs of black and Latino pre-service teachers. Similar voices are needed in the museum community to address the disparities in opportunity and issues of inequality for informal science educators of color and to examine the reasons that museum communities are no more diverse.

Critical Pedagogy

Why I Use Critical Pedagogy

Race, culture, and socioeconomic status are often regarded in literature as deficits that need to be overcome. In the major conferences and meetings in the field, presenters talk about how to work with underserved audiences, and laud their successful recruitment of “others.” I am not often able to find sessions where language, culture, or race are explicitly addressed as assets, or where the background of program participants is considered relevant beyond serving as an indicator that a museum is meeting its mission. Instead, in sessions about diversity, I politely listen to presenters discuss how diverse groups are to be dealt with, or how wonderful we, the white, middle-class professionals, are for having dealt with them.

The science museum community is in denial of its privilege. These epicenters of scientific elitism veiled in a jovial atmosphere of fun and acceptance are completely oblivious to the dominant norms and values that guide their practices. This lack of a critical or reflective lens in museum youth program research is one of the reasons I chose to use critical pedagogy as a theoretical approach.

Critical pedagogy is an appropriate framework for this project because museums have a paradoxical relationship with their communities, existing simultaneously as community centers and palaces of cultural elitism. The everyday practices of science museum workers are steeped in power and privilege. Some of this power will one day be accessible to Eldora, Neethi, and Seraphina. Much of it, due to their skin color, education, and resources, will not. The forms of knowledge that these women use, the types of capital that are valued, and the structures that regulate access to power are all important elements of youth work in museums that are typically not addressed in science education or museum literature. For that reason, I chose to engage in

research that problematizes some of the issues around museum youth programs, and is accessible to a non-critical, practitioner-based audience.

What Critical Pedagogy Is

Critical pedagogy is a practical and philosophical approach that explores how society negotiates power, privilege, and position. It demands that teachers, students, and activists observe, critique, and if necessary, take action against dominant norms and values that oppress those who do not have a political voice. Critical pedagogy resists the notion that dialects and speech habits are deemed a bastardization of standard language, that history in textbooks is objective, and that society need only convince a young person that meritocracy is real and it takes only hard work to advance (Freire & Macedo, 1987). Megan Boler (2004) notes that “dominant ideology enforces itself, not necessarily through violent means, but through people’s agreement to abide by and value a status quo that benefits institutionalized powers” (p. 122).

In museum work, this is manifested in subtle ways. When hiring preference is given to staff who talk or look a certain way, it conveys a clear message that other appearances or dialects are not desirable. We resign ourselves to believe that the “best” candidate was chosen. When program decisions are made by the expert consultants, rather than in collaboration with the front-line educators, we make clear what type of expertise is authoritative. When the newly hired Ph.D.’s. acquire the wide-open office with the windows overlooking the park, we accept that they must deserve it. We assume that things are the way that they are for a reason. However, when students or workers or participants develop a critical lens, and know that they have a right to question and scrutinize these decisions, then the institution must, at the very least, recognize that different points of view might exist.

Advocates of critical pedagogy are especially concerned with those whose lives are affected by the sting of discrimination and poverty. Acting on this concern, critical educators seek out the causes of such suffering in their understanding of power with its ideological, hegemonic, disciplinary, and regulatory dimensions (Kincheloe, 2008a, p.11).

Critical pedagogy investigates unequal power relations and implements reflective practices and actions that shift those power dynamics toward a more just civilization (McLaren, 2016). Rather than evaluating success based upon the criteria set by the institution, this framework allows me to interrogate the experiences of museum youth workers in a way that problematizes their everyday interactions with institutional culture.

Inherent to critical pedagogy is social transformation, but researchers and activists must take care not to apply the term lightly. Transformative learning does not occur when a teacher or supervisor “helps” to make someone’s life better. It is a “fundamental reordering of the paradigmatic assumptions one holds and leads her to live in a fundamentally different way” (Brookfield, 2003, p. 142). Critical pedagogy requires that the participant name an issue, reflect on it, and take social action. The portraits I present are not intended to represent transformations. They represent the first steps, as the young women begin to articulate their understandings of their relationships with the institution. Through their work, they are beginning to know their strengths and how to make themselves stronger, and to name the oppressive structures that exist around them (Freire, 1985).

Gloria Ladson-Billings (1999) has pushed educators to examine the ways that we position students from minority and low-income backgrounds. She is critical of the ways that we approach the education of these students:

Student "success" is represented in achievement within the current social structures extant in schools. Thus, the goal of education becomes how to "fit" students constructed as "other" by virtue of their race/ ethnicity, language, or social class into a hierarchical structure that is defined as a *meritocracy*. However, it is unclear how these conceptions do more than reproduce the current inequities (1995, p. 467).

These current inequities stem from dominant cultural ideologies. *Dominant ideologies* are the beliefs and practices of the ruling class that are embedded within the fabric of a society, and guide how members of that group make sense of the world. Critical pedagogues focus on being able to "identify, and then challenge and change, the process by which a grossly iniquitous society uses dominant ideology to convince people that this inequity is a normal state of affairs" (Brookfield, 2009, n.p.). Ideology becomes a part of language, behaviors, belief systems, actions, and interactions.

Hierarchies in the Workplace

Schools, and especially student work programs, tend to prepare students for a place within their existing social class. Participants at the lowest rungs of the system are provided base level tasks that are completed in isolation, without greater context of why the tasks need to be completed. Activities are regulated through discipline and authority (Kincheloe, 2011). The after school job in the stockroom at the grocers, the job as a cashier at the donut shop, or the weekend work as a janitor, reinforce that work is menial and unrewarding. Work becomes disconnected from spirit, and aspirations for advancement collapse.

Meanwhile, participants at higher social strata are provided with fewer rules and constraints, with opportunities to analyze, negotiate, and think critically. Affluent youth are offered internships with experts in their fields, and are given opportunities to analyze, network,

and present. They learn to be managers and to advocate for themselves. I see examples of this every year when I take my students, who attend free afterschool classes at the University Museum, to a state science competition. Of the two hundred or so youth at the event, my students are typically some of the only students of color. While my students utilize the free overnight accommodations on a gymnasium floor, affluent teens use their credit cards to check themselves into the hotel next door. In the morning, when my students recount having to move their sleeping bags into a hallway at 3am because of a draft from a broken window, the girl with the credit card is telling her friends that she is late to the session because her room service took too long to arrive. During the presentations, my students share the results of the bacteria tests that they completed with a kit borrowed from a teacher, while other students present thesis-level analyses of new cancer drugs in the lab of their father's old college buddy. My students think they just are not as smart as those other teens. They do not realize that the system has been designed this way.

Differential tasks like these are provided, sometimes intentionally and sometimes not, befitting the social status, and not the abilities of participants. Affluent students believe that they have ownership over their actions, and have earned the right to make their own decisions and to be successful. My students believe that fate dealt their cards. This is the system perpetuated in public schools, and often in the workplace. Adams and Gupta (2013) and Cooper, Gormally and Hughes (2015) studied the impact of meaningful work on teens, while Hobbs, McKetchnie and Simpson (2016) discussed the repetitive structures that limit expectations and aspirations in the workplaces of high school students. Entry-level work often reinforces oppressive structures, making mundane work seem normal and expected. When experiences provide opportunities for participants to become producers of knowledge, youth have the potential to develop a sense of belonging within academic and professional settings (Chan, 2014).

By adolescence, most youth have begun to formulate career ideas based upon their knowledge and experiences with the working world. They will likely make educational choices throughout high school that correspond with these ideas about their futures (Reigle-Crumb, Moore & Ramos-Wada, 2010). For many youth, particularly those from working-class communities, early work experiences are often low-skill and low pay. Expectations for low status work are often reinforced when family members hold occupations in unskilled labor, or are out of the job market entirely (Belton, 2013; Rivera, 2015). These low-status jobs, paired with experiences in schools that position young people as recipients and not builders of knowledge, contribute to the social reproduction of class structures. Critical pedagogy suggests that there is a better way.

The vocational education we promote engages students to understand the relationship between academic skills and the world of work. In other words it uses work as a real context in which the academic disciplines gain significance. It uses work as a laboratory where academic knowledge is applied. This new type of vocational education examines the intellectual and social meaning of work in a democratic society (Kincheloe, 2011, p. 18).

Youth programs like the one I supervise at the University Museum and the one that employs the young women at Metro Science Museum have the potential to counter the workplace challenges that Kincheloe describes. When done well, youth from diverse backgrounds can take ownership of their learning and teaching experiences. Activities are scaffolded in such a way that the gradual increase in responsibility is tempered with support, guidance, and education. When done well, it is as close to a meritocratic system as I have seen in formal or informal education. It is truly the practical application of a pedagogy critiqued as being

too theoretical. When done poorly, however, positions meant to provide youth with growth opportunities merely convince them that they were not built for the job. When poor students are slotted into janitorial roles in the basement while affluent students get to teach up in the galleries, and when black and brown students come to work and see only white faces serving as supervisors, teachers, and scientists, it becomes clear that this work is for different people, and that this place is not for people like them.

Moving Forward: Critical Approaches to Museum Studies

In science museums, the dominant ideologies are driven by Anglo-centric, highly educated, heteronormative, middle-class values and norms. For most of the people who work at any museum, these norms are invisible, embedded within the fabric of the institution. For an outsider who comes in, anything from the music in the hallways to the options on the family membership application, to the employee dress code can be subtle reminders of who and what belongs.

Ash and Lombana (2012) call for museums to adapt the core values of institutions for the purpose of “developing a sense of shared purpose, practices, values and beliefs; a deep commitment for collaborating with all visitors; developing reflective and collaborative practices for improvement, and most crucially, sharing power at all levels” (p. 71). The existing methods for research and practice in museums are based upon values of middle-class European-American professionals, and “preserve old ways of doing things that favor a more privileged public at the expense of publics who are already poorly served by education, informal and otherwise” (Feinstein & Meshoulam, 2014, p. 390).

This results in research that is not truly representative of the population of the nation. Missing from the research agenda is the notion of how visitors and staff develop a sense of

belonging within a museum, and what barriers are in place to prevent that inclusion. Dawson (2014) calls out the dearth of literature exploring why people do not visit museums, and critiques the assimilationist approaches to understand barriers to participation. This ideology requires “participants to change to fit institutions, privileging dominant knowledge and practices” (Dawson, 2014, p. 983). Through an ethnographic approach that critically reflects topics from food offerings in the museum dining hall to the coded language of the interpreters doing the demonstrations, she makes it clear that visitors from non-dominant groups feel that the museum “is not for us” (Dawson, 2012, p. 186). While to a critical pedagogue, these barriers may seem obvious, the typical museum manager finds these critiques to be baffling. Most had never before thought to analyze the museum experience from the point of view of anyone whose experiences and perspectives are different from their own.

I intend my work to be a catalyst for this type of thought. The portraits in the following chapters offer a glimpse into the museum experience from voices that are not often heard. While the young women in these portraits describe significant barriers to success, they have each worked hard, with the help of coworkers and mentors, to achieve success by their own definitions. This paper is about three women and their lives, their relationship with the institution, and their decisions as they navigate power and privilege at Metro Science Museum.

Summary

Museums and other cultural institutions fail to represent the demographics of our nation. In our increasingly multicultural society, fewer than 20% of people who work in museums are non-white, and only a fraction hold leadership positions or roles in science, art or education. While youth program demographics are somewhat more diverse, youth from low-income backgrounds or from communities of color rarely are given opportunities to rise through the

ranks and take on the leadership roles that currently are filled by people who are middle-aged, affluent and white. While there are few studies that focus on the lack of diversity in museums, in this chapter I outline parallel issues in formal education. I also make the case for critical pedagogy as a framework for understanding how power and privilege influence museum practice, and how emancipatory learning opportunities have the potential to shift these dynamics.

Using a critical pedagogy framework, I present the portraits of three young women who work in a science museum. The stories of Eldora, a Mexican-American woman, Neethi, a Trinidadian-American woman, and Seraphina, a Guyanese-American woman, are presented through my lens, as a white, Polish-Italian-American woman with a background in museum youth programs and social justice education. These women work within a uniquely diverse department that offers incredible opportunities for fellowship and growth, that exists within an institution laden with structures that reinforce the white, highly academic, middle-class culture of museum leadership. Through these portraits, I encourage the museum field to recognize that the norms of museum decision-makers are not always the same norms of all of the people who work there. I provide the museum field with research that counters traditional presentations of data that deconstruct experiences of program participants, and instead choose to provide three rich texts that provide a venue for these women's voices to be heard.

Chapter 3

Methods

Research Aims & Objectives

In this project, I construct portraits of three young women of color who work as educators at a large science museum in a major city in the United States. Through these portraits, I seek to provide the informal science education community with a glimpse into the lives of museum youth workers who are not members of the dominant culture and to ultimately offer a deeper understanding of some of the experiences and needs of young people from varied cultural and socioeconomic backgrounds who participate in youth employment programs in museums. I use ethnographic field notes, journaling, interviews, and focus groups, to provide these young women an opportunity to share stories of the complex relationships that they have with a cultural institution that simultaneously supports and exploits them, accepts and ostracizes them, embraces but excludes them.

Because I have been dissatisfied with the ways in which museum youth employment programs have thus far evaluated both the benefits and challenges of participation, and because I believe that museum have failed to address issues of power and privilege within institutional culture, I choose to build this project as an entry point to the kinds of conversations that I wish museum personnel would begin having. My questions for this research are:

What are the workplace experiences of three young women of color who work as interpreters in a science museum?

In what ways have these experiences been influenced by power and privilege within the institution?

These questions are merely starting points. The end results of this project are not answers to these questions, but are stories and reflections that come from the exploration of these questions. We have too often viewed youth interpreters, especially those from low-income, minority communities, as commodities. They are demographics that we tally, they are hours that we count up, and they are tools used to make our museums appear progressive and modern. We must acknowledge that these young adults are more than a tool we use to achieve institutional goals. I encourage the reader to cultivate a relationship with the participant, to understand her as a girl, a woman, an educator, a scientist, a researcher, a learner, a Latina, a person of color, a person. Researcher and participants work together to tell a story that is honest and beautiful and real, in the hopes that the reader will see not just a series of data points or conclusions, but will see a fellow human, with pain, love, beliefs, and feeling. This is what has been missing from research on museum youth employment programs, and this is what I intend to provide the field.

Theoretical Perspective

Because of my interest in the ways that race, culture, and socioeconomic status intersect with dominant and non-dominant norms and values, I house my research within a *critical pedagogy* framework. Inherent to critical pedagogy are the ideas that some groups of people are privileged over other groups, and that language, rules, and behaviors can explicitly or tacitly reinforce oppression and dominance. Education is political. Politics are embedded within school lesson plans, workplace regulations and social interactions, and more often than not, provide structure that reiterates dominant norms and values, and reinforce existing power structures (Freire, 1985; Giroux, 2011; Kincheloe, 2008b).

A critical framework urges us “to find the wisdom in our lived experiences and, from there, move toward a critical interrogation of our conditions of life and how we came to be as we

are- so that we might enact our revolutionary ethics of freedom fighters within our practice in classrooms and communities” (Darder, 2015, p xiii). This may sound idealistic. This is a common critique of critical pedagogy. That despite having been a movement since the 1960’s, the uphill battle fought by critical pedagogues is barely noticeable within an educational landscape rife with systemic institutionalized inequalities, steeped in a culture that still wholeheartedly believes in the myth of meritocracy, that trains students to be compliant and that encourages workers to be satisfied with what they are offered (Villaverde & Carter, 2014).

“Because of this damned complexity, advocates of a critical pedagogy understand that no simple, universally applicable answers can be provided to the questions of justice, power and praxis that haunt us” (Kincheloe, 2007, p. 16). We must therefore be vigilant in questioning our assumptions about how education works. Because of this, it is essential that I select a methodological approach that does not generalize the experiences of participants, and that I avoid the temptation to create definitive statements about how museum youth programs should work, or what a work experience should look like. Instead, I gravitate toward a more penetrating analysis, choosing depth over breadth, where I and my participants can co-construct and reflect upon a narrative that illuminates our own experiences in a certain place and time.

Methodological Approach

This work is a qualitative inquiry. As such “we assume that there are multiple realities and multiple truths and that we are presenting just one possibility. The resulting text is historically, culturally, and socially constructed” (Mayan, 2009, p. 25). Because I choose not to disentangle my life experiences from my role as a researcher, to speak to an audience beyond my small academic circle, and because I choose to search for goodness amidst complex social, cultural and historical systems ripe with oppressive and discriminatory structures, I have chosen

to use portraiture (Lawrence-Lightfoot, 2000; Lawrence-Lightfoot & Hoffman Davis, 1997) combined with critical autoethnography (Ellis, Adams & Bochner, 2011; Fine, 1994; Tilley-Lubbs, 2014) as methods for analyzing and presenting the data.

The portraits of participants and the institution are explicitly subjective, as my life experiences cannot be separated from my interpretation of the data. Rather than attempting to detach my personal experiences and biases, I choose to embrace them, and to present my work through the lens of someone who grew up in poverty, who took pride in her community's working class status, and who lived in a Puerto Rican and Eastern European immigrant neighborhood in an industrial American town. I have also been a supervisor of and advocate for museum youth programs for many years, and so my research is influenced by my interactions not just with these three women, but the several hundred young people whom I have known over the years.

I asked a former committee member if I should share part of this personal narrative in a committee meeting. Should I mention my childhood? My family? Should the reader know my biases? He told me no, there is no place for this extraneous information in research. I should be objective. Only data matter. I disagreed.

Critical Autoethnography

I do not like to talk about myself. I never write poems or stories. I never kept a diary or a journal because I have always been terrified that someone would read and trespass into my personal life. I feared the "vulnerability of revealing [myself], not being able to take back what [I]'ve written or having any control over how readers interpret it" (Ellis & Bochner, 2000, p. 738). It is a "dirty job" (Custer, 2014, p. 4) in which the researcher reanalyzes her past, present, and future in the process of studying others. So autoethnography was not a method that I felt

comfortable using. Then, I was faced with this question: “What of the stories we want to tell because they are so important and enraging and courageous and hopeful but don’t because they aren’t ours—alone—to tell?” (Adams & Holman Jones, 2011, p. 109)

Eldora, Neethi and Seraphina have stories to tell. I struggle, however, with my right to be the one to tell them. As a non-member to the cultural communities of my participants, I am at a disadvantage. I can only peripherally understand the worlds of Eldora, Neethi and Seraphina, and only through the lens of a member of the dominant culture. I work from the vantage point of a white academic, and I do not know that I have the authority to write about women of color. “The idea of being an expert with the right to interpret the words of others, of analysing their actions and coming to conclusions regarding their true motives, had bothered me greatly” (Tilley-Lubbs, 2016).

Autoethnography, is a method of researching, critiquing, and writing about the lived experiences of the self and of others (Ellis, 2004; Reed Danahay, 1997), often “within social locations situated within larger systems of power, oppression and social privilege” (Boylorn & Orbe, 2014, p. 19). I can make clear to the reader that I am a participant and that these are my interpretations of my experiences with Eldora, Neethi and Seraphina. I can also “examine my own cultural perspectives as a member of the dominant society” (Tilley-Lubbs, 2014, p. 3). Through this methodology, I can grapple with my position of privilege and the privileged institutions that we inhabit. I reject the myth that researchers must take on a god-like presence (Harraway, 1988) hovering above participants where we “carry no voice, body, race, class, or gender” (Fine, 1994, p. 79). Rather than striving for silent authoring of work (Holt, 2003), I embrace and find value in my background and reflect upon my current practice and everyday struggles as an educator.

Portraiture

Using Sara Lawrence Lightfoot's portraiture approach (1997; 2000) I create a narrative that documents the experiences of these young women within the context of the museum. This includes understanding how the physical space, people, activities, norms, values, and culture of the institution influence their interactions and their decisions. I provide an interpretation of those experiences through my lens as a social justice educator with an explicit interest in understanding power and privilege within museums. Portraiture uses qualitative methods, influenced by phenomenology and ethnography, but goes a step further in exploring both scientific rigor and artistic expression to document the complex and unique experiences of participants, while seeking human themes that will ultimately resonate with a wider audience.

Portraiture is a qualitative method that puts the researcher inside the work, and seeks a unity of poetry and science so that the product might be appealing to a broader audience. It relies on authenticity over validity, and presents information explicitly through the lens of the researcher. "The portraitist seeks to document and illuminate the complexity and detail of a unique experience or place, hoping that the audience will see themselves reflected in it." (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 14.)

While case studies and qualitative interviews are frequently used in research on informal science programs, the method of portraiture has a rare presence in the field. Portraiture is not merely the reporting of findings from a set of interviews. This method allows the co-creation of a narrative that tells the truth as it is known to the participant, and through the lens of the researcher. "A portraitist is keenly aware of his or her many roles in creating narratives that move readers to ponder their understandings of the world" (Chapman, 2007, p. 158).

An effective portrait has the ability to demonstrate the “unique characteristics of the person portrayed, introducing him or her in a way that distinguishes the subject from his or her surroundings and circumstances yet uses them to enrich the portrait and to gain meaning from him or her” (Bloom & Erlandson, 2003, p. 893). Shaped through dialogue, observations and shared experiences, the researcher and participants co-construct a narrative that is accessible, personally meaningful, and relevant to academic and non-academic audiences. Through portraiture, my participants and I can speak directly to an audience of informal science education practitioners, and provide tools that may allow them to reflect upon their own practices as they relate to power and privilege. This approach also allows the young women of this project to express their successes, failures, fears, and aspirations in ways not captured through data collection methods typically administered to youth employment program participants.

The portraits of these three young women do not answer the question of why some members of the dominant culture perceive people of color to have less to offer the fields of science, education, and museum studies, nor do they explain in any certain terms what teens gain from youth employment programs. They will, however, attempt to put a face, a body, a name, and a life to a vibrant community of young adults who have meaningful stories to tell. These women are perhaps not a representative sample of the field. They are, evidenced by their extended tenure and enthusiasm to participate in this project, some of the more successful examples. I intend to offer the field some alternative images of successful engagement with museums and to ask the field some difficult questions about what museum youth employment programs can and should look like.

Data Collection

Pilot Study

In Spring of 2011, I carried out a 40-hour ethnographic pilot study at a large science museum. The interpreters here had a profound sense of ownership over the work, and felt that they had a meaningful impact on others. Something troubled me. All of these staff had come up through a program designed to increase diversity in the field, the museum was in a busy downtown location in a large city, but that diversity was nowhere to be found here. White, middle class science and education graduates filled most of these roles. I wanted to know why. More importantly, I wanted to know why no one else seemed to notice. I shifted my inquiry to take a closer look at the culture of the institution. I became interested in how someone becomes an insider or an outsider in a job at a museum, and what rules are in place to reinforce the dominant norms that guide participation.

Next, I visited three different museums with large youth employment programs, with the intention of identifying parallels in successful strategies for youth participation. The first, Astro Center was in a tourist district on the West Coast of the United States. The second, Eastern Discovery Museum, was in a university district of a large northern city, and the third, Metro Science Museum, was in a low-income residential neighborhood on the east coast. I spent five days at each museum in 2012 and 2013, observing operations, interviewing students, and collecting information about training and supervision.

In the week I spent at each of the three museums, I noticed something. Each of the youth programs was large and recruited students from diverse social and cultural backgrounds. However at the first two museums, this diversity appeared only at the entry level. As I interacted with new and veteran youth, supervisors, and program leaders, I saw a decreasing concentration

of students of color. Metro Science Museum was the only one of the three that had diversity in the entry-level staff and in the program leadership. It was here that I chose to carry out my research.

Research Site: Metro Science Museum

Just a few blocks from one of the last stops of the bus, the museum is a gleaming glass and silver icon in the midst of a city park. Set back from the street and encircled by a tree-lined driveway, Metro Science Museum enjoys a quiet corner of an otherwise bustling neighborhood. The large museum is surrounded by several dense city blocks packed tightly with row houses and apartment buildings. The building sits on a border between a Hispanic neighborhood, mostly Ecuadorian and Mexican, and the city's Chinatown area. Most of the museum visitors, however, visit from the surrounding suburbs. The youth employment program at Metro Science Museum was designed explicitly to engage low-income and minority youth from the surrounding neighborhoods, and they have been fairly successful to that end. In the past few years, however, the demographics of program participants has shifted, and more youth from the suburbs have been recruited to the program.

While the museum location and youth program demographics would suggest a diverse presence throughout, management at the institution is notably lacking in the diversity represented within the interpreter program. All but one of the members of senior management are white, most have Ph.D.'s, and all but two reside well beyond the boundaries of this urban neighborhood, commuting from wealthier suburbs or even splitting their time between their job at the museum and faculty appointments out of state. This institution serves as an interesting case study. A leader in the field that, at the same time, is breaking many of the rules that it teaches to others. What also stands out about this institution is that this place is still one of the only

institutions I could find that truly engaged a predominantly lower income, minority population in its operations.

Participants

The participants in this project were not selected randomly, nor did I seek out particular characteristics or traits. I simply went to visit, and I found people who were willing to talk to me. My first interaction with potential participants was at a morning staff meeting. Each day, just before the museum opens, a group of a dozen or so interpreters gather at the stage just outside of the basement offices. They review the plans for the day and make any special announcements. On several days in the early phases of data collection, I was one of those announcements, with an invitation to be approached by anyone who might be interested in sharing their experiences.

During nine visits to the museum and five phone meetings across much of 2014 and 2015, I spent over 70 hours observing and interacting with participants. It was not difficult to find incredible young people with rich, complex life histories. Ultimately, I selected three young women who represented different cultural backgrounds, had differing career goals, and had different types of experiences within the museum, but who shared some common experiences. With these three participants, I set out to become a witness to their experiences within the museum, and on the borders between the museum and the local community.

Data Collecting

I use ethnographic methods, including field notes, reflective journaling, and interviews to create portraits of these three young women, and the institution in which they work. The development of a relationship with participants is important in portraiture. Each participant first agreed to an informal chat, as we strolled around the museum as they worked. I described my background, and they described theirs. We shared anecdotes about people we knew in common,

and traded stories about interactions we have both had working in museums. In a second meeting with each person, I described the project in greater detail in a recorded interview, which took place in the quiet meeting room just behind the staff break room. I used a somewhat static protocol for this first interaction, asking for a job description, educational history, and family background. I spent much of the rest of that day observing each young woman as she worked on the museum floor, occasionally asking questions, or assisting her with a task. I would take notes in the quiet moments, writing phrases that I would write in long form later. I took some time alone midway through the day to type or write out these notes, reflections, and questions. In the evening, I spent several hours writing out a descriptive set of notes that encompassed the entire day.

Second, third, and fourth interviews followed, each developing organically, referencing earlier conversations and observations. One interview with each participant included a walk around the neighborhood or a bus ride home, where we could talk about who they are outside of the museum walls. On two occasions, we met together as a group so that they could share thoughts with each other.

I also spoke with other people in the museum. I interviewed the former director of the department, just before she left her position. I spoke with the program administrator, who has since become the manager, and the manager, who has since become the director of the program. I interviewed a part-time supervisor, who has been in place for well over a decade, while he works to complete his associate's degree. I interviewed the executive assistant to the chief operating officer, just as she was choosing to leave her job. I also walked often throughout the museum, observing interpreter interactions with the many visitors, and seeing how the "other half" lived, in the bright airy administrative wing on the second floor. I walked the museum

grounds, the park, and the surrounding neighborhood, stopping in at the local bodega or juice stand along the way. I rode the bus to and from the museum, just as my participants did on their morning commute to work. I used my sparse abilities in Spanish to order trays of Peruvian chicken for lunch, and ate greasy pizza with the interpreters at the end of an occasional shift.

The portraitist understands the participants to be the best authorities of their experiences, and thus encourages them to have an authoritative role within the interactions. I had guiding questions for each interview, but ultimately allowed each participant to dictate the flow of conversations. This was challenging at first, but as we built rapport, the dialogue became more conversation and less interview. Eldora, Neethi, and Seraphina asked me questions as well. I responded honestly, sharing details of my personal life that, in previous, more traditional iterations of this research, I would not have shared. Questions that guided my interactions with them included: What have been some of the best moments in your work at the museum? What does your family think of your work? What kinds of interactions do you have with other departments? Why do you think other museums lack the diversity that you have here? How have you changed because of your work? What advice would you offer to other programs?

Data Analysis

In portraiture, the voice of the researcher is everywhere; in the assumptions, preoccupations, and framework she brings to the inquiry; in the questions she asks, in the data she gathers; in the choice of the stories she tells, in the language, cadence and rhythm of her narrative (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 85).

My identity is central to data analysis. Narratives are co-constructed with participants, but ultimately presented through the lens of the researcher (Chapman, 2007). Central to this approach is the concept of *voice*. My voice can be used as *witness* to the events unfolding around

me, as *interpretation* to represent the setting from the perspectives of participants, as *preoccupation* to understand the assumptions I bring to the research, as *autobiography* by imposing my own life history on the scene (Lawrence-Lightfoot & Hoffman Davis, 1997). This is accomplished through both listening to the voices of the participants as an outsider, and by engaging in dialogue with participants to achieve critical consciousness, that is, an awareness of and willingness to take action against injustice (Freire, 2000).

This requires a rigorous, thorough empirical analysis. As a researcher, I must continually examine my biases and their place within the work, question my assumptions, and examine ideas from different points of view. I must systematically engage with the data, monitor what I choose to include, and scrutinize how I choose to include it. This approach requires that I am reflexive throughout the interactions, asking not just what something is, but what it means, and what it could mean to different actors.

Lawrence-Lightfoot and Hoffman Davis' (1997) approach to analyzing data includes identifying reoccurring words and ideas, seeking out metaphors and ideas that help to make sense of the data, and identifying institutional rituals that have become embedded in the culture of the site. To ensure accuracy, they suggest looking for verification from multiple sources, then giving special attention to things that do not fit and working to understand why. Whereas in quantitative work, discordance of data means that the story does not make sense, in portraiture, this discordance simply adds a level of complexity to the story.

To be reflective and thoughtful in my analysis required careful documentation of all data sources, including interviews, field notes, written artifacts, and researcher reflections. During visits, I recorded handwritten notes and typed them each evening. A few days later, I took time to reflect on the experience through a personal journal and to transcribe recorded interviews. I read

and reread the interviews, field notes, and journals, and I made a list of all of the topics, questions, and ideas that seemed interesting or relevant to my research questions. I highlighted important sections of the interviews, pieces of the conversation that were meaningful to me, and discarded sections that were not relevant. Then from this list of ideas, I created a set of codes drawn from critical pedagogy literature, for example “language” or “gender.” A code is a “word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (Saldaña, 2008, p. 3). I went back through the data and applied these codes using color-coded marks, then grouped colors together to identify emergent themes. Shagoury and Miller Power (2012) note that, for teacher researcher, analysis includes more than just the words recorded on the page. The above methods of coding helped me to organize the large quantity of data, but ultimately the process of choosing what to include and how to include it took something more.

Constructing Portraits

The research represents one interpretation of the experiences of three people who work in a science museum. While many of their experiences may resonate with others, the outcomes are not generalizable. Denzin and Lincoln (2011) speak of the interpretive bricoleur, or “pieced together set of representations that is fitted to the specifics of a complex situation” (p. 4). In portraiture, in particular, the narrative is constructed not only around the themes that emerge from the technical analysis, but also from an aesthetic point of view. What elements of the narrative are most important for me to share? What will be the most evocative story? What images and scenarios will have the most lasting impression on the reader?

After coding for key themes, I piece together descriptions, quotes, images, and reflections that present a narrative that respectfully represents each participant. The resulting portrait is not a

biography, with a chronological record of her life, but rather a story of a museum interpreter, and how her background has influenced her experiences in a certain place and time. Portraiture must also, ultimately, seek out goodness amidst stories that could easily be interpreted as tragic, or ugly or oppressive.

In examining the dimensionality and complexity of goodness there will, of course, be ample evidence of vulnerability and weakness. In fact, the counterpoint and contradictions of strength and vulnerability, virtue and evil (and how people, cultures, and organizations negotiate those extremes in an effort to establish the precarious balance between them) are central to the expression of goodness. (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 3).

Each portrait is divided into several sections. I begin with a description of a place within the museum, and how each young woman interacts with that place, followed by a description of the young woman and my impression of her from our first meeting. This is followed by her personal background, her early days of work in the museum, and her growth into her current position. Each young woman chronicled the complex relationship she has with the institution. The portrait concludes with her present and future in the museum and beyond.

Researcher Role

In portraiture, the role of researcher and participant are upended. The role of the researcher is not to control the experience, or regulate the flow of data. Rather, the researcher is in a place of vulnerability, entering unfamiliar territory, existing as an outsider, who requires guidance from more knowledgeable research participants. The three participants in this research have been engaged in their work for several years. They possess authority and expertise. They are able to share perspectives that are typically underrepresented in the museum field. Portraiture

allows these women the venue in which to share their knowledge rather than rely upon the researcher's perspective as the only valid source of data.

When using portraiture, the researcher is ever present “not only in defining the focus and field of the inquiry, but also in navigating the relationships with the subjects, in witnessing and interpreting the action, in tracing the emergent themes, and in creating the narrative” (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 13). Because I am so embedded within the process, I must take care to ensure that the voices of the participants remain at the forefront of the work, and must keep participants “in focus and in the light, always watching for ways her shadow might distort her clear vision of them” (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 95).

Inevitably, my sense of self is evident in the interpretation of data. Autoethnography, in fact, demands it. While in positivistic research this would be seen as detrimental to the trustworthiness of the data, in autoethnography, my own experiences are important data. In this case, my youth and my history of work experiences in museums are relevant to my research point of view, and all influence my lens. I must acknowledge, also, that as a white, middle-class, middle-aged woman with a middle-American accent, I understand the world through a privileged point of view. As a member of the dominant community, I lack the cultural and linguistic capital that Eldora, Neethi, and Seraphina possess, and can never truly understand the worlds in which they live. This work is presented through that privileged lens. Autoethnography allows me to grapple with the politics of this project, with my own professional work, and with my privilege (Denzin, 2003).

Confirmation of Data

Qualitative research, particularly research that seeks to describe norms, cultures, and beliefs, does not necessarily consider reliability and validity in the same ways as traditional

experimental design research. Rather than strive to present data that the data are unbiased, I ask the audience to recognize that my interpretation of the data is a worthwhile representation of the participants' life experiences. In autoethnography, "our work seems verisimilitude; it evokes in readers a feeling that the experience described is lifelike, believable, and possible" (Ellis & Bochner, 2000, p. 751).

The first way that I address these issues is to present my theoretical and methodological approach, thus acknowledging one of many interpretations of these data. I acknowledge my existing relationships with these institutions, and make my agenda explicit. I use "memoing" (Miles & Huberman, 1994, p. 158) or "Impressionistic Records" (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 188) to track my thoughts and ideas about emergent themes. To confirm the presence of a theme, I use the idea of crystallization. Crystals are three-dimensional objects that both reflect and refract, and what we see is dependent upon our angle of view (Richardson & St. Pierre, 2008). By looking at an emergent theme from different vantage points, I can determine if those points of view resonate with one another, or if they are dissonant. For example, all three of the women refer to "the upstairs people" and the stories they told that positioned the upstairs people above interpreters in the hierarchy were noteworthy. My own observations of the disparity between the upstairs office and the downstairs one, the descriptions that the former director gave regarding the need for outside expertise, the CEO's charts lauding Ph.D.'s on staff, and the recent institutional history that displaced the diverse education staff, all pointed to this as an important theme. Crystallization uses varied forms of systematic and emotionally driven data and analysis to bring forward a theme that might otherwise go undiscovered.

Conclusion

This dissertation project has undergone multiple iterations, and multiple doctoral committee chairs, since I began writing in 2012. The result of the varied frameworks, methods, and project designs is that I have an intimate and thorough treatment of the data from a variety of perspectives. The expanded duration of this project has also provided me with opportunity to receive feedback from my colleagues in the museum field and have hard conversations with advocates, allies, and opponents, helping me to realize that there is a void of both compassionate narratives and of non-dominant voices in the science museum field. I was struck by this notion when leading a workshop last year on exclusionary practices within dominant museum cultures. After two years of struggling to break through to an audience of privilege deniers, we (the facilitators) decided to stop talking to them and start talking to each other. In our third year of presenting together, we moved away from the front of the room, we turned our chairs into a small circle, facing each other, allowing the audience to encircle us. By modeling the uncomfortable conversations we wish more people would have, our audiences finally started to hear our voices in a different way, not as workshop facilitators providing a lesson, but as vulnerable men and women who have, for many years, had to negotiate where they belonged. The workshop culminated with reflective conversations in ways that I had never before witnessed at a professional conference, and participants were encouraged to go home and to continue the conversation through the new social lenses that they were beginning to develop.

Sadly, the follow up workshop was not accepted at the conference, but this research will be a continuation of those conversations. There is a desire, a need, and a social obligation to bring non-dominant voices to the discourse of science museums. While existing research has adequately demonstrated the academic and economic benefits of youth participation in museums,

we have, in a sense, reduced these young men and women to a set of statistics and benchmarks. We are so focused on the outcomes that we ignore the journey. We are lacking any portrayal of the joy, the melancholy, the pride, and the drudgery that youth interpreters experience through their vocation.

While the museum field preaches the need for diversity and broadened participation, we have not thoroughly critiqued the institutional structures that prevent full participation, nor have we reflected on the practices, norms, cultures, and values that require outsiders to change and assimilate if they are to belong.

Through this project, I present a portrait of one science museum, and three young women who work there. Using critical autoethnography and portraiture, I analyze interviews, field notes, artifacts and researcher reflections to explore the ways in which these women understand their experiences within the museum. I create a narrative for each that will help the readers to better understand the experiences of museum youth workers from non-dominant communities, and to hopefully, encourage the readers to reflect upon their own practices and position. Drawing from critical pedagogy, I explicitly address issues of power and privilege, in particular, the ways that youth negotiate their places within the dominant museum culture. The resulting product is an eclectic collection of stories and reflections that chronicle the complex relationship between three different young women and the place that they work.

Chapter 4

Portraits

Portrait 1- Eldora Ruiz

“When I was a trainee, right, I thought everything was perfect. When you become a senior, you kinda see things, and you start to recognize things within the institution, like woah, this still happens?”

The Museum

As I exit the silver bus, after a half hour ride from downtown, I look among the movie posters and nightclub flyers for a sign to tell me where to go next. Down the sidewalk and through the turnstiles, I spot a small gray plaque in the corner of the dirty platform. The plaque is partially covered by black-marker graffiti, but it lists the name of the museum and has an arrow pointing to the right. I follow a crowd of people through a heavy wooden door with a broken windowpane and down the steep steel staircase. The people around me are all speaking Spanish and most are carrying grocery bags or backpacks or strollers. Every few steps, I pause behind a woman with a black ponytail and a gold tooth, as she struggles to carry a chubby toddler in a pink stroller down the steep flight of stairs to the sidewalk. She is slowed by several people who stop at the base of the stairs to light cigarettes.

I step onto the street and dodge through a row of yellow taxis blocking the congested intersection. I am quickly hit by the smell of trash and exhaust fumes. I pass a deli, a small laundromat with telenovelas playing on the oversized TV, and a brick apartment building. Loud *bachata* music pours out of the entryway to the building, where three teenage boys laugh and drink colorful Jarritos sodas. In the shade under the train tracks, two women with wavy black hair and long denim skirts sell corn on the cob and sausages. The food is being cooked in an

aluminum tray resting atop a shopping cart that has a small fire built in the bottom section. I pass a group of young boys on bicycles, then two women in tight-fitting club tops and stretch pants pushing baby carriages, their long black hair pulled back tightly into ponytails. A man with a thick mustache and a dirty flannel shirt walks ever so slightly too close to me and growls "*Hay, que linda*" [how pretty] in my general direction.

Three blocks from the bus platform, I am in sight of the museum, with its iconic silver and black spheres gleaming in the sun. There is a large empty parking lot and a dusty patch of grass between the spheres and me. A man is snoring loudly in the grassy area under a tree. Several empty beer cans are strewn around him. Across the street are several three-story brick apartment buildings. Each unit has a small balcony with white iron bars. Laundry hangs over some of the railings. Other balconies are filled with children's toys.

I near the driveway for the large silver and red brick building. A well-manicured lawn lines the long winding drive that leads toward the parking lot. A silvery 8-foot wire fence surrounds the facility, and the only entrance is through a tall, frosted-glass revolving door, under some tall silver letters with the name of the museum. Once inside, the clientele are surprisingly different from the people I passed outside. A thin, pale woman with blond fluffy hair runs quickly past me and grabs the arm of a toddler who is about to make a break for it. "McKenna! Don't you dare!" she shouts. A ginger-haired family of five pays admission at the front desk, their matching green polo shirts an obvious attempt to easily identify each other once they get into the busy museum. A gray-haired white woman in a bird embroidered vest and perfectly ironed linen pants walks over to a young boy in a dinosaur t-shirt.

The guard they call "Shark" greets me at the entrance. He is a big guy. At around six feet four inches tall, and near 300 pounds, he could be intimidating if not for his big friendly smile.

His dark brown skin contrasts the bright white of his security uniform shirt. He shuffles me past the security gate and sends me toward the escalator. I walk past a cafeteria into a large, open two-story hall. Huge orange and white DNA strands hang from the ceiling and neon lights flash from various points in the room. The exhibition is loud with buzzers, synthesized music, whirring sounds, clanging sounds, laughter, shouting, a few screams, and mechanized voices from a computer kiosk. Below, some cartoonish walls cordon off several sections of the new exhibit. Bright pastel colors cover each wall, and computer animation stations keep visitors busy.

I walk down the stairs, and a yellow-vested girl quietly guides me down a narrow pale windowless hallway past several white metal doors, most of them closed. Rows of fluorescent lights bathe the hallway in a cool bright light. Old gray laminate tiles cover the floor. There is nothing on the walls. No posters, no windows, no color, just a long sterile hall of white and gray. After about 50 steps, I turn the corner and reach three opened doors. As I stand in the hallway, there is one door to the right, and two rooms to the left.

To my right is a room with three sections of green lockers, a few of them covered in small stickers that have worn away over the years. The floor is dirty and a few of the tiles are broken. A heavy wooden table takes up a significant portion of the room and is surrounded by a number of mismatched chairs, several of which are held together with duct tape. Three people are sitting around the table reviewing some documents and drinking cans of Coke. A large corkboard hangs behind them, draped in sketches of cartoon characters, a sign up sheet for people who want someone to substitute for their shifts, and several restaurant menus. A microwave sits atop a fake wood TV stand in the corner, stacked with paper plates and a pile of plastic spoons.

I am told I will meet Eldora in the basement meeting room of the interpreter office. It is an 8 x 15 foot room, hidden behind the interpreter break room off of the main hallway. The room holds a large wooden table, partially covered with plastic bins and cardboard boxes that spill over onto a gray metal cart. Eight chairs surround the table meant for six chairs, so that two of them are wedged up against a TV monitor in the back left corner. In the front right corner of the room there is a metal shelving unit that holds various shapes and sizes of plastic bins, some tall and purple or green or red, others flat and clear or gray. Bits of string and plastic tubing poke out of the top of one of the bins. Another holds big wooden blocks. This room is really more like a very large closet.

Ductwork hangs low from the already low ceiling, and a row of florescent lighting hangs between the ducts. I can clear it, but a tall person might have to duck. There are two white metal doors in this meeting room. One leads out to the front section of the interpreter office, a locker room of sorts where staff gather in the morning and take their lunch breaks in the afternoon. The other, on the left wall, leads to a boiler room, a dark cellar-like space with several noisy heating and air conditioning units. Even with the heavy door closed, the loud whirring and occasional clang from the units can make it hard to hear.

Meeting Eldora

Eldora turns the corner from the hallway and bounds into the room with tremendous energy. When her supervisor points in my direction, she immediately comes over and shakes my hand vigorously, and apologizes for being late.

“Oh my God, Hiii! I’m so sorry. I was just doing a magnet demonstration. I had some visitors stay after because they had some questions. They were so cute.” She speaks loudly and quickly. Eldora barely catches a breath before launching into the next several sentences.

“It’s so great to meet you! I’m so happy that you want to talk to interpreters. I love my job. I think people should know that. Have you been waiting long?”

“No,” I say. “I’m fine. I just got here. I was just catching up with Shanti.”

“Okay great. Let’s go in the back. No wait, I need to get a drink of water. Is that okay? Did you want some water too?” she inquires.

“No thanks, I’m good. But you go ahead.”

“Okay. Am I talking too fast? Sorry, I know I’m talking really fast. I just, I still have energy from doing the show. There were so many people today. Let me get a drink of water.”

Eldora’s brown hair frames her wide, olive-toned face. Long swoopy bangs hang over her eyes. She wears a black t-shirt that hangs low on one shoulder, revealing a green bra strap, with jeans and black converse sneakers. The standard interpreter uniform, a sunny yellow vest, completes the ensemble. We move some boxes of springs and pulleys from the large table in the interpreter meeting room, and pull up some chairs. I ask her to tell me about her job.

“Well, I’m currently a senior interpreter at the museum. Um, so it’s the second highest position for interpreters, below supervisors of course. So I get to train people and help them learn to interpret. I like that. So I was interested in talking to you because I really really like what I do here.”

“How long have you been here?” I ask.

“I have been here for four years, wait, yeah, oh my god, yeah it has been four years. I started as a volunteer because back then it was a volunteer position to start so I was like an apprentice and then eventually I moved up.”

“So when you say moved up...”

“Oh, yeah so moved up, I got promoted, We have lots of different levels here so you start off doing simple stuff as like a trainee and then you get promoted to an apprentice, and then after an apprentice you are an interpreter, and after interpreter you are an advanced interpreter, and then a project interpreter and then some people can be a senior interpreter.”

She shows me a chart on the wall that outlines all of the positions and lists the names of all of the people at each level.

“It took a while because, man, I was so quiet at first. You wouldn’t know it now because I talk so much but I was really, really quiet.”

I agree with her that she does not seem very quiet.

“But that’s what is good is that lots of us started quiet but people are here to help you and support you and you find someone you can look up to and you start talking too. That’s why I love my job. Because I get to help now.”

In making these stories anonymous, I chose to use the name Eldora for this girl. In Spanish, Eldora means “golden” or “gift from the sun.” She brings light and energy into the room. Despite the difficulties she has faced, she finds the positive side to every situation. This would be the first of five visits with Eldora. I can remember when each conversation occurred because each time her hair was a distinctive color. In this first meeting, her hair is light brown. We talk about the basics of her job, and I observe her as she interacts with visitors. In our second visit, her hair is a darker shade of chestnut, and is cut to just below her shoulders. I shadow her on the museum floor where she performs a demonstration about air pressure for 20 young children on a field trip. We have lunch with some of the other interpreters, and she spends some time supervising the rest of the interpreters as they work. The third day, a few weeks later, she has a streak of green hair. After a few hours on the floor, we spend some time outside, and she

shares some more personal details of her life, her struggles, and how she has grown. On the fourth visit with Eldora, the green streak has turned blue. We meet as a group with Neethi and Seraphina, and talk together about the broader societal and institutional issues that affect our work. Finally, after writing up segments of this chapter, I check back in with her, share pieces of what was meaningful to me, and ask her to help fill in some of the gaps. This time, it's like catching up with an old friend. She hugs me as soon as she sees me, and asks about my projects at work. Now, all of her hair is a dark purple color.

The information I present throughout the portrait is not presented in the order of our interviews. The details have been rearranged to flow in chronological order, as Eldora advances through her life. The personal stories she shares were not the first stories she told me. They came much later, and only after I opened up about some of my own familial struggles, and after we developed a mutual trust. I begin this portrait with her youth, family, home life, and her decision to become an interpreter. This is followed by some of her advancements at work, and finally, her relationship to the broader institution, and her aspirations for the future. Along the way, I reflect on some of my own experiences in the workplace, and in my transition to academic culture, and I cite research that aligns with the conversations that Eldora and I have.

Eldora at Home

It's a beautiful day. The weather is warm, but not hot, and the sky is sunny, so Eldora and I decide to walk outside to talk. The museum is located at the edge of a large wooded park, one of the few green spaces in the area. We walk along the path and find a park bench. The heavy steel bench, painted green, has metal bars that segment it into smaller compartments, so that homeless people cannot stretch out and sleep. This mechanism seems to work, because we see a man stretched out in a patch of grass under a tree.

As we sit beneath the tall oak trees, I explain to Eldora some of the reasons that I want to do this study. I tell her that I grew up in a low-income neighborhood in a diverse immigrant community, that neither of my parents worked, and that I was the only person in my family to go to college, so I know what it's like to feel out of place. I tell her about the museum director who, several years ago, told me that some kids were "too ghetto" and how I became obsessed with getting museums to start to talk about these kinds of assumptions. I tell her about some of the amazing young people I have met over the years- some friends, some relatives, some students- who have been through challenging times, but who have gone on to do incredible things. Those are the people who inspire my work.

There is a cool breeze uncharacteristic of the generally thick, still air that sits heavily between apartment blocks. I can almost forget I am in the city, if not for the occasional siren or rumble of a distant train. I ask her how she came to work here. Eldora pauses for a moment. A bright green shock of hair falls into her eyes. It's a long silence by her standards. Then she begins. "I have six siblings, so it's a biiiiig family."

Eldora tells me that her mother, father, older brother and four older sisters moved from Mexico to the United States in the early 1990's. The children were all under 10. The family didn't know anyone here. They saved up enough cash to rent a tiny basement apartment. When Eldora and her sister were born a few years later, the family moved to a slightly larger apartment, and they have lived there ever since. When she was two years old, her father passed away, and her mother, Candela, raised all seven children alone. She was the outcast in her own wealthy family. The youngest daughter of an alcoholic father and mother who died during childbirth, to the family, "ella fue un error" [she was a mistake]. She married a man considered beneath her social status, and was disowned by her father, aunts and uncles. There was no assistance or

support from other relatives. So Candela, Eldora, and her siblings were completely on their own in the United States. Only once did Eldora visit the extended family in Mexico, but she was greeted with the same calculated disinterest, and was frequently left alone on the large estate when her aunts and cousins went about their days without acknowledging her presence.

Eldora's mother Candela became very strong and very serious. She was determined to do what she needed to do to take care of herself and her family. She joined a church, and the religious community became her family and her support system. They helped her get through some of the difficult times, but they also imposed strict guidelines that the family needed to follow.

Most of Eldora's family lacked a legal presence in the United States, so finding work was difficult, and her mother struggled to make ends meet. Everyone took on odd jobs to help pay for rent and food. Some of her older siblings took some college classes, but because they did not have permanent residency, they were not eligible for financial aid. Some took classes one at a time, as they could afford them, from the community college, and worked to get their green cards. Because community colleges in the city are notoriously difficult to graduate from, they struggled. Her brother took 12 years to get his associate's degree. He also got his working papers and now has a full-time job. Most of her sisters gave up much sooner. Because she and her youngest sister were the only United States citizens in the family, they were encouraged to focus on education, but they also warned her:

When I was younger, my mom was like, you gotta go for education, right. You gotta try to be the best person you are, because despite whatever you can do, people are gonna come to you and say, you know you probably don't belong in this area, you don't belong

here, but you gotta prove that you are, at least to yourself, and so when I was young I did, but I did it more for her than I did for myself.

Through her teen years, however, there was much tension between Eldora and her mother, mostly around religion, which carried over into everything else. Her mother is a strict Jehovah's Witness, and believes strongly that non-believers are morally corrupt and destined for damnation. And that included her daughter. Eldora was Jehovah's Witness as a child, but as she entered adolescence, she began to question the faith, causing a rift between her and her mother. They argued often and her mother regularly expressed her disapproval. Her mother's strict religious perspective gave her lots of rules, and Eldora rebelled against those rules.

Because she felt like an outsider at home, she sought social support elsewhere. Eldora began spending as much time as possible away from the house and from her mother's disappointment. Around the age of 14, Eldora started hanging out with a new group of friends, friends that her mother did not like.

If you would have talked to me when I was 14, I was like mute. I didn't talk, I had this colored hair, well I still have colored hair I actually just did it yesterday, I had the whole, like, wearing band t-shirts and stuff, and so I felt out of place even in my own home. I was with some not great kids. Because I was all alone and dealing with a lot, I thought that they were my friends, because everyone else thought I was a creepy girl with crazy hair and slipknot shirts, but they [the friends] accepted me for who I was.

However those friends drew her into some trouble. She fought often with her mother. She started skipping school. She made some bad decisions. By the time her mom found out, she had already missed a month of ninth grade.

I was conscious that what I was doing was not correct, but I needed some sort of stress reliever, I think I was desperate, like emotionally, maybe I should have seen a psychologist or something, but I don't know, I was a lonely child.

Her siblings had similar struggles. One of her sisters ran away from home, and didn't return for three years. During that time, she was in an abusive relationship. Eldora suffered from lots of stress during the years that her sister was gone, guilt that she couldn't help her sister, and anger at her mother for pushing her away.

Eventually, she realized that something had to change. She felt herself slipping away. Her brother already had a job at the museum, and he encouraged her to sign up to volunteer. The museum was just a few blocks away from their apartment, and it had the potential to turn into a paying job down the road. As someone who never talked to people, kept her head down and wore her hair over her eyes, this position did not seem like a great fit. She trusted her brother, and knew that work was a step toward something more positive.

Eldora Becomes an Interpreter

Eldora was really nervous in the interview. Even though she had walked through those doors of the museum many, many times before, this time was different. Her palms were sweaty as she approached the door to the conference room. She almost turned around and walked out.

It was a group interview, so there were ten other teens sitting around the table. Now she had to compete with all of them. Some sat quietly. Others had already struck up conversations with their peers. She didn't want to talk, but the interviewers helped to put her at ease. The interview was more like a set of games, and was actually fun. She surprised even herself when she was able to speak up.

When Eldora arrived for her first day of work, she was terrified. She knew the place well; her older sister and brother had both worked there, so the museum was not unfamiliar. This time she was walking in as a worker, and not a visitor and it felt different. “It was scary. It was scary at first because I didn’t like to talk to people and I didn’t think I could be good at it.”

It took a few months for her to get comfortable talking to people, but she remembered what her mother told her about proving herself to others. She tried hard. She liked that supervisors paid attention. If she arrived late, her supervisors would reprimand her. If she was late again, they would pull her aside to make sure everything was okay. She developed a connection to Seraphina, who was a senior interpreter at that time. Seraphina would give her some one-on-one mentoring when they were both working on the floor, and she would help her study all of the science she needed to learn for the demonstrations.

At the museum, Eldora found a different kind of support system. “I like how we are all different here. Like it’s mixed. It’s all different races. It’s great.” Her co-workers were all either college-bound or already in college, and her supervisors gave her encouragement and support as she looked into college options.

Seraphina would like, talk to me and I’m like oh she cares about me, she would ask me like “hey what do you think about learning next”, or ask me about my personal life. She would always be there, so I had trust in her. There was this team and they cared for each other.

Eldora was not always sure about herself. Girls like her did not go to college. Girls like her did not get science degrees. In contrast, at the museum, she was surrounded by people who made achievement seem possible.

There is more to an interpreter than just a vest. There's so much more. I forgot who it was, but someone was like this person did such a good job, I never knew she would be this knowledgeable, and I'm like "thanks but really? Why are you surprised?" But I'm like, "great, you finally realized." Even though they are young, they are not as knowledgeable as you, they may not have their Ph.D., or even a bachelors yet, but they are trained, and they are dedicated to what they are doing, because of what this program offers. There are so many opportunities, I got an email about getting scholarships, there is networking, it will benefit you so much in the future. So I feel motivated. Interpreters are the face of the museum. You come in the museum, what do you see, do you see people at a computer? No, you see interpreters. So they are representing the institution and I think people should look at that.

Eldora is now a senior interpreter. She interacts with visitors and does demonstrations, but she also mentors the younger students and helps them to move up the ranks. We spend a few hours on the floor during her supervising shift. She picks up pieces of trash from the floor and offers directions to a family. We visit the preschool area and she chats with an interpreter, asking her what she needs to do next to get certified on one of the live shows. In the background, children's music plays ("and Bingo was his name-o"). The girl assures Eldora that she will go for certification right after her finals, and Eldora scribbles this into her notepad.

Eldora loves working on the museum floor, but she also loves being able to mentor other teens. In the end, her motivation is not only to convey science or to share what she knows. Sometimes, it's to take away the pain. She can tell when a fellow interpreter is going through a rough time. She recognizes the dark circles under their eyes, the sadness when they speak, the mistakes they make when they are not able to focus, and she intervenes. Sometimes it is with

visitors, like the little boy who spent the afternoon with her shortly after his parents divorced and he hadn't seen his mom for a while. She knows what it is like to miss a parent, and so they talked not just about science, but also about how to feel better when you miss someone.

Interpreting is not only about science. It's about connecting to people at a personal level sometimes. But it's happened to me so many times that it's just like a relief. I want to give them the best, funnest times of their lives at least for five minutes and that they say, you know what, I felt better when THIS happened.

Eldora and the Institution

On our next visit, after a few hours doing show live shows and interpretations with visitors, we have a lunch break and decide to walk outside. We walk along the sidewalk in front of the museum. It's hot today. Eldora's blue streak of hair is fluorescent in the sun. We pause as a police car slowly rolls by, the driver releasing small bursts of the siren to announce his presence in the neighborhood. He edges along, sending out blurts of sound as three boys nervously pick up their pace across the street.

Eldora tells me that while she loves her job, she has also had experiences that made her doubt herself or question her abilities. Usually this occurs with museum visitors who challenge her authority. Sometimes her apprehension stems from interactions with staff from outside of the Interpreter Department. The higher she moves up the ranks, the more she notices. One thing that comes up frequently is language.

When I was in senior year of high school, I decided to work more on my enunciation and pronunciation. After a live show this guy came up to me and he was like, "Whoa, the way you talk was so proper. That's not what I expected you to sound like."

At first she was flattered that her practice had paid off, but after some reflection, she was frustrated that he was actually expressing shock that a girl with brown skin spoke in Standard English. “I didn’t understand at the time, but then I was like ‘WAIT! Does that mean that you think certain people have to talk like THEEES?’” She adjusted her vocal patterns to produce a more stereotypical Mexican accent.

Her brother, Max, had a similar issue, but that situation was far less flattering. He was running a birthday party, something he had done many times before. When he walked into the room, the parent of the guest of honor looked dismayed. Max is fairly certain that this response was because the parent did not expect a Mexican man to lead a party for her five-year-old white daughter. When another party leader, a girl of Korean heritage, came into the room, the mother’s demeanor shifted.

The mother than had the party was just like “Oh, you’re the person who is doing this birthday party?” And she just looked at him like this is not what I ordered. She bossed him around. The way that he described it was heartbreaking. It was obvious that she had a certain preference to who she wanted leading her party. When he started talking to the group she interrupted with “I can’t even understand what you are saying.” He was upset. He didn’t want to do birthday parties anymore.

The police car circles back around then creeps down the other side of the street before stopping, turning the sirens on full blast, and darting away towards the bus platform. Eldora and I sit on a brick flowerbox under a thin hickory tree. A few frail branches provide some shade. Eldora tells me that the list goes on. Little things that start to add up. When we talk about interactions with other departments, she takes a more serious tone and says “when I was a

trainee, right, I thought everything was perfect. When you become a senior, you kinda see things, and you start to recognize things within the institution, like whoa, this still happens?"

Eldora tells another story. One time, a videographer who produced all of the museum's marketing videos auditioned some interpreters for a short promo video. One of the lines was "You might be asking yourself, how does it all work?" One of the boys came in and read the lines. He was dynamic, personable, adorable, and had a great on-camera presence. Then he read the line. "You might be axing yourself, how does it all work?" The videographer yelled "cut!" and corrected him. The word was ASK not AX. He said the boy sounded like a hoodlum. The boy was taken aback. They had to compromise and change the line to "You might be wondering, how does it all work." Eldora looks around and then leans in toward me.

It's not obvious, but you know how within each museum there are certain things that are not obvious. Discrimination [she says this word quietly, as if she's embarrassed to say it] but I remember there was this one time where there was a girl, and, um, she had a very, um, interesting voice, and I remember the CEO didn't want her to do any more live shows because she didn't like her voice, so that was kinda messed up. And no one's gonna say anything against her because, you know, it's the CEO, so that girl all of sudden had to stop doing all of the shows that she has been learning for like two years.

She has begun to notice that the CEO, who just came on board a few years ago, has some distinctive preferences that are very different from the previous leaders. She wants the program to be more selective, and to seek out only the most advanced students in the city. The interpreters joke that she has a few favorites that she likes to show off. I ask if there are certain characteristics she seems to favor. She tells me two names. One is a tall and well-poised white

girl named Susan, and the other is an academically talented Asian boy named Jake. Eldora leaves it at that. I interpret her look to mean that she does not need to say more.

Eldora Now

Eldora feels fortunate to have had the experiences she has had, because they make her stronger, more compassionate, and more appreciative of what she has. She also has a great tolerance for people who may not appreciate what she has to offer. She isn't angry with the people who look down on her. She just thinks they haven't been exposed to enough diversity.

I think in an institution there is always going to be misinformation and people are always gonna stereotype you based on how you look, or how whether you have experience with school. I think because of that, because you are not given the opportunity, it's like, I'm not gonna choose you over someone who has, I think people assume that intelligence is something that's only based on a number, a certain race, a certain class, like you are gonna already be up here, versus someone who like, okay you might not have the grades, you look this way, and you represent this way. You are already stereotyped outta nowhere, because of how you look, the skin color you are in, apparently, um, so people are gonna just do that. It's unfortunate. It happens, you don't want it to happen, but it just is like that. People sometimes don't see it this way, or sometimes they don't even recognize themselves that they are discriminating against someone else. They are like "oh I just prefer her because she has, um, better grades." It's like, okay, you measured her, like she might be a smart person but it doesn't mean that she is the most intelligent overall.

She does hope that slowly, other people in the museum will start to figure this out, because she fears that with the newly implemented focus on selecting “the best and the brightest that the city has to offer,” youth like her will be left behind.

Because Eldora was the first member of the family born as a United States citizen she was also the first in her family who had a real opportunity to get financial aid and go to college full time. Her siblings urged her to do what they couldn't do. She struggled with discerning the hopes and dreams of her family from her own. Her mother wanted her to go to school to study religion, but Eldora was not interested. As punishment, she was banned from the church community, leading to a sense of loneliness that first friends, and then later the museum community were able to fill.

Despite the barriers, Eldora still has a sense of obligation to care for her family. Because her older sister isn't able to work, she will loan her money, or make up situations where she can pay her to help her. When her mother struggles to make ends meet, she offers to help pay the utility bills, because no matter what, her family has helped her to get onto her current path. She believes that her struggles as a child helped her to better appreciate her life now, and to be better equipped to do some good for other kids. That's part of why she loves her work, and why she feels that youth programs like this are important opportunities for other teens.

There is this feeling when interacting with children, like somehow I'll have a conversation with them and they'll end up telling me more about their lives, and sometimes I feel like a psychologist, because sometimes children will express themselves in ways that are kind of relatable to when I was younger and I think, I went through this, so I'll try to help you. I mean, I can't help you like that but I'll make you have a good time, for at least 5 minutes and make you happy. So I think that's one of my main goals. I

love making people happy, despite sometimes myself not being happy, but I want others to feel happy and be positive no matter what.

Today she is in her second year at a City Technical College taking her liberal arts requirements. She is thinking about studying biology, and maybe going into a health or medicine related field, but she's not sure yet. She also loves art, and has taken some painting classes. She feels like she is on the right track. She owes much of this to her support system and the opportunities at the museum. She gets resume and scholarship assistance, she attends STEM Networking nights, and she attends workshops on creativity, innovation and design. Mostly, she values her interactions with people from the interpreter department.

Good people. People who were motivational to me. The museum really helped me. It really changed my life. I don't think, it's weird but I don't think I would be the person I am today if it wasn't for the museum.

Summary

In this section, I present Eldora Ruiz, an exuberant, 20-year-old woman with an extraordinary sense of empathy, and a talent for almost intuitively understanding who around her is in need of emotional support. Her complex home life, once the source of so much pain, has given her strength, and she uses this strength to do good for others. A creative spirit and talented artist, when not at work at the museum or at the technical college taking classes, she is painting and taking photos that help her to express her grief, her melancholy, and her joy to others.

She has always been an outsider, but the interpreter department gave her a community that she needed. Eldora loves her work, and in many ways, believes it has saved her. However she regularly faces reminders that she is an outsider, not in the department but in the museum and in society. She and her brother have been underestimated because of their accents, and

questioned because of their skin color. She has been made to feel inadequate by others in the museum, not intentionally, but in subtle but penetrating ways. Eldora tends to forgive those who discriminate against her, even feel sorry for them, because she understands that they are ignorant or naïve, or have not yet been exposed to a talented Latino girl like her. She will forgive, but she will not forget, and she will use these experiences to grow stronger and more resilient, and to do more good for others.

Portrait 2- Neethi Joseph

It opens up saying you can be a chemist, you can work with plants, you can be a teacher, or even take science and incorporate it with museums, or even music, and you can change the world.

The Museum

The hotplate sizzles. Neethi Joseph, clad in a pink plaid shirt, bright yellow vest, orange safety gloves and huge plastic goggles, stands behind a large linoleum counter. The hotplate, a bucket, and two beakers sit atop the counter, along with various tubes and containers. Several children and their parents are gathered along the aluminum benches a few feet away. Neethi gently removes the Coca-Cola can from the hotplate with a pair of large metal tongs. She plunges the can into a bowl of ice water then steps back. The can immediately crumples, and the audience cheers.

Neethi wears a black headset microphone that amplifies her voice so that it fills the room. The sound echoes off of the tall glass windows that overlook the water park. This part of the museum is bright and airy. Light gray translucent panels cover a sloped ceiling on one side of the room, and tall ivory panels extend across the opposite wall, meeting at the ceiling at a large metal beam. Brightly colored prisms catch the sunlight coming in from outside, throwing an occasional ray of blue or orange light across the stage. A massive wall of silver LED ropes and blinking buttons extend the length of the wall behind the stage. Across the room, a glass case highlights a several cages inhabited by various furry rodents, busy at work digging tunnels and foraging for food.

The museum isn't very crowded this day, and Neethi's blaring microphone seems to be significantly unnecessary for the six children sitting in front of the stage. Regardless of how many people are there, she gives it her all. She moves purposefully across the stage as she encourages all of the children to gaze at the sea of air that is all around them. The children look up, then to the left, then to the right, squinting hard in the hopes of spying some of this air that Neethi is talking about.

At the conclusion of the show, three of the children come up to the stage and ask if they can touch the crushed can. Neethi carefully holds the can out to them, and asks them if they remember why the can smashed in so violently. They remember that the explanation had something to do with the air getting sucked out. One of the children notices a button on Neethi's vest.

"Pokémon!" he shouts "Do you like Pokémon?!"

"I sure do," she replies. "Who is your favorite?"

This opens the floodgates of pop culture, as the boys suddenly realize that her vest is covered in far more than Pokémon. Harry Potter buttons. Spiderman buttons. My Little Pony buttons. Every childhood cartoon or science fiction reference seems to be catalogued along the front of Neethi's yellow vest.

As the boys wander off, Neethi takes down her experiments and stores the components in a plastic bin. She removes her rectangular-rimmed glasses, takes off the microphone, and pulls her wavy black hair into a ponytail, revealing large silver hoop earrings that match her silver nose ring. She doesn't wear any make up, and her style, aside from the plethora of buttons, is simple and relaxed. Under the pink plaid shirt I can see a Teenage Mutant Ninja Turtles t-shirt. She greets me with a casual "hey," and I offer to help her clean up.

Meeting Neethi

Neethi Joseph is 18 years old. She is a freshman in college, likes to travel, loves to read, and has a newly discovered passion for photography. She is learning how to use a fancy DSLR camera at work, and recently learned how to make YouTube videos and use Photoshop. Neethi lives with her mother, father, older sister and younger brother. She wants a dog but her mother won't let her get one.

I admire Neethi's buttons on her vest.

"Oh thanks," she says. "I've been collecting them for a couple of years. They are good for icebreakers."

"Like to get kids talking to you?"

"Yeah, but also so it's easier for me to talk to them. I'm not always the most outgoing person, so it's easier to start a conversation when there is something to talk about."

"There must be at least 30 buttons on there. Where do you get them all?"

"Anytime I go to a comic book store or a toy store, I pick up a few. Some of them are just from the dollar store. Every once in a while a little kid will ask me for one, so sometimes I give them away, but now my friends will buy them for me whenever they see some."

Neethi's speech is unembellished, and she has a calm and steady cadence. Her sentences don't end in question marks, like many 18-year-old girls. She pauses between sentences as she thinks about what to say. Occasional phrases hint at an English dialect that is rooted outside of the United States. One of the meanings of the name "Neethi" is "truth," or someone who always speaks the truth, and that describes this young woman quite nicely. She is matter-of-fact and says what she means.

Neethi and I speak on four occasions. In our first meeting, we talk about the interpreter job. On our second day, a few weeks later, we discuss her family in Trinidad and her science teaching. A third visit takes place jointly with Seraphina and Eldora, where we discuss institutional issues, and a fourth conversation, over Skype, wraps up with some of her concerns about gender and career aspirations. Throughout our conversations, Neethi is enthusiastic about communicating the opportunities that her job has afforded her, and positive about the way the program operates. She seems generally content with life. She does not complain much, and just takes things one day at a time. She attributes this to her Trini lifestyle.

Neethi at Home

We sit on a bench near the hamster cages. The museum is quiet, aside from the low thwacking sound from the large ceiling fans above. I ask Neethi to tell me about herself. "I am Trinidadian," Neethi tells me. She pauses, looks up and holds up her hand, palm forward, then corrects herself. "Well, *I-ee* am American. Both of my parents are Trinidadian. I basically grew up going back and forth."

Neethi's parents were born in Trinidad and Tobago. They came to the United States for college, got married, had three children, and decided to stay permanently. She tells me life was difficult for them, managing work and family, so she spent much of her childhood being shipped back and forth between Trinidad and the United States. Eventually, her father decided to stay home to care for them while her mother worked.

Society's norms are father is the breadwinner and the mother is underpaid or stay-at-home mom. In my family, my mom is the breadwinner and my dad took care of us when we were younger. So for him, it's when you know what you want, go for it.

Her parents have always been very supportive. Her father, a paraprofessional with the board of education, has encouraged her to do whatever makes her happy. Her mother, a dietician at a medical center, has more specific goals in mind. She encouraged Neethi to pursue a career in the sciences. A number of family members back in Trinidad work as engineers or doctors, and Neethi's mother is set on Neethi going in to STEM as well.

My mother pushed me into the medical field. Like literally shoved me. Because she works in a field where she sees the need for more STEM based people, she is like, go for something you can get a job in. For her, passion is something you can always have on the side, but you need to focus on money.

When the time came to choose a high school, Neethi thought it would be best to let her mother fill out her applications, a decision she now regrets. Her mother enrolled her in a vocational nursing academy across town, however Neethi realized within the first semester that she was not interested in nursing. She continued at the school, traveling an hour and a half each way on the bus every day, at her mother's insistence.

When college application season began, Neethi applied to all six of the colleges in the city, but despite her good grades and numerous extracurricular activities, she was only accepted to one of them. The college was her last choice school, and was just a few blocks from her home. There was a stigma attached to going school to in that area.

I grew up, it sounds bad but when I was younger my dad said that that school was the college of Independence Ave. And for me, we normally associate Independence Ave as, eh, its brown people area, the majority of it. I grew up on Independence Ave and as soon as people see me they ask me where are you from and they say you must be from

Independence Ave. So I did not want to go to school there because I grew up hearing about that.

She begrudgingly registered for classes, there just a few blocks from her home, and takes the bus across town two days per week to attend her job as an Advanced Interpreter at the museum. This high level position is a job she has worked up to over nearly three years, and a job that she hopes to continue with for several more.

Neethi Becomes an Interpreter

Neethi still is not sure how she was selected to be an interpreter. Not because she didn't think she was good enough, but because she doesn't actually remember applying. The application requires several pieces- school transcripts, personal statement, and resume- and she claims she never submitted those things. She lives on the other side of town, so she never even visited the museum. Nevertheless, she received an email inviting her to attend a group interview. She thinks that the application might have been her mother's doing, though her mother vehemently denies the accusation.

Neethi needed a job. She did not want to work at a grocery store like her sister, so she decided to take the chance and showed up, completely unprepared, for the meeting. She realizes now that her interview was probably pretty awful. Each applicant had to stand up and give a one-minute science presentation. In her 15 years of life, she had never done any formal public speaking, so she had no idea what to present. She laughs as she tells me what she did.

So I just listed all of the sciences that are there and that was my presentation. I said the definition of biology is... the definition of chemistry is... I listed every kind of science I could think of, and I gave the definition.

Still, she got the job. This was Neethi's first work experience. She came into the position knowing nothing about work, nothing about professionalism, and nothing about how to interact with other people. She was awkward. Her primary engagement strategy when meeting peers was to smile, say hello, and bring lots of cookies. She loves cookies, and so each day of work, she would buy a package of cookies from the corner store, have one for herself, and share the rest with others, hoping that those cookies would help break the ice or buy her some affection.

She did not talk to many people in the beginning. She thought her peers were too cool and found her supervisors too intimidating. Fortunately, the Advanced Interpreters were very good at providing encouragement and support. They were teens, just like her, who had come up through the program. They once had the same fears and anxieties. They once knew nothing, and now trained and mentored others. If she was afraid to ask a supervisor, she could talk to one of them. If she didn't understand a concept, she could listen to the way that an Advanced Interpreter communicated the idea. Slowly, she improved her science content and communication skills. She recently had an assessment with her supervisor, where she had to watch a video of that very first interview where she defined science fields, and then a video of a recent talk she gave about the biochemistry of obesity.

Looking at the person in the beginning to now, I really didn't think I would be able to get this far, but I've progressed and that's good. I have a couple of things I need to work on, like I have to look at people when I am talking to them, or I speak too much with my hands, but those are little things.

Her first attempts at public speaking were marred with failure. Before being allowed to do a live show with the public, an interpreter must pass a pre-certification, where content knowledge is tested for accuracy and clarity. For her first live show, Neethi attempted pre-

certification and failed five times. She nearly quit her job over it. This was really frustrating for her, so now that she is an Advanced Interpreter, she makes sure to set trainees up for success by incorporating different learning styles and making sure they understand the content fully before sending them off to be assessed. She was grateful for the assistance she received from older interpreters, and now wants to do the same for the younger trainees.

Um, a lot of the senior interpreters, they were really approachable. Things I wouldn't ask in training, and ended up asking them, and I watched them do shows and they were so lively and enthusiastic and I thought "I want to do that. How do I do that?" It was kind of motivational because you saw them do things and they would balance like being there for you but also being professional and making you do certain things.

I ask her more about her interest in teaching. She tells me that a turning point came when she and some other interpreters were asked to assist with a summer camp last year. She was a camp counselor for a group of sixth graders when she became fascinated by the varied learning styles within the group. Some students responded to hands-on learning, while others enjoyed reading. Once she began to recognize that she could appeal to different learners in different ways, she noticed a change in the students.

So I was working at camp one summer. It was sixth graders. Same age group that I swore I would never teach. It really hit me that different people learn things in different ways. I'm the person who learns hands on. Other people like reading. So working with that camp was able to show me that I knew how to fit the needs to get through to the kids. And once they got in and understood it and realized there is a certain respect, they weren't rude, that was a turning point for me. I was like, I can do this!

Another major opportunity came for Neethi last year, when she was selected to attend a week long archaeology camp in Colorado. Sponsored by a foundation focused on increasing opportunities for women in STEM fields, the program provided Neethi with free tuition and transportation for an adventure that included excavations, rock-climbing, weapon-making and networking with scientists and other teens to learn about Native American culture. She learned how to be independent, how to challenge herself, and how to work with people who are very different from her. For a girl who was obsessed with the TV show “Bones,” which is about a female forensic anthropologist, this trip was a dream come true. She also participated in an internship at an art museum, where she learned about the intersections of art and science, and interacted with an entirely different audience. From internships to college prep workshops to STEM nights at the museum, Neethi’s job has afforded her opportunities that she never thought possible. I ask Neethi why she thinks the program works so well.

I think ours is successful because we have structure. We also have different age groups so we have freshmen, like baby 14-year-olds and people who are getting masters like in their 20s, so there is a huge range. If we need help we ax each other for help because someone should know. We’re fun! All of us have like our individual bubbly personalities, and that just like adds a uniqueness to each training or different sessions throughout the day. Seeing how other museums have their staff, they are similar to us but I think ours is the best.

Neethi appreciates being in a place where she can be herself. She likes being surrounded by other people who take their work seriously. She believes that her peers take work seriously because they are trusted by their supervisors. She also thinks that the interpreter supervisors are strategic in hiring people who have room to grow, and offer the means for that growth to occur.

We actually have people when they start out they are really, really shy and after a couple weeks they realize who their coworkers are and how their coworkers are and they break out of that shell. And they are able to just be themselves.

Neethi has concerns regarding gender equality, but not in the way that I expected. While her understanding of the gender gap in sciences has grown since working here, she is far more concerned with equal opportunities for young men. Many of the scholarships, programs, and resources are designed for girls in STEM, and so boys are turned off. She cites the lack of male participants in the higher levels of the interpreter program as evidence.

“Sexism is a huge thing. A lot of people just associate women as secretary/teacher/stay-at-home mom, or one of those and when I came here I learned sooo much about women in STEM.” She talks about a campaign at the museum by a major cosmetic company, highlighting careers for women. Her usually steady vocal pattern rises and her pace quickens. “It made me realize, women, we are *making it* somewhere.” Neethi suddenly takes on a more serious tone.

Now to see that the male population here is decreasing, it kind of scares me, because we need male role models, and if they don't see them, who are they gonna look up to, because boys still have that tendency of “it's a girl. How am I gonna look up to a girl?” She is worried that boys are not afforded the same opportunities as girls, and that their education suffers because of it. I ask why there are fewer men working there.

Society is focusing a lot on girls, and because we are focusing on girls, we don't do enough for boys, for example, they have an application going out for the archaeological camp we are partnered with, but the application is only for girls, and I know a lot of guys who want to go, but who has \$2000 to spend on airfare and \$5000 to spend on a camp?!

So the boys are not seeing that as fair, and are saying, okay, well, I guess I will find opportunities elsewhere.

Her brother, for example, is considering taking a job at a grocery store rather than applying at a museum. Neethi believes that he prefers the grocery, because he can lift heavy things and stock shelves; masculine tasks that he feels comfortable completing. He is less convinced by the work in the museum.

My brother just needed a job, so he said “I can go to the grocery store because they need people to like lift boxes.” When I suggest he come here, he was like, “the science that you focus on is like the science that you teach in schools.” And if you look at schools, teachers are majority women. I had to literally talk sense into him that you can do whatever you want in the science field it doesn't have to be teaching. And he has been here and he has seen that you can do so much more.

With a family full of engineers and doctors back in Trinidad, Neethi finds that her work in education is viewed as an inferior career field. On her trips to Trinidad, she had to explain in detail what her work was, and then justify why it was worthwhile work. Her father likely had to argue his position as well, as both a paraprofessional in a school and as a stay-at-home father. She wants to make sure that young men are not left behind in the push to move girls forward, and so in her work, she is careful to give boys meaningful feedback and support early on, so that they don't decide that museum work is not for them.

Neethi and the Institution

We take a stroll through the gallery, past the hamsters, and the web of ropes, down the steep metallic stairs, and beyond the water park. On the opposite side of this space, behind the simulation of a rainbow, is an alcove with an austere wooden door and a small sign marked

“STAFF ONLY.” Neethi scans her ID card at a gray panel, the panel beeps, and I hear a loud click as the door unlocks. Neethi turns to me and lifts two fingers to her lips, so that I know to be quiet. We pass through the door to a receptionist desk, where a woman looks up at us, and then back down at her computer. We walk down a long curved hallway that opens into a bright room with four rows of frosted glass cubicles. On the wall nearest the hallway is a modern looking glass-walled conference room with a sleek pale wood cabinet. The other three sides of the room are lined with large well-appointed offices each with big bright windows overlooking various views of the park. We stroll silently through the cubicles, most of which are empty of people. There is a galley kitchen lined with tall maple cabinets, and complete with full sized refrigerator, dishwasher, and coffee station. Neethi picks up a napkin and some cookies from a tray on the counter marked “ENJOY!” Across the hall is a door to a modest classroom with numerous bookcases, tables, and a staff desk. A set of glass doors leads back out to the exhibit floor. We emerge through the glass doors and walk down to the water park, an outdoor space filled with enormous metal structures covered with flowing, gurgling streams of liquid. Here, in the shadow of the fountain, we sit to talk.

“So, what’s the deal with the offices we just walked through?” I ask. With shiny chrome features and tall windows, that space stands in stark contrast to the drab windowless education offices in the basement.

“Ha!” Neethi begins, “yeah that’s where all of the important people work.”

“Important people?!” I cannot tell if she is being serious or sarcastic.

“Like the vice-presidents and stuff. Well I guess before I started here, that was, what three years ago, the cubicles in the middle was where all of the education people was. Like the instructors and the teacher programs people.”

“I thought the education people were in that big room downstairs?” I inquire.

“Well yeah, they are now. But before, they was upstairs.” She takes a bite of a cookie, and offers me the other.

“Do they always have free food?” I ask, looking at her cookie.

“I don’t know. I hardly ever go up there. I mean, I guess interpreters used to hang out up there all the time, when education was there, but now, we just never do. Unless there is food!”

Shortly before Neethi started, the new CEO relocated the education staff down to the basement. Rather than the cubicles being occupied by the former interpreters who became the education staff, they were home to an ever-rotating set of visiting researchers and temporary program managers.

“So now, I don’t really know who is up there. I never go up there. It just seems kind of off limits. There are lots of people here who, I have no clue who they are, I mean I get emails from them. I know names, but I don’t know who they are.”

“So you never go up there for meetings or to work with anyone?”

“Upstairs area, like there’s a bathroom there, apparently that’s for staff! I didn’t even know that! I didn’t know that I was allowed to use their bathroom.” I make a reference to separate drinking fountains but it falls flat.

She continues. “It is awkward walking through there at times. I’m okay with the majority of the people who work down here in these offices. But the other people upstairs....”

“What about them?”

“Like here is this pretty dressed woman and here’s me all ahhhh! I kinda felt intimidated.”

I ask her why the people upstairs make her uncomfortable. She cannot pinpoint a reason because they never do or say anything bad. It is the lack of interaction that is troublesome. She describes a time that she had to attend a meeting in the executive conference room. Everyone in the room became completely silent. No one spoke. No one said hello. Everyone worked quietly. She felt that they looked up at her like she did not belong there.

I tell Neethi that I feel fortunate to have my program situated in the main office area, along with the rest of the professional staff, which means that the youth who work at the museum walk through the same staff doors as everyone else, use the same staff restroom, and pass professors and administrators regularly in the hall. Though we feel lucky to have a great space, it is evident that not everyone loves having us there. I tell her that recently, some yogurt was taken from a shared refrigerator. This occurred on a busy holiday with numerous new volunteers in the building. That also meant that my students did not have class. Nonetheless, I was approached to see if my students took the yogurt, and was advised that they be more careful. I burst out “More careful?! How should they be more careful? Should they try to be less young? Or less black? Or should they cease to exist because they weren’t even here that day, so if they have to be more careful when they are not even in the building, I don’t know how to help them do that!”

Neethi laughed. “Yeah, that’s pretty much how I feel sometimes. I kind of thought I was the only one.” Fortunately, Neethi has a very different experience in the basement, where peers and supervisors are warm and accepting. If she came to the museum and only met the people upstairs, she never would have lasted these nearly three years.

Neethi Now

I ask Neethi what she wants the readers of this paper to know. Neethi wants people to know that interpreters are important.

Interpreters are needed. I interned at an art museum. They have tiny signs with small print. I think it would be a lot cooler if there were someone there who said “Hey! Galileo did this because he had this or because he was crazy in a good way.” To bring that energy of “this is awesome, you should check it out.” It’s needed.

We talk about *who* should be interpreters. She was hired as a child with no experience, but in her internships she has noticed a much wider range of people who do this work. I ask her why high school and college students should do this work.

High schoolers need the opportunity to get out there, and this has helped me a lot with getting out and seeing the world. I’ve done several internships, I’ve created my own app, I even got to go to an archaeology camp in Colorado, and yeah, it was pretty cool. High schoolers need the opportunity to break out of that shell of just schoolwork, schoolwork, schoolwork, SATs. And for them to get a job like this they are both learning as well as sharing their knowledge. It opens a whole opportunity to see careers in a different way. Because in high school they are like okay I want this major, I wanna get into this college, and in college you are like, okay but I want to get a job. It opens up saying you can be a chemist, you can work with plants, you can be a teacher, or even take science and incorporate it with museums, or even music, and you can change the world.

As most 18-year-olds, Neethi is struggling to decide what she wants to do with the rest of her life. Her career aspirations change regularly. At first, she changed her mind often because she did not know what options were available. Now she finds that she has too many options. Many of those new ideas have come from the professional development offered at work. She participates in resume writing and interview workshops after hours, and last month, her manager

led a workshop on financial aid. Every month, the program hosts a STEM night, where professionals from various careers give presentations about their work.

Normally when a kid is growing up they want one of three jobs. Like doctor, lawyer or engineer. With the STEM nights I have been able to meet developers of games, I have met chemists, and it broadens the whole career field because I like choices.

Those choices can be disorienting as well. The first time we met, Neethi told me that she had just switched her major to biology from speech pathology. A few months later, her plans are changing again.

This job has shown me so many options, that it confused me at one point because I went from wanting to be a surgeon to wanting to be a nurse because of my mom, then I came here, and wanted to be an anthropologist, an archeologist, at one point I wanted to go into medicine. For now I'm going to focus on earth science and psychology and once I graduate I will jump straight into physical therapy, but I also might want to go into teaching. My dad is a paraprofessional, so I swore that I would never teach. After working here and seeing, I really like teaching kids and they understand and get it and I like that. So as long as I have options, I'm cool.

Now, at the end of her freshmen year of college, she has decided that going to school on Independence Avenue was not so bad. She enjoyed her experience, but because she decided to change her major again and transfer to a different school. She is not worried. Neethi knows that it will all come together at some point. Through her work at the museum she has had the opportunity to network with so many people in so many career fields, some who grew up on Independence Avenue, too. And when everything falls into place and she gets her degree she will finally tell her mother that she changed her major.

Summary

Neethi Joseph is 19 years old and enthusiastic about nearly everything she does. She wears her interests, her passions and her hobbies in the form of shiny buttons on her bright yellow vest. Neethi takes advantage of every program that the museum has offered her, including meetings with scientists, workshops with engineers, and a summer archaeology camp in Colorado. While her mother has pushed her for years toward a career as a doctor or a nurse, Neethi's experiences at the museum have helped her to gain understanding of dozens of career possibilities. Neethi has always liked science, but through her work she has learned that she loves teaching and mentoring as well, and exercises all of these talents in her new position as an Advanced Interpreter. Within the interpreter department, Neethi is concerned with the lack of opportunities for young men. She believes that boys might also be discouraged from working at Metro Museum because of the lack of male role models and the stigma of education as a female field, and so she puts energy into supporting male members of the team. In her three years of employment, Neethi has had few interactions with staff from outside of the department, and so her knowledge around the people and operations of the institution are limited, so limited that she just learned that there is a staff restroom in the "upstairs" offices. She does not aspire to a career in the museum, in part because she has not been exposed to many options. Neethi is now in her second year of college, and still has a list of a half dozen possible career possibilities. Whatever she chooses, her work at the museum has ensured that she will choose something that makes her happy.

Portrait # 3- Seraphina Persaud

“Maybe if someone had spoken up at that time, things would be different now. I just feel like we are treated as if our work isn’t as important. I don’t know if it’s because of the race or ethnicity of our team, but I think it could be easy to make that connection.”

The Museum

It is a busy day in the museum. The time is only 10:15, but a few hundred elementary school students have already arrived on big yellow school buses and are pushing and shoving and shouting their way into the museum. They are gleeful as they pass through the heavy glass doors and onto the exhibit floor, where they run toward anything shiny, or noisy, or glowing, or bouncing. There are ample choices. This area of the museum is divided into two floors. The first floor houses a temporary exhibition about animation and art, and is filled with life-sized cartoon character cut outs, Claymation stations, and video green screens. A half dozen videos are playing simultaneously, creating a clamor of voices and music that echoes throughout the space. In the far left corner, atop some black rubber mats are two table-sized trays of soap, where visitors can make bubbles as big as their bodies, or just splash and slip in the gooey liquid. In the far right corner there is a touch tank, where visitors can poke and pet small aquatic creatures.

The second floor is a sort of balcony that surrounds the first floor on all sides. A tall silver railing borders the room. One section has a new exhibit about the human body, complete with diagrams of lungs and models of the birthing process. Another section is about astronomy, and contains model space shuttles and star maps. The largest section, and the biggest draw for the children, it seems, is an exhibit about light, color and perception. The clunky exhibits are outdated and heavy with text, reminiscent of a 1980’s mall arcade. Sizeable black lacquered

cases surround panels of tiny white text. The kids nevertheless run toward a laser, or prism or colored light and start pushing buttons. It's here where the interpreters do much of their work.

There are three interpreters working the room. One squats down near a light box to explain in Spanish how prisms are used to refract light. One interrupts a near-fight between two boys who want to use the same handle to spin a wheel. A third draws applause when she uses a mirror to pretend to levitate a chair. I ask them all who taught them how to do their job and they all give the same answer- Seraphina.

Meeting Seraphina

Our first conversation happens by chance. I was standing in the hallway outside of the interpreter office talking to one of the managers. I was expressing some concern to my colleague that when white students come in to visit me at my office, they walk upstairs unnoticed, while black students are usually stopped at the security desk. Seraphina overhears me and pokes her head from the office into the hallway. I am shocked to see an adult version of a girl who I last met as a 15-year-old volunteer, and she is shocked to see me. She asks me if I remember her, and then asks if she can give me a hug. Now, at the age of 22, she will soon be graduating from college.

She apologizes for interjecting, but wants me to know that she is getting a degree in urban studies and is thinking about going to graduate school for museum studies and wanted to know if there were programs that focused on social justice. I told her I did not think any existed yet, but offered some advice on how she could create a path of her own. Seraphina has an interest in studying inequalities in education, and has an acute awareness of how this could apply to work in museums. Although she struggles to articulate exactly how power and privilege are leveraged, she has noticed things that make her question whether the mission of the interpreter program is

being met. She hopes that talking to me will help her to better articulate her observations. When we realize that we have much in common and many years to catch up on, we schedule a time to meet the following day.

Over five half-day visits, Seraphina shows me how she mentors interpreters in the classroom and on the floor, and shares her transition from reluctant volunteer to dedicated supervisor. She discusses race and culture through her lens as a Guyanese-American whom everyone thinks is Indian, and airs her frustrations with what she views as practices and assumptions that deny fundamental privileges to the youth who are the heart of the museum. We meet as a group with Neethi and Eldora, and she shares with them the challenges that she usually tries to keep to herself. I chose to call her Seraphina, a name translates as fiery-winged angel. She is passionate, she is strong in her convictions, and she is an advocate for and protector of her fellow interpreters.

Seraphina has a rather sophisticated understanding of the politics of the museum, and is a keen observer of her surroundings. She had many stories to tell. To avoid a narrative steeped in gossip and assumptions, I share only the stories that were supported through independent interviews with other employees from other departments of the museum. All of the accounts shared here regarding hierarchies, structural changes and leadership decisions were reinforced through interviews with at least one other person, most of which took place long before I even added Seraphina to my list of participants.

Our first session takes place on a busy work day. When I arrive, Seraphina is leading a workshop with a group of ten yellow vest-wearing high school and college interpreters. She and the interpreters all stand in a circle on the second floor, between a wall of mirrors and illusions, a set of galaxy posters, and an enormous globe. The floor is already busy with activity. School

groups have arrived and are filling the hall. Children weave in and out of the circle of interpreters, as Seraphina raises her voice over the din of the crowd.

Though just a year or two older than the students in the circle, Seraphina, stands with confidence among them. She doesn't wear a vest, her role having moved recently into a more supervisory capacity. She has graduated from jeans and tennis shoes to gray boot cut pants and black heels, a slightly more polished appearance than when I met her a few years earlier. Her waist length black hair is thick and straight. Black eyeliner and a touch of red lipstick finish the look. She carries a clipboard and has a walkie-talkie clipped to her waistband.

I stand a few feet away from the group and watch. The interpreters are taking turns explaining exhibits to each other. They form pairs, and each pair takes ten minutes to investigate an exhibit and practice how to present that exhibit to visitors. One by one, the pairs present their explanations. Seraphina facilitates the conversation, asking what each did well, how they might change the explanation for various age groups, and what they could add or change to improve it.

The interpreters each wait for their turn to speak. Some stand with shoulders slumped and heads down, hoping to not be selected. One girl pitches forward and rises up slightly on her toes, looking as if she is hoping to be noticed so she can share something that will most certainly impress the rest of the group. Seraphina glances at her, but then asks a young man in an olive green t-shirt to go next. He seems nervous, so she offers to pretend to be a young visitor. She squats down to shoulder height, which makes him crack a smile, and then in a thick Caribbean accent, he begins "Um yeah, uh, little girl." He stops and giggles, which makes some of the other teens giggle and mock his opening line, "Uh, little girl."

He continues. "Little girl, do you want to see if you can touch these stars?" he points to a large black box with a small window that displays what appears to be twinkling stars aglow in

green light. Seraphina agrees, and approaches the box, feigning surprise when the stars prove to be an optical illusion.

The young man continues his explanation, “Wah, what happened?” She tells him that she doesn’t know. He becomes more animated and leans over, hands on his knees, to eye level with Seraphina. He explains that this is an illusion, and that the stars are actually in a different place, but there is a curved mirror that makes them appear to be right up front. He talks about light and reflection, and then invites some of the other interpreters in the group to try out the activity. They reluctantly take turns stepping up to touch the stars that are not there. Some pretend to be freaked out. Others half-heartedly lift a hand to the box and turn away. They all start laughing and talking, until Seraphina steps into the middle of the group, and draws their attention back to the exhibit.

Seraphina leads a workshop like this at the start of each workday for a different group of interpreters. Every interpreter has a professional development workshop every week. Sometimes they learn a science concept in the classroom, sometimes they practice exhibits, and sometimes they focus on job skills. Seraphina was promoted to this position just a few months earlier, and now she spends 30 hours a week teaching, evaluating, and developing lesson plans, workshops and exhibits. Just a few months earlier, however, she was a student in the group and not the leader of it.

Seraphina Becomes an Interpreter

Seven years ago, Seraphina began as a volunteer in the museum. When she was 15, her mother wanted to get her out of the house for the summer and instructed her to put in an application at the museum. Her first thought was, “Eeww, science, I hate science. Why would I want to go there?” Reluctant to defy her mother’s wishes, and with nothing better to do, she

applied. She hated the job for a while. Actually, she hated the job for the entire first year. The volunteer position was leading activities primarily with preschool aged visitors. Seraphina did not have lots of experience with younger kids and did not really care to, but she received community service hours, she made some friends, and she was no longer pestered by her mother to find something productive to do.

Seraphina volunteered for about a year, but just before she was scheduled to move into a paid position, she had some difficulty getting the required working papers from her school. She became frustrated with the paperwork process so she decided to take a leave of absence for a few months. One of the supervisors, Kamyon, was worried that if she left, she wouldn't come back. He convinced her to just take a couple weeks off, and in the meantime, he promised to make sure her paperwork issues were resolved. She came back three weeks later as an Interpreter, and continued in that position for three years.

Her first few months as an interpreter were scary. The bar was raised. Seraphina had to not only talk to complete strangers, but also had to teach them science. This meant that she had to learn science, and not just memorize some talking points. Learning science was scary, so communicating science with any sort of confidence was incredibly difficult.

Not knowing enough was scary to her. She was not a great science student, and there were lots of exhibits. She was torn between enjoying the place, and not feeling smart enough to be there. In training, and on the floor, she was scared to be wrong. So she would just not talk at all. Her supervisor Felix never smiled, he never gave praise, and only talked when he was teaching. He had a serious expression all the time. Felix was terrifying. So Seraphina talked as little as possible.

Being in the museum and not knowing enough was scary. I knew enough about the museum, but getting questions that I didn't know the answers to and feeling like I wasn't strong in science *at all* at the time, I was like what am I doing here? But it kind of built over time.

For another year, Seraphina coasted by doing an adequate job of interacting with visitors, but still not feeling confident in her abilities to really teach. Other interpreters were learning to do live shows, where they would put on a microphone and present to an entire room full of people. Seraphina carefully avoided doing this for at least a year and a half. After delaying this big step for several months, another interpreter, Robbie, took notice. He nudged her to call the supervisor and have the performance added to the schedule. After the performance, Seraphina felt relieved that she finally faced her fears, but more importantly, felt good that Robbie cared enough to pay attention.

All these people take steps like that. It wasn't even a supervisor. It was a peer who wanted to see me do better, who wanted to encourage me. He didn't have to do that for me, but that's just how the interpreters are. They look out for each other, because they have all been in that same place at one time or another. Like I can remember specific moments when people pulled me aside and made a difference.

Another boost in Seraphina's confidence occurred when a manager of another department pulled her aside to ask her if she could attend a special one-day event and facilitate some nanotechnology activities. This was a simple request, but she was so honored to be included that she came in on her day off to attend. "I was like, oh me? Really! So I came in on a Sunday which I never do because they wanted me." This small gesture was a big deal to her. She was noticed. She was requested. She was appreciated. She had something valuable to contribute.

When Seraphina had the opportunity to move into a mentoring role as an Advanced Interpreter a few years later, she jumped at the opportunity. She studied all of the exhibits and learned all of the live shows. She looked after the younger teens and offered them support and advice. This led to a position as a Senior Interpreter, where she could supervise operations at various points throughout the day. Her strengths, however, were in her teaching abilities. She knew the fear that interpreters felt when transitioning between roles, so she offered praise when praise was needed and pushed people when she knew a push would help. She knew how interpreters felt when they were on the outside trying to become a member of the in-group. So when she was part of the in-crowd, Seraphina made sure to pay attention to the people who were not. Now, in her new full-time position, she is a fierce advocate and defender of her interpreters.

Seraphina at Home

Much of her advocacy stems from sociology courses at school. Seraphina is currently in her fifth year at a local college, having changed her major from elementary education to urban studies last year. While she is passionate about education, after student teaching, she realized that the classroom was not the right fit for her. She was offered a job as an interpreter trainer, and now thinks of the museum of her laboratory for studying injustice and inequalities. She realizes now that discrimination has been a burden her entire life, but she never had the words to name it. We talk about her early interest in these topics, which began with her own family.

Seraphina's family is from Guyana, South America, a Caribbean nation with a complex history of colonization and immigration. Two thirds of the population are descendants of indentured servants brought to the Americas from India or Africa generations ago by Dutch and British colonists, while a much smaller percentage are of mixed or indigenous heritage. In the past 200 years, Guyanese culture has evolved in ways that bear little resemblance to the cultures

of ancestors across the seas. So while Seraphina is often mistaken as Indian, her family has had no connection to that country for generations. Her ethnic identity is one of many things that has driven her academic interests. She has been puzzled that people want to know what she “is.” She recognizes that she has an ethnic identity, while many of her white classmates do not. She notices that she, and her family, and other people with brown skin were subject to different rules and different kinds of interactions. She has noticed examples of discrimination throughout her life, but didn’t really know how to articulate the injustice until she started taking classes in urban studies. As her scholarly interests evolved, she realized that issues around culture, class, race, and power could be found everywhere, even in her own family.

She tells me that racial conflict has always existed between African-Guyanese and Indo-Guyanese ethnic groups. Within the Persaud family, there are tensions around skin color. Lighter skin is considered more desirable, smarter, better.

I have a cousin, who, even though she is mixed race, has lighter skin, and that has become a talking point in the family, like, “Oh look she’s half Haitian so she could have been much darker, but thank God she’s not.” It’s not something that I imagine should be coming from my family.

Her family, she believes, is under the impression that a lighter-skinned member of the family might have a chance of being perceived as white and therefore have greater opportunities. She sees this in her lighter skinned cousins, who believe that they are more likely than she to succeed in life because they can “pass.” She thinks they are being painfully naïve.

Seraphina considers herself to have medium to darker skin tone. She definitely can not pass as white, and she is not black. She possible looks Indian. She believes that this has

influenced the way that people interact with her on many occasions, both in and out of the museum. Air travel, for example, is often stressful.

People looking at me and thinking that I'm from a particular culture judging how I will behave or how I will act, or getting stopped at the airport because I look like certain groups of people. It's easy to, I think it's easy to say that there are quote unquote random searches at the airport. And yeah, part of me wants to believe, yeah, totally, random, sure. But when it happens often you're just kind of like, this doesn't feel random anymore. But know you, we are Christian, like my mom and I grew up here, like we have no ties to, you know anything bad, so it's surprising just how wrong people can be when they look at you. I'm not surprised that it happens, it just, it's sad that people will still look at you and assume.

Sometimes the discrimination is more subtle, like a slight look of surprise when someone has spoken to her over the phone and then meets her in person, or the frequency with which people come to her office and ask for the person in charge, not realizing that she is the one in charge. Whether these negative interactions occurred because of her age, her skin color, or something else, these are microaggressions that, over time, are demoralizing. As she shares these stories, Seraphina leans in, and her pace accelerates.

My mom has an English name, it's Susan, and they look at her last name and I don't know what people think when they see our last name, it has Hindu traces I guess, we have no idea, so it's not obviously a particular race or ethnicity and she'll get called for interviews and they'll love like her resume and they'll love her but then they'll see her and they don't expect her to be who she is. Or like I'll be in classes and a professor will call my name but it's the first day and they won't know who they're looking for, and then

this brown girl raises their hand and they have this like shocked look like why does this girl have an English name that I can pronounce and it's sad to see that in this day and age that you don't think that there can be that kind of diversity or that you can't be different than what you expect.

Not all of her family members share her perspective. She recalls walking out of her aunt's home during a discussion of police violence. This was the month that Michael Brown was killed in Ferguson, Tamir Rice in Cleveland, Eric Garner in New York, and John Crawford in Beavercreek, Ohio. The discussion became heavy when some of her aunts, uncles and cousins, who had gathered together for a family dinner, decided that the criminal record of one of the men justified the use of police force, and legitimized his death. Seraphina worries about this because her cousins, even those with dark skin, believe that they are exempt from this kind of discrimination because they aren't engaged in criminal activity or because they aren't African American.

You can't see that month after month how these, I consider it an attack, to be honest. I mean there are lots of minority men, in particular, I read up on a couple of young ladies this happened to too and nobody knows about them, and it's because of the government, well, the police. And it's really scary. I have two police officers in my family, and I definitely support the NYPD, but at the same time, how can you not see this is a thing... this is an actual thing that is bad!

I share with Seraphina some of my anxieties around the ways my students are perceived. I tell her that I no longer send the students in my after school program out to do scavenger hunts around the campus, because I fear what other people will do when a group of five black teenagers approaches them on the sidewalk. When we do go out in groups, I make them wear big

flamboyant nametags that identify them as part of the museum, but they may as well be labels that say “Please don’t be scared. I am not a threat.” I tell her I request that the same security guard be posted at the museum each night when the students leave because he is the only officer who understands that he is there to protect the students, and not to protect the campus from the students.

I tell her that where I work, in a city that is 80% black and Latino, with the exception of two people, the only people of color who work in the University Museum, other than the teens in my program, are the janitors. I tell her that I am likely the only person, other than my students and the janitors, who comes from the lowest rung of the socioeconomic ladder. In fact, rules are in place to almost ensure this. Before being hired into a museum, an applicant must submit not only to a background check, but also a credit check. The reason, I am told, is that museums have valuable things, and that someone with poor credit may be a greater risk around those valuable objects. This has caused some of my students to be ineligible for employment, including a girl who worked as an interpreter for over a year, then took a leave of absence because of medical issues, and because she incurred significant medical bills during that time, was ineligible for re-hire to her old job because her credit score was too low. The policy, I am told, is campus-wide and there is nothing I can do about it. So although the museum staff is kind and supportive and happy that this youth program exists, there are serious structural barriers to equitable participation. Seraphina gasps when I tell her this story. Her eyes get squinty and she looks up at the ceiling. Her voice cracks a bit as she speaks.

Stuff like that... it’s upsetting, because the... uh, if the only certain people are getting the good jobs, are getting the good training, they will be the future of STEM, so they will

become the next wave of mentors. It's this horrible cycle that continues to kick these other kids out, and that's, I don't even, that's terrible.

Seraphina and the Institution

A few weeks go by before we speak again. In that time, we both had a number of experiences that we looked forward to sharing, so that we could know we had an ally in the field. On the day we talk about her museum, Seraphina is effusive. She has been wanting for some time to talk to someone about her observations of privilege in the museum.

I arrive early, just as a coworker walks in with a late breakfast for the two of them from the Dominican restaurant on the corner. It's a huge aluminum tray filled with mashed plantains, sunny-side up eggs, saucer-sized sausage and slabs of fried cheese. We walk down to the office, where she pulls a plate, two forks, and two bottles of hot sauce from her desk drawer. Without saying a word, she scoops half of the food onto the plate and pushes the plate and a bottle of green hot sauce toward me. As we eat, she begins with some of the most positive parts of the museum structure.

“So in my department, with interpreters and supervisors who used to be interpreters, there is amazing diversity, and really just an amazing sense of community,” she says as she slices into a big slab of sausage with her plastic butter knife. She tells me that everyone knows everyone else, and they are all working toward a common goal. All of the program supervisors were once interpreters, and she thinks this is important so that interpreters have supervisors to whom they can relate to in some way.

I think it's wonderful that there are a hundred or so interpreters that have seven supervisors, and no offense, there are zero white people on this team, and it's kind of amazing that they look up and they see these people are kind of like me! I don't know if

they see the role as something awesome or great, but it's like this little peek into "you can have a supervisory role, you can do this and it can work."

When she first started as a volunteer, nearly every member of the education staff, from the vice-president, to the classroom teachers, to the technology specialists, began their careers as interpreters. By the age of 25, most of the full-time staff had 10 years of tenure as an educator, and were serving in management roles across the institution. Seraphina was inspired, as a young brown girl, to see people who looked like her in leadership roles. She had never before been to a place where the people in charge were not white.

In her first few years as an interpreter, she felt a tremendous sense of belonging. Former interpreters worked all over the museum. Interpreters were brought in to assist with camps, to give opinions on new projects, and to lead activities. Museum managers came from all over the country to meet the interpreters and see how the program worked. They were the flagship program and the face of the museum.

Over the past year or two, however, things have changed. She takes me on a quick tour down the hallway. The first floor office area includes several other departments. Some of those departments have a fine relationship with the interpreters. Others practice careful avoidance, and still others seem annoyed that they have to share a space with the rowdy teens. Seraphina is hyper aware of the things that interpreters do that might bother other people in the museum.

I don't want the rest of the office area to be like oh those pesky kids who always make noise, because first of all, it's their lunch break, so be understanding but like I shouldn't have to worry about it. I don't want anyone to feel less respected than they are because like I value the interpreters, and I think you guys have this great amount of knowledge and skill that people at the museum don't understand and won't have experience with but

the fact that they get looked down on because, you know maybe you make a little bit of noise, you know, because you are young, or not the same race. It just, it shouldn't be that way. I mean I try and protect, but that kind of hurts things too sometimes, because if I'm quieting them because I don't want to offend other people, that's not how it should be.

I ask why. Seraphina hesitates for a moment. She looks around, and then gets up to close the office door. She returns to her desk and leans back in her chair, then sighs. She thinks about what she wants to say and how she wants to say it. She picks up a pen and taps it on her desk.

A few years ago, the CEO who had long been an advocate of the program retired and new leadership moved in, including a new CEO and a new director of the interpreter department. Inevitably, adjustments occur with any change of leadership, but these changes affected the interpreters in unexpected ways. A third of the interpreters were laid off. When new interpreters were hired, they were selected based upon grades, test scores, and academic achievements, and priority was given to youth who intend to pursue a science career. This meant that most of the kids from the local neighborhood no longer met the requirements for the position, and the percentage of teens from elite science-focused high schools across town increased significantly. There was also a desire to do research, and so large numbers of high-performing students were recruited, so that a large number of them could be rejected, and control groups could be established for longitudinal research. Seraphina takes issue with that plan.

I don't care if they aren't good at it yet. That's our job, to make them good at it. We want some kind of potential but we need to mold it. If you hire someone who is already great at everything, that's good for them, and that will make it easier for us, but then we aren't doing the work that we are saying we are setting out to do. Your purpose is to better this person, to help them. Like if you go to a school that has never asked you to do

presentations in front of another person. Some people have never taken speech classes. If you have never done that, you are at a disadvantage already. If you don't understand science content and we are asking you to come up with something science, then you are going to go look up stuff you don't understand, maybe if that much, right, and then we can see you don't know what you are talking about, but maybe you're not supposed to understand it yet, so and I think the more competitive this program gets, the easier it can be for us to lose our purpose and our mission, because if we are trying to, I mean if it's competitive you want to take the best but that's not the point.

The new director of the interpreter department, Connie, had not worked in a science museum before, so she did not offer much advice or guidance to the department. Seraphina felt that she never took the time to get to know them. I noticed this as well when, a year earlier, I interviewed Connie about her new job with the interpreters. When I asked for an example of a success story, she stumbled over her words, paused, and then told me that she is too far removed from the actual interpreters and would not be comfortable answering that. She was unable to tell me the name of a single interpreter with whom she had interacted in the nine months that she had been there.

Connie also hated live shows. I was a bit surprised to hear her use the word hate. One of the first things she did was remove half of them from the rotation, and then had the remaining few undergo major revisions, which were reviewed and approved by some of the new project managers who worked upstairs in the administrative wing of the building. The interpreter staff had not actually met any of the people involved in these new layers of approval, but were told they had done research in this area and would be better equipped to develop the new activities.

It was around this time that Seraphina noted that their sense of agency (yes, she used that word) was taken away, and decisions about programming required approval from what they referred to as “one of the PhD’s upstairs.” From the perspective of the interpreter supervisors, the ever-changing queue of “upstairs” approval was both inefficient and unhelpful.

I don’t think anyone is intentionally disrespecting us, but there is a lack of wanting to get useful information from them about experiences on the floor. We know a lot, and the fact that opinions aren’t valued or our work isn’t always considered important. I love my job, this is something, you know, that I want to spend my life in, but the deeper you get into the institution and the more you learn and the more you find out, I realize I don’t have the same level of respect.

In those early years, when much of the management staff was made up of former interpreters, the teens were integrated throughout the institution. Now, she feels as though they are accessories. Project managers from out of town are brought in to do the work that Interpreter leaders used to do, and when the projects are complete, they depart their positions. Interpreters no longer develop relationships with people from outside of the team. Personally, Seraphina has only had one interaction with the CEO, and it was a frustrating one.

She begins. “I don’t know if I should tell you this.”

“Well, if it helps, all of this will be anonymous,” I say.

“Well, I guess it’s not a really big deal but okay, so our CEO was looking for another girl who sits in our office and saw me and asked if I was her.”

“Was this when you were new?”

“No, that’s the thing, I was already a supervisor so I’ve been like in meetings and stuff with people upstairs for at least a few months.”

“So you thought he might know your name.”

“Right, and I said nope, she’s right over there. So as CEO, he clearly doesn’t know who I am, but also he didn’t take the time to say, oh, well who are you? Why are you sitting here? I mean I have nothing against him and I’m sure he had lots of things going on, but you know, I would have introduced myself, I would like to have said oh hello, I’m Seraphina, nice to meet you, I’m a trainer.”

“What did he do?”

“He just turned to the other person and was like, oh I really liked that thing you did.”

“And if you were someone in a different office you think that might have played out differently?”

“I can’t say for sure, but I assume that if it had been another person in another office, he might have, yes, it might have played out differently. He might have wanted to know my name.”

I tell her about an encounter that I had at University Museum on the morning that I returned from my last few days of fieldwork. I had been out of town for a few days and returned mid-week. As I walked into my building and turned the corner to the administrative hall, I was immediately waved over by a member of the staff.

“Oh I’ve been looking for you for days,” she told me. “It’s about the kids.”

She looked like she had a story to tell. I thought she had heard that Carlos had been accepted to three Ivy League universities, or that Salina’s engineering lab research had some publishable results. Sadly, that was not the case.

“One of your kids smeared poop on the walls!”

“I’m sorry?” I replied. I must have heard her wrong.

“In the ladies room. Someone wiped poop on the walls and all over the chair in the third stall. It must have been your kids.”

I thanked her for the information, and said that I would look into it, but inside I was fuming. These are high school students who come to a museum, after school, for fun. This person was under the impression that they would leave their classroom to deface a public restroom with feces. Luckily, in this situation, my own director came to our defense, and the security office discerned that a young child with special needs caused the issue. The issue never came to the attention of the students. I try to protect them from the accusations, the snarky comments, and the patronizing compliments when I can, but my students are not naïve. They recognize the averted glances and know the assumptions. Some students can laugh off the interactions as the product of sheltered people who do not understand their privilege. Others never feel at ease. I worry that students leave the program not because they are not smart enough, but because they are made to feel not smart enough, or not good enough, or not something enough, in subtle ways, every day.

Just as Seraphina's frequent searches at the airport feel more than random, so do the minor inconveniences or innocent misunderstandings experienced by members of the interpreter team. Seraphina witnesses the frustration when an interpreter has her name mispronounced for the tenth time, or is just given a nickname because her name is too difficult to say. She is concerned for the interpreters who have a non-Standard American accent, which is an enduring component of one of the multiple languages they speak, for fear visitors will perceive them as less intelligent. She worries about the failure of others to recognize that interpreters are giving just as much as they are getting, and that they are producers, and not just recipients, of knowledge. Sometimes she has to control her impulse to assert herself. She is the youngest

member of the supervisory team and does not want to speak out of turn. She wishes someone would. Maybe she should be the one to speak, but she is not yet confident enough to do so.

Maybe if someone had spoken up at the time, things would be different now. I just feel like we are treated as if our work isn't as important. And I don't know if it's because of race or ethnicity of our team, but I think it could be easy to make that connection.

Seraphina Now

Connie, the department director that initiated so many of the changes, was removed from the position last year, and the person who took her place, Shanti, began 15 years ago as an interpreter, and worked her way through the education department. Seraphina is pleased with this. She notes that with this new promotion, Shanti is the only person of color on the management team.

When things got shifted around and she [Connie] left, we just dropped all of it. And I think it's freeing now. The person who is making decisions [Shanti] is also the person who actually knows what's going on. She has the power now, thank God, to make decisions, or to allow us the power to make decisions, because she's been there.

This has given Seraphina more freedom to do the work that she loves to do. She is developing curriculum, running the professional development workshops, and mentoring the new students as they transition from one step in the program to another.

I don't know what motivated that friend to motivate me, but that's something I try to do everyday. Like I try to be inclusive of people, like I didn't know someone's name I would be sure to ask, I would introduce myself to get them comfortable because I know how scary it is to go from volunteer to interpreter, because you knew the faces but not the people, and when you are finally wanted at the luncheon table, in that sense I knew what

it felt to be on the outside, like I'm an imposter but they don't know, so I didn't want anyone else to feel like that, so reach out to people like who are you, what are you doing. Just random conversations because it builds that familiarity, like that familial bond, I think we sort of have here? I don't know if it's as strong now. Like people cared about each other more back in the day, like now there might be more competition like, like individual desire to succeed, um, as opposed to benefiting the whole team, but um, we can fix that.

I ask Seraphina about her long-term goals. She will graduate from college this year and wants to continue working in museums. As we are speaking, her director comes in to pick up an application for a diversity fellowship at an upcoming conference. Seraphina is looking forward to the opportunity to meet other people in similar positions to hers who might be just as passionate about issues of equity in museums and in STEM fields. I fear that she may be disappointed when she gets to that conference and sees that only black and brown people attend all of the diversity sessions, and that these attendees are not the leaders of the museums, but the mid-level staff who received these diversity fellowships. I think she will be disappointed to talk to people who feel that museums have fulfilled their missions because they give free field trips to children from low-income neighborhoods, or that they have an annual celebration during Black History Month. I think she will begin to see that the problems run deeper than she knows, that they are embedded in the fabric of the museum field, of science, of academia, of society.

Seraphina hopes to make a career of this. Her dream job would be to travel around the country and work with other museums to develop practices that are inclusive of all youth. She understands why this is not a structure that every museum would want to do, but she wants to be able to make her case.

If we hired perfect people in this program, number one, there would be nothing for us to do, because there would be nothing to develop, nothing to work on. It would just be an employment opportunity and that would be fine. But I think that does a disservice to people who are looking at a museum and coming in like, maybe it would run a little bit better, but it wouldn't have a purpose, it wouldn't have a good purpose.

I ask Seraphina what she wants the readers of this paper to know. She wants people to know that she fell in love with her work, not with the museum or with the science, but with the people and with the culture of support and caring. Programs like this one are equipping people to go out and succeed, but sometimes the criteria for participation, and the definitions of success, are skewed. She wants people to know that there are talented youth across the country who just need an opportunity to showcase their talents, and to have their capital recognized.

Interpreters are incredible. They are the heart of the museum. They are what make this different than any other experience. And they shouldn't be underestimated, and I think that happens a lot. Interpreters are smart, and they are talented and they obviously need work, I mean we all do. But they are doing it. They are working on themselves and that's great to see young people taking that step in their own lives.

Seraphina wants to develop a network of teens who work together across states or even countries, to enact social change in their communities. She wants to see more people of color not just working in museums, but also running them. She wants to do research on the culture and structure of museums to understand why people of color are not included. She wants to start a revolution. But for now, she just wants to graduate from college.

Summary

When Seraphina Persaud poked her head around the corner of her office door on that Saturday morning at Metro Science Museum, I recognized the face of a timid girl that I had met years before when she was still a volunteer. Through her 22 years of life, seven years at the museum and five years of urban studies and education courses, Seraphina has become an astute observer of the ways that power and privilege influence the practices, policies, and social interactions at Metro Science Museum. In the five conversations and several hours of observations of her work as a Training Supervisor, I learned that Seraphina was a proud champion of social justice, and an advocate for revolutionary change in the ways that museums engage with youth. Over the years, Seraphina has come to love her job, and finds joy in helping other young people to build confidence, gain skills, and find their passions. She has also come to understand some of the many ways that interpreters are under-appreciated by others in the institution, as well as the tacit ways in which positions of authority have slowly been removed from the department. As she approaches graduation, Seraphina looks forward to continuing her work as an advocate for the underrepresented voices of interpreters in the museum and beyond.

Reflecting on the Portraits

I approached my meetings with each young woman knowing that museum youth work can be a powerful tool for learning and for professional advancement. I came in also knowing that with any work that involves marginalized populations, there is a risk of domination by the institution, and ironically, risk of perpetuating the inequalities that the program is trying to address. I had no idea if any of the young people I interviewed would be willing to talk about any of these things, or if they even knew they existed. I was awestruck to find that, while their

degrees of institutional knowledge and awareness of structural issues varied, Eldora, Neethi and Seraphina possessed nuanced and complex perspectives on the nature of museum work.

These portraits are anonymous, and after bravely disclosing so many intimate details of their lives, I assured the women that I would do my best to maintain privacy and anonymity. I worry, still, about the repercussions. Might their CEO read this, and would he be angry that his perspective was not included? Would the director of the program who allowed me access to her staff feel betrayed that the critical representations would put her job at risk? Would my own supervisors read this and take issue with the personal reflections that I share? I am anxious and fearful that I have said too much, that I have gone too far, or that I have been too caught up in my own agenda. But then I remembered a conversation with my students the other day about environmental justice. We read and discussed an article that described some of the pollution concerns on our own community, prompting the students to talk about the ways that their lack of power, money and social status make it easier for corporations to allow hazardous materials into our neighborhoods. At the end of the talk, Monae reminded me, “if you care about something, and are lucky enough to have the knowledge, and you have the credentials and therefore the power to say something, then you sure as hell better say it because no one else will.”

Chapter 5

Discussion

Overview of the Chapter

In 2014, societal issues, including racial tension around police brutality, white privilege, immigration reform, and the shifting demographics of the country led to a revelation about the stories that I needed to tell. In the months leading up to my last set of interviews, a deluge of opinions about race, ethnicity, and socioeconomic status became part of public discourse in ways that I have not seen before. After the murder of nine people at a church in South Carolina and the removal of the Confederate flag from the capital, my social media feed became filled with both support of the #blacklivesmatter movement, as well as indignant red, white, and blue confederate flags in place of profile pictures. The discourse on race prompted a discussion at the university where I work regarding the possible name change of a building that bore the moniker of a notorious slave master of the 1800's. Students on campus were divided, many reeling against the name change as oversensitivity and a feeble attempt of liberals trying to create racial issues that do not exist. Yet just a few months earlier the black son of a prominent New York Times columnist was detained at gunpoint while exiting a library. Meanwhile, one of my students was on campus for only a week when he told me that that students had inquired about his immigration status, while another was told at a bursar's office that she is lucky to be Hispanic or she would not have even been accepted to the school. While I felt helpless in combatting the elitist discourse that has guided the university for hundreds of years, I believed that I could, in the microcosm of the museum, affect change.

I sought feedback from the field. Conversations with colleagues left me with a frustrating realization that members of the dominant community were patting themselves on the back for the

good work they were doing to reach diverse communities, without reflecting upon the things that they could be doing better. Black and brown youth appeared as commodities, whose college achievement and polished appearance are brandished as examples of successful implementation of a diversity initiative or outreach grant.

Just as portraiture looks for beauty amidst pain and seeks the good in people who have lived through adversity, critical pedagogy requires a dialectic that understands both oppression and liberation. This dialectic does not mean that there are two sides to a story or that there is a right or wrong, but that “there are many sides to a problem and often these sides are linked to certain class, race and gender interests” (McLaren, 2009, p. 62). I first reflect on the good, powerful, meaningful experiences that encourage these women to come to appreciate who they are. Each was plagued with self doubt and fear of not being good enough, found systems of support within their department that helped them to recognize their talents, and then developed a sense of purpose in their work that has guided their career goals and aspirations. I then examine the challenging, stifling, but well-meaning interactions that remind the women that they are still the “other.” This includes examples of cultural conflicts between the interpreters and the “upstairs people,” incidents of prejudice from visitors and other staff, and the shifts in power dynamics that left the interpreters feeling helpless and underappreciated. Race, socioeconomic status, language, and culture norms all become points of contention, as the women wonder if who they are and where they come from is perceived as an asset or a deficit to other people. In this chapter, I revisit a number of the quotes from the portraits. As I reiterate their words, I tie each emergent theme to literature that lends academic credibility to what Eldora, Neethi, and Seraphina know to be true. Finally, I explore the ways that these women come to know their own strength so that they may transform their practices and the practices of the museum.

The themes in this chapter are drawn from the interviews and field notes from the 70 hours that I spent with these women at Metro Science Museum, as well as from the months of reflection on those experiences within the context of my own work at University Museum. I listened to and transcribed each of the interviews, and then sat with my printed copies and my colorful markers to code. As I sat on my living room floor with my piles of paper, I could not help but reflect upon the stories I read in the news that morning about presidential candidates' racist responses to terrorism, protests on college campuses, or Facebook arguments over the confederate flag. When I walked back through the stone arches of the university geophysics building to my office at the University Museum each Monday morning, I was inevitably bombarded with reminders that Metro Science Museum was not the only institution with structures steeped in privilege.

Research Questions

I began this project with two research prompts. I refer to them as prompts because they are but a starting point for the many questions that have emerged throughout the project. Those prompts are:

What are the workplace experiences of three young women of color who work as interpreters in a science museum?

In what ways have these experiences been influenced by power and privilege within the institution?

As the work advanced, so did my questions. Some of those questions were about their trajectories as workers. *What set of circumstances led to each young woman working at the museum? What did it feel like to step into the museum for the first time? What comes next in their career paths?* Other questions related to their relationship with the institution. *How long did it*

take to feel comfortable? To feel authoritative? Who were the people who lifted them up? Who put them down? Other questions sought connections between their identities as youth, as women, as women of color, as children of immigrants. How do home, family, education, income, religion, language and skin color influence their work as museum interpreters? These questions led to questions about the institution. Who decides what is important? Who decides who is skilled? What are the gatekeepers to acceptance and success?

In Chapter 6, I ask a third question: How can these women inform and change museum practice? This question explores the transformative practices that help Eldora, Neethi and Seraphina to rise up against the institution, to have their voices heard. Freire (2005) noted that if those who lack power are to “be able to wage the struggle for their liberation, they must perceive the reality of oppression not as a closed world from which there is no exit, but as a limiting situation which they can transform” (p 49). Through this third question, I identify ways that these women show resilience, transform their understandings of their place in the museum, and recognize that they are agents of change.

In museum youth program research, we tend to ask what participants gain, what they learn, and how they have become better because of these experiences. We tend not to investigate what the participants bring to the institution, how and where negotiations might occur, or where the institutions have failed them. We assume that the institution has knowledge to provide youth, and we measure success based upon participant’s acquisition of that knowledge. We do not often reflect critically on our practice, and we rarely offer youth the opportunity to do so.

Research Question 1

My first question is “*What are the workplace experiences of three young women of color who work as interpreters in a science museum?*”

With this question, I reflect on the stories that Eldora, Neethi, and Seraphina chose to share about their lives, and how those life experiences affect the ways they move through their work. *Where We Come From* is a re-introduction of each woman. In *Through The Hallowed Halls* I begin with a reflection of my own professional path, and then choose a quote to represent how each young woman connects to her work. *Making People Happy* represents Eldora’s mission in life, *When You Know What You Want, Go for It* is a guiding principle for Neethi, and Seraphina explains her goals in *This Is How I Connect*. In the *Who We Are* section, I examine how heritage, home, culture and workplace culture influence their work. In the *What We Know* section I explore different forms of knowledge and the ways that knowledge is valued or de-valued in the workplace. In this section I use terminology from critical pedagogy, namely culture, community wealth, technical knowledge, practical knowledge, and dialogue to characterize what Eldora, Neethi, and Seraphina bring to the workplace.

Where We Come From

Through the Hallowed Halls

Where we come from matters. Life histories influence our opportunities, our chances for success, our perceptions, decisions, and ways of knowing. Our histories guide our actions, sometimes giving us strength or direction, and sometimes simmering doubt. When I accepted my position at the University Museum four years ago, I was both excited and intimidated. Despite having a fairly successful career, ABD, or all-but-dissertation status, I was nervous that I would not be good enough. I was going to work at a prestigious university, and I envisioned interacting

with grandiose professors in tweed jackets and designer glasses. I could not shake the thought that they would see right through me. I even bought an expensive suit, on sale, to assimilate to the expensive suit-wearing colleagues I might encounter. I stepped with trepidation through the glass-walled foyer and past the sparkling minerals and massive fossils to my new office. My fears were absurd. Everyone was nice. No one wore fancy suits. Blue plaid shirts and jeans were the uniform of most of my colleagues. I was occasionally mistaken for the secretary of the man in the office behind mine, but I would politely turn down the requests by passersby to make copies or take a message. Beyond that, I fit right in. I wonder, however, if a Guyanese-American woman, or a Trinidadian-American woman, or a Mexican-American woman would have a rather different experience than a Polish-Italian American woman in this place. My whiteness allowed me a free pass into this elite academic world.

With my students, my whiteness was not an asset, but other things were. The institution chose me because of my degrees and my work experience. As a white, middle-aged, middle class woman, my life is very different from my students' lives, and I must certainly be less relatable because of it. I wonder, however, if the people at University Museum who hired me cared about this. I wonder if anyone considered that a white, middle-aged, middle class woman was not the best choice to serve as a mentor to high school students of color. Were they looking for someone who was a "fit" for the students, or a "fit" for the institution? Based upon the white faces I see in every office, I believe it was the latter. In this rare situation, however, my experiences in a low-income family provided me my most valuable forms of knowledge. My most useful skills included knowing how to navigate social services, knowing how to swear in Spanish, knowing what to say when someone's parent drinks too much, or loses a job or gets evicted from their apartment. Where I came from was valuable.

Eldora, Neethi, and Seraphina bring their culture, their language, and their passions to their work. Each young woman began her work at the museum at the age of 15. They were just children by many standards. Nevertheless, these women came to the workplace with 15 years of lived experiences, and generations of cultural knowledge that shaped their identities and worldviews. On their first days of work, however, they were all terrified. Seraphina did not feel smart enough. Eldora was uncomfortable with her new identity as employee, and Neethi did not feel at all qualified. Now, with between three and seven years of work experience, their tenure at the museum surpasses that of many of the managers and directors who work in the cubicles in the upstairs wing. Their knowledge of the community, neighborhood resources, and local culture vastly exceeds that of many of the people who work in the museum. Still, program evaluations want to know only how the museum changed them. I focus instead on what these young women bring to the museum, and how their cultural knowledge and skills are applied to their practice in the museum to improve the experiences of visitors, other staff, and themselves.

Making People Happy

Eldora Ruiz grew up with her mother, brother, and five sisters in an apartment just a few blocks from Metro Museum. She described herself as a shy, sad girl “with colored hair and band t-shirts.” Throughout adolescence, she had a strained relationship with her devoutly religious mother. The church gave their immigrant family much needed support in the years after her father’s passing. Though her mother had hopes of her daughter’s pursuit of ministry, Eldora found herself drifting away from the conservative ideologies of the Jehovah’s Witness faith. Her mother’s disapproval, and Eldora’s subsequent excommunication from the church, caused her to seek out friendship and support elsewhere. This led her to engage in some rather self-destructive behavior. After a year or two of slipping grades and truancy, she knew it was time for a change.

Her brother Max had been working part-time at the museum for a few years when he encouraged her to apply. She trusted her brother, so after a few months of contemplation, she nervously applied for the job.

Eldora's relationship with her mother is complicated, but this dissonance played a tremendous role in how she chooses to live her life now. Eldora has learned to hide her sadness. The lonely girl who kept her head down and her dyed hair over her eyes has transformed into a bright-eyed woman who fills a room with her energy and spirit. I am taken with the ways that she uses her pain to bring joy to others. Her work at the museum is less about teaching science and more about offering respite.

I can't help you like that but I'll make you have a good time, for at least five minutes and make you happy. So I think that's one of my main goals. I love making people happy, despite sometimes myself not being happy, but I want others to feel happy and be positive no matter what (Eldora).

Eldora has risen from being a shy quiet girl to being a Senior Interpreter. She works not only to bring a bit of joy to the children who visit the museum, but also to seek out the younger interpreters who might also be experiencing some hardship, or have some self-doubt, or struggle with finding their place. She offers support and mentorship, and lets them know that no matter the challenges they face, life will get better.

When You Know What You Want, Go For It

Neethi Joseph lives with her mother, father, brother and sister across town, but regularly spends time with her extended family in Trinidad. Neethi comes from a family of doctors and engineers, so she has always faced pressure to pursue a career in a medical field. At her mother's urging she attended a nursing vocation high school and quickly learned that it was not her

calling. Neethi does not recall applying for the job at Metro Science Museum but she went to the interview anyway, and was awarded a position despite a teaching audition that was nothing more than speaking a list of science fields and their definitions.

With her mother's busy career as a medical administrator, Neethi's father was the primary caregiver. Neethi's unwavering support from her father gave her the courage to explore her career options. The museum has given her the opportunities to do so. Through programs and people at the museum, she has been exposed to biology, geology, archaeology, chemistry, engineering, medicine, physical therapy, and education. Most importantly, she has learned to find a career that allows her to do the most important work, not make the most money. Her father's choice to take on an unconventional male role has also given Neethi sensitivity toward gender roles in the workplace.

Society's norms are father is the breadwinner and the mother is underpaid or stay at home mom. In my family, my mom is the breadwinner and my dad took care of us when we were younger. So for him, it's when you know what you want, go for it (Neethi).

Neethi is enthusiastically exploring her career interests, and takes advantage of every opportunity that the workplace offers to explore different STEM fields. She is aware of how much she has grown as a communicator during her three years of work, and she is now learning to train and mentor younger interpreters. Neethi is especially concerned with the female dominance of the department and wants to make sure that young men of color have places to go and people to support them.

This is How I Connect

Seraphina Persaud was coerced by her mother to work at the museum. Seraphina was not interested in science, she did not like talking to people, and she had no interest in teaching. She

certainly didn't want to do any of those things for free. Her mother wanted her out of the house during the long summer days, so her options were limited. It took a year for Seraphina to begin to enjoy it, and even then, she nearly gave up. Not knowing enough made her uncomfortable. She didn't feel good enough, but through the encouragement of her peers, she stayed on. As she got better at her job, she felt valuable. She received feedback on her performance, support in her weaknesses, and recognition for her accomplishments, bringing her to find her calling in teaching. She even decided to major in elementary education in college. Three years into the program, she realized that classroom teaching was burdened by frustrations and constraints that she was unwilling to take on.

Seraphina's Guyanese heritage also played a role in her career interests. Topics like the value of light skin and the inconveniences of being brown skinned at the airport are common dinnertime conversations. Political discourse around race, incidents of police violence, and segregation in schools drove her to explore the sociology of education. She changed her major to urban studies and became an advocate for social justice, but she wants to continue working in the museum so that she can be a role model for other youth.

I want to continue in this field, I mean this is something I want to spend my life in, this is how I connect, I connect really well in museums and I learn really well in museums, but the deeper you get into the institution and the more you learn and the more find out, I don't have the same level of respect and neither do those guys (Seraphina).

Making personal connections to people in the workplace was essential to Seraphina's developing sense of self, so as she transitions into a position as a full time supervisor in Metro Museum, she focuses diligently on the ways that museum culture can embrace or ostracize her

staff, and seeks everyday to protect them from the naive and sometimes hurtful actions of people who may not recognize the skills these youth have to offer.

All three women arrived with a sense of discomfort, unsure that they would be successful teachers of science. All expressed nervousness, fear, and at times, a desire to quit. Over time, through interactions with peers and supervisors, each identified and cultivated their talents. The structure of the department allows each woman to grow her skills at her own pace and on her own terms. Each experienced turning points where their abilities were recognized, often by supervisors who were in a similar position just a few years prior. Within the interpreter department at Metro Science Museum, a subculture has come into being; a community of peers and mentors offering support, guidance and pressure to do better.

How We Belong

Culture

Culture refers to the ways that groups of people collectively experience the world. Culture includes language, religion, belief systems, understandings of art, history, nature and science, shared by members of a group that have some set of characteristics, like place, age, heritage, class, or interests, in common. Dominant culture “refers to social practices and representations that affirm the central values, interests and concerns of the social class in control of materials and symbolic wealth of society” (McLaren, 2009, p. 65). In the United States, the dominant culture is, among other things, white, Eurocentric, English-speaking, heteronormative, Christian, and middle class. The dominant culture is embedded so deeply within society that members of it have forgotten that it exists. Because of this forgotten culture, members of that group believe that they are neutral, when in fact they are expressing a very specific set of values and norms that present a singular view of the world (Kincheloe, 2008).

Members of non-dominant cultures are often acutely aware of the existence of the dominant culture, and recognize how, from radio stations to textbooks to political representation, their cultures and their identities are less represented and less valued throughout society. Subcultures may, intentionally or not, isolate themselves from authority, unified in their distrust of those in power. Subcultural groups can also organize as a safe place to express values and norms that counter the mainstream (hooks, 2003).

Despite the often ferocious exploitation of the subcultural resistance of various youth subcultures by bourgeois institutions, (school, or place, justice system, consumer industries) subcultures are usually able to keep alive the struggle over how meanings are produced, defined, and legitimated; consequently they do represent various degrees of struggle against lived subjugation. (McLaren, 2009, p. 66).

Capital is the collection of the things we have that are of value. Those things can be goods and wealth. Capital can also be social connections, cultural knowledge, and ways of interacting with others. Generally, people who have lots of things in common see value in the things that they already have and want more of, so the capital of the dominant culture is more valued by members of the dominant group. *Social capital* is comprised of the network of persons and things that a person has access to and can use to his or her advantage. From the dominant perspective, middle-class families have greater social capital than their working-class peers because they tend to have access to people and places that the middle class view as useful (Lareau, 2003). Social capital, however, is context specific. In different settings, different sets of tools and connections are useful, even if those tools go unrecognized by the dominant perspective (Elmesky & Tobin, 2005).

Cultural capital includes knowledge, skills, and styles that people use to negotiate their position with others and is expressed through talk, dress, and action (Bourdieu, 1977). Those who hold the most power in society determine what forms of cultural capital are desired, and these values are reinforced through everything from television shows to college admissions committees. The dominant forms of cultural capital are embodied in our certificates, diplomas, and titles, because those are the things deemed academically important.

Community Cultural Wealth

Yosso's (2005) discomfort with Bourdieu's (1977) privileging of white middle class culture led to the idea of community cultural wealth as "an array of knowledge, skills, abilities and contacts possessed and utilized by Communities of Color to survive and resist macro- and micro-forms of oppression" (Yosso, 2005 p. 77). This framework includes aspirational, social, navigational, and linguistic capital. In Yosso's framework, close-knit immigrant communities can also have significant social capital embedded within churches, classes, and community groups, and low-income youth have social capital that serves as credibility within peer groups. In Bourdieu's framework, the dominant culture values academic ability, knowledge of fine art, music and food, and worldliness. Yosso's form of cultural capital greatly expands what is deemed valuable, and recognizes fluency in multiple languages, indigenous knowledge, and varied worldviews as extraordinary forms of cultural capital (He, Bettez, & Levin, 2015).

Eldora, Neethi and Seraphina know that by virtue of their cultural wealth, race, and backgrounds, they are valuable to the museum. The field of education suffers from a tremendous lack of diversity. "Not only is the vast majority of the country's teaching force white, but Eurocentric attitudes also tend to filter into classrooms" (Anderson, 2015, n.p). They recognize also that the interpreter program at Metro Science Museum is somewhat unique in its diversity.

They also know that they, as women of color, play a crucial role in serving as role models to youth from their community, in ways that no one from “upstairs” can do. They did not get their jobs because they were people of color, but they believe that the museum is perhaps a better place because of it. When I discussed with the women the reasons that the museum draws young interpreters primarily from communities of color, they were clear in knowing that this is an asset.

Racially or classwise, they [someone with a degree] might not be someone who is as relatable to the visitors that we have. This is in my head, but I think kids see a fun, youthful personality, and so they are more relatable, more inspiring. It might be a weird fleeting memory, but that kid years from now might remember that there was this kid, and he looked kind of like me and he taught me cool stuff and I could do that too (Eldora).

Similarly, the interpreters in the program benefit from these diverse influences. Seraphina calls out an important detail of the leadership structure.

I think it's wonderful that there are a hundred or so interpreters that have seven supervisors, and no offense, there are zero white people on this team, it's kind of amazing that they look up and they see these people are kind of like me! I don't know if they see the role as something awesome or great, but it's like this little peek into “you can have a supervisory role, you can do this and it can work” (Seraphina).

Creating an Internal Culture

The cultural perspectives of Eldora, Neethi, and Seraphina are relevant because who they are away from work is important to who they are at work. The social and cultural knowledge these women possess is essential to the success of their interactions with peers and with visitors. Because they have had opportunities to capitalize on their unique strengths, the women place

tremendous value on bringing in culturally diverse young people who possess enthusiasm, desire, and different points of view, over hiring people who possess a uniform set of technical skills. Together, they see value in what they have to offer. Together, they lift themselves up. This structure is not intentionally subversive, nor is it expectantly transformative. It serves that purpose nonetheless. Seraphina makes this clear when she recalls the support Robbie provided in convincing her to take the test for her first performance. "He didn't have to do that for me, but that's just how the interpreters are. They look out for each other, because they have all been in that same place at one time or another." Similarly, Neethi expressed her appreciation for a culture in which diverse perspectives are embraced.

If we need help we ask each other for help because someone should know. We're fun! All of us have like our individual bubbly personalities, and that just like adds a uniqueness to each training or different sessions throughout the day. Seeing how other museums have their staff, they are similar to us but I think ours is the best because we have so many different points of view (Neethi).

The women lauded the support they received from coworkers within the department to be themselves and to embed their cultural perspectives into their practice as museum educators. The dress code is lax, and no uniforms, other than the vest, are required. Unusual hair color, tattoos, and colorful buttons are not frowned upon. Religious head coverings are perfectly acceptable. Shyness, abrasiveness, varied levels of English proficiency, or big personalities are not deficits. Everyone knows that even the supervisors started in a similar place. They were nervous, intimidated, and interested in, but by no means expert in communicating science. Everyone on the staff can see someone who is just a little bit older, a little bit more skilled, and working on similar goals.

By finding similarities amidst their differences and embracing the unique perspectives that each interpreter brings, the interpreters have created a subculture within the museum. This subculture, marked by appearance, language, and the spaces that they occupy, has become a safe place for these youth. Membership is visible in the brightly colored vests that the interpreters wear. The large wooden table in the interpreter break room is a place where laughter and music can be heard, as interpreters come together to talk about their day, often over big plates of food from the local empanada café. The corkboard on the wall holds drawings created by interpreters, photos of supervisors when they were young, and a memorial wall of former interpreters whose lives were cut too short. Coded phrases like “go for pre-cert” and “get a demo” are shorthand terms for the process of demonstrating expertise in a live presentation, but are meaningful only to members of the group. Stories about former supervisors are passed down through the generations like fables. A history, a pattern of behaviors, and a set of values and norms have been established that set the interpreters apart from the rest of the museum, but that bring them together as a group, a community, a family.

What We Know

Forms of Knowledge

Eldora, Neethi, and Seraphina know their audiences, they know the neighborhood, and they know the needs of the community. They understand the value of hard work, they know how to make someone feel special, and they are confident in their abilities to fulfill their roles. They can communicate science in multiple languages and dialects, and for different age groups and ability levels. Some of this came from the mentorship they received at the museum. Much of it comes from the talents that they bring, that they cultivate, and that they create

Critical pedagogy explores the relationship between knowledge and power. It examines the ways that authoritative knowledge regulates and guides what is considered to be true and good. Much of the knowledge that Eldora, Neethi, and Seraphina acquire in the workplace is what McLaren (2009) calls *technical knowledge*. *Technical knowledge* is the content that school systems and textbooks have deemed valuable and that students acquire from teachers or other authorities. It can be measured by test scores and by quantitative assessments. The museum requires extensive technical knowledge to function: background science in physics, biology and chemistry are the building blocks of exhibit explanations. Weekly trainings teach content. Interactive shows are semi-scripted and require specific protocols of experimental procedures and safety. Assessments are based upon acquisition of this technical knowledge. Tests are taken, failed, and taken again, sometimes five or six times. For the institution, progression through the hierarchy is regulated by the acquisition of technical knowledge.

But this is not the only type of knowledge that is valid in the museum. Through the application of this technical knowledge, Eldora, Neethi, and Seraphina find ways to use *practical knowledge* to observe and analyze real world situations. This type of knowledge “aims to enlighten individuals so they can shape their daily actions in the world” (McLaren, 2009, p. 64), and is valuable in the workplace where decision-making comes from interaction with colleagues, customers, and supervisors. As interpreters rise throughout the ranks, they cultivate communication and interpersonal skills. They learn responsibility and accountability. They learn to become creators, and not just recipients of knowledge.

The mission is to develop young scientists, I mean that's part of it, but also to make sure they leave here with the ability to further their careers. There is a lot to learn about being

on the floor, but the professional development they get doesn't happen at a regular job.

It's equipping people to go out and to succeed (Seraphina).

Dialogue

The training, professional development, and support that the women receive from the interpreter supervisors have provided rich opportunities for growth and learning. This approach unintentionally stands in contrast to the banking model of education, which relies on teachers' knowledge at the forefront of interactions, and positions students as passive recipients (Freire, 2000).

Through weekly training with peers and supervisors, interpreters are challenged to take risks, try out different ways of communicating, and practice talking about science in a low-risk setting. Seraphina leads several groups of interpreters in weekly training sessions. She tries to act as a member of the group and not the leader. She refrains, when possible, from providing answers, instead encouraging members of the group to provide their interpretations. When a conflict arises, she looks to members of the group to find a solution. Over time, she sees leaders emerge, often from the most unlikely of participants. A year or four may go by, but quiet, shy, or disinterested interpreters often become leaders, and students who believe they know it all begin to listen.

Seraphina confesses that while training was one of the most intimidating processes in her early days as an interpreter, it was also one of the most valuable. She could not pretend to know things. She had to demonstrate what she knew. For Neethi, training forced her to pay attention to her own words, her style, and her interactions with other people. Eldora saw training as a venue for developing relationships with a small group of people, and for building a safe space to learn and grow together.

Training is guided by the participants and grounded in linguistic styles that make the most sense to the interpreters in the group. Supervisors offer up control, and in doing so, they unknowingly enact a crucial component of liberatory education: dialogue. “Without dialogue there is no communication, and without communication, there can be no true education” (Freire, 2000, p. 73). Through dialogue, participants can articulate what they know, reflect on what they do not, and build a culture of trust that can lead toward critical reflection (Aliakbari & Faraiji, 2011; Freire, 2000).

Through this intensive small group work, interpreters build a sense of community, and through this community, build confidence in what they do. In a moment of sassiness, Eldora summarized this notion in this way: “Interpreters are the face of the museum. You come in the museum, what do you see, do you see people at a computer? No, you see interpreters.”

Through guest speakers, resume and interview workshops, public speaking opportunities, trips to various labs and research sites, and group projects, the women have been exposed to a variety of career and school possibilities. This problem solving and real-world application is essential as learners negotiate their position and power in society using knowledge and language that align with their own cultures and values (Aliakbari & Faraiji, 2011). While much of this externally driven training is traditional in reliance upon expertise of presenters, participants personalize, discuss and apply their learning in real and practical ways.

High schoolers need the opportunity to get out there, and this has helped me a lot with getting out and seeing the world. I've done several internships, I've created my own app, I even got to go to an archaeology camp in Colorado, and yeah, it was pretty cool. High schoolers need the opportunity to break out of that shell of just schoolwork, schoolwork,

schoolwork, SATs, and for them to get a job like this they are both learning as well as sharing their knowledge (Neethi).

Summary

Eldora has had numerous opportunities to teach visitors in Spanish. She has honed her communication skills in two languages, learning to translate complex scientific content to audiences of varying backgrounds. She can communicate well with visitors of varied levels of proficiency in Spanish and English. Seraphina is skilled in making science culturally relevant, finding connections to the real-world experiences of a child who lives in a high-rise apartment building or a house in the suburbs, to someone who rides the city bus or someone who has a chauffeur. She can connect with younger interpreters who may not have the confidence or knowledge to teach science, but who have the desire to learn. Neethi can reassure younger teens that it is okay to not know what to do, it is okay to be shy, and it is okay to be unsure of yourself, and that it is okay to come from Independence Ave. In the interpreter department, there was a support system, held up by people with similar backgrounds, stories and experiences that support these women in recognizing how their capital is valuable to Metro Science Museum.

I began this inquiry by asking “*What are the workplace experiences of three young women of color who work as interpreters in a science museum?*” I ended with a profound sense of awe, admiration, and respect for three women who have faced challenges that I would never have to face, worked to push beyond their comfort zones to learn and grow, and in the process developed incredible passion for the work. I learned that Eldora, Neethi and Seraphina brought their life experiences to the workplace, and were given the space to incorporate their interests, culture and histories to what they do. I learned that the interpreter supervisors were also once teen interpreters, and now focus much of their energy on mentoring youth in the ways that they

were once mentored, and providing training that gives ownership of the process to the interpreters. I learned that by allowing interpreters space to be themselves and to grow at their own pace, and to take pride in what they do, a sense of community has developed. This community provides a safe space for interpreters to challenge themselves to do good work for themselves, their peers, and their visitors.

Research Question 2: The Institution

My second research question is: *In what ways have these experiences been influenced by power and privilege within the institution?* In the previous section, I share how community, family and culture influence Eldora, Neethi and Seraphina in their work with visitors and with other members of the interpreter department. In this section, I look more closely at the tensions that they must endure. *You Talk So Proper* reviews ways that language and accent influence perceptions. *Subtle Reminders* is a section about racial microaggressions in the workplace. In *Outsiders at Home* I define hegemony and ideology, and present ways that Eldora, Neethi and Seraphina must work within the dominant culture of the museum. This is followed by *The Upstairs People* where I investigate meritocracy and technocracy in the hierarchies within the institution.

You Talk So Proper

Racist Nativism

Public discourse around immigration policies has led to a complicated political climate for Eldora. As a United States citizen with numerous family members who are without legal documentation, she is sensitive to the assumptions that are made about people of Mexican heritage. Serious contenders for the office of President of the United States perpetuate brutally inaccurate depictions of Mexican immigrants as drug dealers, rapists and murderers. Strangers

tell her to go back to her own country. Classmates regularly ask Eldora where she is from. She knows that the subtext of that question is often “are you here illegally?” She is faced with the decision to defend her heritage, engage in conversation, or just let it go. None of these options are particularly pleasant.

While Eldora’s interaction with the man who praised her speech pattern was intended to be a compliment to her good diction, his surprise at her accent was not. She recounts what he said when he approached. “Whoa, the way you talk was so proper. That’s not what I expected you to sound like.” Wells (2013) describes this tendency for white people to describe others, with complimentary surprise, as “articulate” as being rooted in an era when non-white Americans were disallowed formal education. This veiled compliment indicates that the man expected Eldora to sound different, less intelligent, less American.

Racist Nativism assumes that people of color are non-native, and therefore do not belong to the dominant historical perception of American identity, as white and non-immigrant. Examples of racist nativism include legislation in Arizona that allowed ID checks for people who “looked” non-American, or political suggestions to ban all Muslim people from the United States. Racist nativism implies that non-white or non-Christian people are, by default, non-American, and therefore a danger (Perez-Huber, 2011). Eldora was assumed to not be American because of her olive skin and dark hair, and therefore the expectation was that she would have a heavy accent, and not a standard northeastern American dialect.

Othering

When Eldora’s brother experienced hostility while hosting the birthday party, he was unsure if his heritage was the cause or if he simply was not performing to standard. When the

woman criticized his accent, and when her demeanor changed with the approach of the other party host, he was certain that the conflict was cultural.

"I can't even understand what you are saying." For a young man who took pride in representing the museum as a Birthday Party Leader, and in providing dynamic educational experiences for young people in not one but two languages, those words hit hard. *"I can't even understand what you are saying."* Eldora found it rather unlikely that the white parent of the white birthday party guest could not understand what he was saying. Max had been in the United States for most of his life. He spoke English as well as he spoke Spanish, but did so with an accent that did not deny his heritage. Eldora and her brother both understood what this woman meant. He was the Other, and was not desired.

Othering makes clear that someone is an outsider to a group. Othering is a method by which "groups that have power maintain their status through protective actions that distance them from the marginalized" (Borrero, Yeh, Cruz, & Suda, 2012, p. 114). In museums, the *other* becomes evident when accommodation of members of non-dominant groups is problematized, or becomes something to be dealt with. When museums seek out employees, they can avoid the other by manufacturing unintentionally discriminatory rules. Employees must have degrees that young people from this community typically do not possess. Employees must possess a particular presentation style- clear, articulate and very American-sounding. Employees must have something in common with the person who is hiring them.

For the mother of the party honoree, Max was the *other*; he did not belong in that space. When the CEO requested that a young woman no longer present live shows because of the way she sounded, she made a decision about what interpreters should sound like. We know that because of lack of linguistic diversity, limited cultural representations, and a focus on

Eurocentric science, some cultural groups are made to feel uncomfortable in science museums, and we know that this means reduced visitorship (Dawson, 2012; Garibay, 2009). We do not yet know what being the *other* means for the employees of these institutions, who are faced every day with reminders that they do not belong.

Rossatto, Allen and Pruyn (2006) found that bilingual youth are forced to choose between sounding American and sounding Mexican, and are "locked in an oppressive cycle of criticizing, ridiculing, and Othering... which creates divisive circumstances through reinforcing categories of being American or not-American" (p 53). Despite the incredible asset of dual cultures, dual language ability, and the ability to present himself with confidence to a room full of white children, Max was suddenly in a "space infiltrated by hegemonic rhetoric on assimilation and identity" (p. 55). The mother of the birthday girl paid a significant amount of money for the party, thus she held the power. She used that power to decide that someone with an "American" accent was expected and desired.

Language as Power

I recall a conversation with one of my own students, a young man, who completed a geology research internship over the summer. He is a native speaker of Spanish but is fully proficient in English. He was not only able to acquire extraordinarily complex terminology about geologic time and communicate it to an adult scientific audience during a poster symposium, but was able to translate it all to his father, who spoke only Spanish. He lamented, in one of our meetings, that although he recognizes his own intelligence, teachers at school regularly assume that, because of his accent, his trendy style of dress, and his script tattoos, that he is a thug. He said, "Yeah, I have an accent, because this is my second language. They don't even know this stuff in their first language." His linguistic capital goes unrecognized, and it is painful to see. I

only hope that he can maintain his strength when he moves on to college next year, and is inevitably faced with even deeper discrimination.

Discrimination against persons with presumed non-standard English accents has been recorded fairly extensively in critical pedagogy. The English language is often characterized as white, and becomes a “marker of cultural Otherness and distance that constructs the racialized non-native speaker as less authentic, knowledgeable, or legitimate” (Taylor, 2006, p. 524). College students rated a speaker with an accent as less interesting and less intelligent than speakers with a standard American accent (Harrison, 2014; Kalin, Rayko & Love, 1980). Native English speaking students from Liberia reported that, despite use of grammar and structure identical to, or better than, their American counterparts, they were regularly made to feel as though they did not speak English well or were not as smart as their American peers (He, Bettez, & Levin, 2015).

Language is a form of symbolic capital and an “instrument of power” (Bourdieu, 1977, p. 648), and so the language, accent, or linguistic practices chosen by the dominant community as appropriate will be the authoritative and most powerful form. In museums, we are just beginning to investigate power relations around language. Dawson (2014) finds that museums “relied on assumptions of English language fluency, scientific background knowledge and a series of specific learning behaviours” and “in literacy terms, the overlap of complicated and specific scientific language, such as ‘cells’, ‘pH’ or ‘habitat’ with English language, a language that despite being multilingual, participants were not fluent in” (p. 225). There are not, however, studies that explicitly investigate language use among people who work in museums. This is an area in need of further research.

Subtle Reminders

Microaggressions

Prejudice is “negative prejudgment of individuals and groups on the basis of unrecognized, unsound, and inadequate evidence. Because these negative attitudes occur so frequently, they take on a commonsense of ideological character that is often used to justify acts of discrimination” (McLaren, 2009 p.72). Prejudice can manifest as blatant, vulgar, violent, racist words and actions. Prejudice can also manifest in far more subtle ways. “Microaggressions are embedded in small actions- the daily behaviors of gestures, tone of voice, direction of eye contact, meeting protocols and so on. They are aggressive in that they are experienced by the recipient as marginalizing or disregarding” (Brookfield, 2014, p 4). To the perpetrator, the insensitive comment, the averted glance, or the gesture of surprise is so engrained in everyday behaviors and actions, that it goes unnoticed. To the recipient, the gesture is yet one more of the onslaught of reminders that she is offensive in some way. “Most offensive actions are not gross and crippling. They are subtle and stunning. The enormity of the complications they cause can be appreciated only when one considers that these subtle blows are delivered incessantly” (Pierce, 1970, p. 265).

Sue and Constantine (2007) categorize microaggressions in three ways. There are assaults, which are explicit and physical acts of racism. More common are insults, generally demeaning offhanded comments about culture or race. The most invisible are invalidations, in which contributions are ignored or disregarded. Subtle and biting, the onslaught of attacks is both hurtful and exhausting, yet victims must almost always pretend they don't exist or be faced with accusations of oversensitivity or irrationality.

I reflect on my own work at the University Museum. College students of color who work in my department tell me often about the simple but blinding comments that stop them in their tracks. Mona was called “you, girl” by the professor who did not think to ask her name and failed to realize that the term “girl” meant something different to a young African American woman than it did to him. Jevan was stopped by the front desk attendant again while walking up the stairs to his office. The interaction was cordial, but this was the third time this month he was stopped and asked to show his identification card. While hanging out in a dining hall, Ashton was asked by her classmates what it was like to grow up in the “ghetto” and inquired if she lived with a single mother because her father was in prison. These events happen not just once, but regularly and with naïve callousness. With each subtle blow, their confidence wanes or the anger builds. Each comment is a reminder that they are not wanted here.

The term microaggression does not fully describe the act that occurs. It is micro in the sense that the gesture is small (a word, a glance, a question) or even trivial when compared to a blatant and explicit act of racism (Perez-Huber & Solorzano, 2014; Pierce, 1970; Wells, 2013.) Microaggressions are not usually explicitly and physically violent, but target victims in ways that cause fear, anxiety, and frustration. To the perpetrator, microaggressions may be naively well meaning. The professor just wanted to get Mona’s attention, the desk attendant was just trying to do her job, and Ashton’s classmates had never met a black person and were just curious. Microaggressions are confusing because the perpetrator often is not aware that he is offending, and can respond with denial or accusation of oversensitivity, political correctness or playing the race card (Lynn & Parker, 2006; Wells, 2013).

Mona’s relationship with the professor never grew to a collegial one, and she counted the days until the semester was over. Jevan chose to stop each day at the desk and enthusiastically

greet the attendant with an over-the-top hello to ensure that he would no longer be forgotten, and Ashton just shut down. After that seemingly friendly lunch, which coincided with a number of other high profile racial conflicts across campus, she crawled into bed and stayed there for most of the week.

Making It A Race Thing

The concept of microaggression is used in Critical Race Theory to understand acts of racial bias explicitly targeting members of minority racial groups in predominantly white settings. This can mean society at large, or the microcosm of an institution. Eldora sometimes has uncomfortable interactions with staff outside of her department. She has felt awkward, intimidated, or out of place. Sadly, she blames her feelings of intimidation on her own unfamiliarity with the staff, rather than on anything that they might be doing to her. "I guess because I'm not exposed to them a lot and they don't really talk much to us a lot, so it's different." She does not blame them. She recognized that members of the dominant culture simply lack the cultural awareness to know what they are doing. "Sometimes they don't even recognize that they are discriminating against someone else. They are like 'oh I just prefer her because she has, um, better grades.'" At the young age of 20, Eldora intuitively understands the complexities of discrimination, but does not feel that she has the authority to do anything about it.

Seraphina describes examples of microaggressions in her experiences at home, school, and work. Her numerous "random" searches at airport security were exercises of power and authority that explicitly targeted a person who fit a middle-eastern-looking profile. Her long black hair and brown skin were enough to trigger her removal from the TSA line on more than one occasion.

Seraphina described the many times that people ask her where she is from. While on vacation with her mother in Las Vegas, her taxi driver asked if she was visiting from India, causing her to shout at the startled man about what it means to be an American. When her professor calls out her name on the first day of class, then looks surprised when she raises her hand, she can never be quite sure if he is confused by her race or just trying to learn his students' names. And when members of her own family send praises to God that a cousin's baby is light-skinned, she looks at her own deep brown skin and wonders why a dark-skinned family has been trained to loathe what they are.

In the workplace, there are social and verbal clues that make her feel unwelcome. When the CEO visits the office and mistakes Seraphina for another girl with dark skin, she feels insulted. Do all brown people look the same to her? When someone comes looking for the supervisor of the interpreters and then seems surprised to see Seraphina step forward, she feels invalidated. Were they picturing someone else? Her desire to protect the other students in the program from these moments is evident, and it keeps her in a constant state of policing those interactions.

But the fact that they get looked down on because, you know maybe you make a little bit of noise, you know, because you are young, or not the same race. It just, it shouldn't be that way. I mean I try and protect, but that kind of hurts things too sometimes, because if I'm quieting them because I don't want to offend other people, that's not how it should be (Seraphina).

The impacts of microaggressions are many. The victim of these aggressions may feel hyper-alert, may be drained of self-confidence, and may simply become exhausted from the continuous reminders that she is different. Wells (2013) describes the self-doubt that an

underrepresented person faces when racial microaggressions surface. She recalls being frequently called out as being unhappy and insecure when she felt under scrutiny as a black, female lawyer. She was told not to take things so personally, or was accused of playing the race card when she spoke up. Seraphina worries, too, that if she were to suggest that race played a role in her unpleasant interactions with museum leaders, she would be "making it a race thing" or that she would seem ungrateful for the resources that have been provided to her. She fears that the institution's reputation as a place that does good work for low-income and minority youth absolves it from scrutiny. The museum is uncharacteristic in its successful employment of such a large group of diverse staff. Much of it is attributed to the work of the interpreter department management and from the museum's location within a diverse part of the city. However it has become clear to Eldora, Neethi and Seraphina that the values within the department are not quite the same as the values outside of the department.

Outsiders at Home

Majority Status

Segregation of neighborhoods results in economic, social and cultural resources being allocated disproportionately to more expensive white neighborhoods (Massey & Denton, 1993). Museums are often located in suburban or tourist districts, far from the low-income, minority audience. This distance is a common excuse for lack of diverse participation. Metro Science Museum is somewhat unusual in its placement as a large cultural institution embedded in a low-income neighborhood. This placement has, for several decades, provided local youth with access to work and learning without having to take a bus ride across town to the tourism district, and has offered the museum a rich source of diversity in staff, visitors and program participants.

The neighborhood around the museum is 65% Hispanic, 15% black, 10% Asian and 7% white (United States Census, 2010). The demographics of the interpreter staff are similar, but with a lower Hispanic population and larger Caribbean population. There is significant diversity throughout the institution, but this diversity is concentrated within janitorial staff, security staff, visitor service staff, as well as among the educators who remain from years ago. The majority group outside the museum is not the same as the majority group inside the museum. As is the case in schools, businesses and universities, the majority dictates the culture of the institution.

“The majoritarian story tells us that darker skin and poverty correlate with bad neighborhoods and bad schools. It informs us that limited or Spanish-accented English and Spanish surnames equal bad schools and poor academic performance. It also reminds us that people who may not have legal documents to “belong” in the United States may be identified by their skin color, hair texture, eye shape, accent and/or surname.” (Yosso, 2002, p. 29).

In Metro Science Museum, the dominant cultural norms and values of the institution have shifted over the past several years, and are rather different from those of the young, diverse staff who work as interpreters. The majority of the decision-makers and the holders of authoritative knowledge are now white, highly educated, and not native to this part of the city. These authoritative figures can, at times, lack a cultural appreciation of the interpreters and the knowledge they possess. The interpreters recognize this. Eldora, Neethi and Seraphina are reminded every day that their story is not the majoritarian story, and that, by nature of their appearance, their accents, or their culture, that they are of lesser value.

“Although students of color are holders and creators of knowledge, they often feel as if their histories, experiences, cultures, and languages are devalued, misinterpreted, or omitted

within formal educational settings” (Delgado-Bernal, 2002, p. 106). Despite a collective 14 years of experience at the museum, Eldora, Neethi, and Seraphina sometimes still feel like outsiders. While their relationships within the interpreter program are strong, and they have all elevated to leadership roles, there is tension with their relationships with other staff. They love their jobs and are grateful for the opportunities they have been given, but they also feel a sense of discomfort with the structures that have gradually shifted institutional priorities away from what they love most. Throughout our interactions together, they described numerous ways that these issues manifest.

As Seraphina advances in her work, she worries that there may not be anywhere else for her to go within the institution. Jobs within the museum are more and more often being filled by outsiders, young white women with various graduate degrees. Her cultural knowledge of the community, the interpreters, and how to teach are less valuable than the degrees and credentials brought in by others, and this is reinforced by the people in power who also hold those advanced degrees and credentials.

Hegemony

Hegemony is “the maintenance of domination not by the sheer exercise of force but primarily through consensual social practice” (McLaren, 2009, p. 67). Hegemony is evident within this museum, through formal and informal structures and practices that reinforce dominant cultural values around knowledge, skill, and authority. The rules, values and norms of the institution are created by the people who work there. People in power, intentionally or not, have given themselves the authority to make their values normative and to therefore make people who do not share those values non-normative *others*. These normative values tend to become engrained in the culture over time, but with new leadership, with pressure from workers, or with

changing community needs, they can change. “Challenging the ways that power works by calling out marginalizing policies within the dominant discourse is essential to democracy and social justice” (Giroux, 1989, p. 14).

This discord is manifested in workplaces, schools, and institutions of higher learning. In college and graduate school, structures of domination can be debilitating, convincing qualified students that they are not qualified to participate in rigorous academic work, especially in STEM fields. This is especially true for students of color in STEM fields, who often feel isolated in a place that lacks mentors and role models who come from similar cultural backgrounds (Gonzalez, 2006; Hoffman, Llagas & Snyder, 2003). Students express lower expectations from faculty (Solorzano, Ceja, & Yosso, 2000), and a lack of curriculum that reflects their heritage (Seiler, 2001). Students are often made to feel as though they did not earn their place in the program, but were given the place because of their race (Brown, 2000; Figueroa & Hurtado, 2013). “Counter to the dominant narrative, URM [underrepresented minority] students are not dropping out, but are being pushed out of their STEM graduate programs by academic environments that lack full acceptance and encouragement of diverse students” (Figueroa & Hurtado, 2013, p. 25).

Institutional Structures

“Microaggressions are a component of institutional racism, which is a system of structures and policies designed, intentionally or not, to marginalize or exclude certain groups on the basis of race, culture, language, values, norms, or gender” (Perez-Huber & Solorzano, 2014). Within these institutional structures are well-meaning attempts at order and protocol. These structures often reinforce inequalities and perpetuate a system in which those with the highest levels of education and validated forms of social capital thrive.

When the CEO at Metro Science Museum made the decision to cut half of the interpreter staff, she did so as a way to limit participants to only the highest performing, most promising youth. The supervisors were faced with the task of making those cuts, and it was a painful period for everyone. The youth who were hired in the aftermath of that purge were drawn more explicitly from STEM-focused high schools and private academies, to ensure a more dynamic pool of talented youth would be hired. Seraphina did not care for this approach.

Some people have never taken speech classes. If you have never done that, you are at a disadvantage already. If you don't understand science content and we are asking you to come up with something science, then you are going to go look up stuff you don't understand, maybe if that much, right, and then we can see you don't know what you are talking about, but maybe you're not supposed to understand it yet, so and I think the more competitive this program gets, the easier it can be for us to lose our purpose and our mission, because if we are trying to, I mean if it's competitive you want to take the best but that's not the point.

This approach also resulted in a much more competitive environment. Interpreters' focus shifted toward academic achievement and moving quickly through the hierarchy. The women lamented this shift. Seraphina noticed interpreters becoming less supportive and more focused on individual advancement. Eldora worries that the young people who have the most to gain from participation will never be selected. Students who are shy, lower-performing, or not science-focused, as she once was, will no longer be given priority for participation. Neethi fears that too great a focus on advancement, will result in the more sterile and serious culture similar to that which she has seen in other museums. While none of these outcomes were the intention of the shift toward a more academically rigorous selection system, they are the inevitable

consequences. “Schools often condition students to remove their emotions from their schoolwork—a characteristic highly valued in the workplace. The more “dehumanized” a bureaucracy becomes the more “success” it attains” (Kincheloe, 2011, p 4). Seraphina and Eldora noticed the impacts of these shifts, with interpreters now more competitive and more focused on individual achievement than they ever were in years past. An unintended consequence of a more rigorous selection process was an unintended loss of a sense of community.

The Upstairs People

I really do think there is like a class difference. You kinda walk upstairs and you go into those cubicles, and those cubicles didn't use to be the executive offices. The education team was there, and they were cool with us. People who have been in this role or who have worked closely with interpreters have a different understanding and different level of respect for interpreters and know that these are people I can go to that will help me with this stuff because they are probably doing it more often (Seraphina).

There are lots of people here who, I have no clue who they are, I mean I get emails from them. I know names, but I don't know who they are. Upstairs area, like there's a bathroom there, apparently that's for staff! I didn't even know that! I didn't know that I was allowed to use their bathroom. It is awkward walking through there at times. I'm okay with the majority of the people who work down here in these offices, but the other people upstairs.... (Neethi).

It's different people who are down here and people who are up there. They are not as approachable... People our age are stereotyped, like they are just loud ones, I also like that we are like kind of mixed, everyone from different races are here, it's great. But [upstairs] they don't interact with other people (Eldora).

Physical Barriers

Each woman noted the disconnect between her department and the people who work in the second floor offices. While they know the names of people from their email addresses, none can put a face to a name. They get nervous when called to that wing for a meeting, and draw a clear line between the people "up there" and the people "down here." In the past several years, the occupancy of the offices has changed. The education staff was moved in its entirety to a windowless classroom in the basement, and the education director to a storage closet converted into an office. The "upstairs" area became inhabited by administrative staff who had minimal interactions with the interpreters. Seraphina notes that years ago, when the education staff occupied that space, interpreters would regularly visit, assist in projects, and chat with vice-presidents and directors in the hallways. They felt engaged and involved, and were familiar with the jobs that former interpreters held, and that they might one day have as well. Now, however, there is a disconnect, and the goings-on of other departments are less than transparent.

The hierarchy in the workplace keeps those workers at the lowest rung of the ladder ignorant of the way the production process works as a whole. The low level workers see only a minute part of the process and they see it in isolation from the logic of the process. This ignorance requires that these workers accept the fact that decisions regarding their work be made by higher-ups (Kincheloe, 2011, p. 5).

At the Metro Science Museum, this isolation of youth interpreters from the decision-making of the institution has, in recent years, become much more prevalent. In Seraphina's description of the changes in the approval process for new programs, authority over content was removed almost entirely from the interpreter staff and their supervisors. The process became so opaque that the people who made edits and changes to content were nameless, faceless curriculum developers known only as "the Ph.D.'s upstairs." To learn more about the shifts in decision-making policy, I interviewed both the former department director, Connie, and the current director, Shanti. From the perspective of the former department director, Connie, the interpreters simply were not doing a good job and so other experts needed to be involved. However, her methods did not involve collaboration of departments or professional development for the interpreter team. Instead, she chose to export the product to someone who the institution deemed more knowledgeable and more skilled. Instead of creating a learning opportunity, the director created a hierarchy, and the process of curriculum development became invisible to the people who had been doing it for the past decade or more.

It takes away your sense of agency and assumes that someone else knows more. If you think someone else knows better, then hire them to do this job, but they won't because this work is beneath them, I don't know (Seraphina).

This lack of transparency also disallows youth from understanding potential future careers. Interpreters no longer have regular opportunities to interact with the scientists, curriculum developers, and educators who work on the other side of the building. While a select few interpreters graduate into part-time year-long fellowships, Seraphina's turning point moment of being selected by a program manager to show off her skills at an event might not have happened if she were a new interpreter now.

Stuff like that, it's upsetting, because... if the only certain people are getting the good jobs, are getting the good training, they will be the future of STEM, so they will become the next wave of mentors. It's this horrible cycle that continues to kick these other kids out (Seraphina).

Technocratic shifts

Technocracy is a societal system in which knowledge is mediated by technical expertise, so for example, someone with a degree in finance would be best suited to make financial decisions. However because technocratic rationality proposes that knowledge can be socially engineered into an optimized form, certain knowledge systems are privileged over others (Giroux, 2003). Those knowledge systems, and the credentials achieved through participation in those systems, are inaccessible or irrelevant to many who do not identify with the dominant culture (McLaren, 2016). Technocracy stalls the aspirations of entry-level workers. When workers aspire to something greater, and believe that they have the abilities to do so "they are discouraged by the higher formal education requirements necessary for such high level jobs. Seeing access to higher education as limited, the low level worker gives up his or her aspirations to higher positions" (Kincheloe, 2011, p. 6.) This was by no means the intention of the new CEO, when he arrived with a fresh new agenda to transform the museum into a cutting edge learning sciences research facility. He simply wanted to recruit the most academically talented people that he could find. The unintended consequence of that shift, however, was that the definition of talent became much more narrow and applied to a more privileged segment of the workforce (McNamee & Miller, 2009).

Shanti, the current director of the interpreters, told me that five years ago, most of the educational management positions were filled primarily by former interpreters, and most of those

former interpreters began as teens who may have had interest, but not particular aptitude in science. They were young men and women from the local community who worked up the ranks through high school and college to attain full time positions. A report from 2007 praised the institution for filling 70% of the full time education positions with former interpreters. Most had begun in high school and developed their expertise through a decade or more of work in the museum. Today, that number is closer to 25%, with the vast majority of managerial positions being filled by learning science researchers and psychologists from various university backgrounds. These shifting dynamics, viewed by the CEO as a step in the right direction, has in many ways dismantled the institutional structures that allowed the youth program to flourish just a few years before.

This shift was reinforced by the former program director, Connie, in our 2013 interview. She and the CEO implemented a requirement that interpreters have an aptitude for science saying "It's wonderful when young people come in who don't realize that they're interested in science and develop this love of science, but there are so many young people out there who are really interested already." These shifts inevitably led to a different demographic composition of interpreters. The museum was beginning to embark on the type of racialized tracking common throughout public schooling, where privileged ideas of talent means that high achieving minority students are misidentified and passed over for opportunities for advancement in favor of white peers (Ford, Grantham & Whiting, 2008; Tyson, 2011).

The sting was greater, Shanti noted, at a recent staff meeting where the CEO lauded the tremendous increase in Ph.D.'s working at the museum. He showed a big bright projection with a colorful bar graph that listed the education levels of all of the full time staff in the museum from five years ago and the present. The bars for bachelor's degree and under contained the interpreter

staff and much of the staff who were formerly interpreter staff. Most had bachelor's degrees and a few were working on master's degrees, but with many of them raising families or taking on second jobs to make ends meet, they would not likely have the financial capacity or time to pursue graduate studies. And they were fine with that, until that meeting. The CEO pointed proudly at the Ph.D. column. None of the increased height in that bar came from existing staff who went on to pursue graduate studies. Every new segment of that column came from the influx of researchers who were hired by the CEO to lead all of the new departments and projects. Here, as in many museums, they have "internalized the dominant Western Paradigm that frames academic knowledge as the central objective of education and diminishes the importance of cultural knowledge systems. Under this paradigm, academic knowledge is a normative knowledge system" (Quijada Cerecer, 2013, p. 198).

Shanti was angry, frustrated, and discouraged. Just a few years ago, a key component of the museum's mission was to elevate youth to positions of authority, where they could serve as teachers, managers, and leaders. On this day, she realized that the internal meritocracy no longer exists. That meeting was one of many that reminded the interpreter staff that they fit into a lower place on the hierarchy.

Eldora, Neethi, Seraphina, and many other youth, have begun to recognize that there is a dominant culture, and that they live on the fringes of it. They know that there are people who look down on them because of the way they look or the way they talk, and they believe that this is something that will always be. The American education system leads students to believe that we live in a meritocracy, that hard work will pay off, and that everyone has an equal chance at success, all while perpetuating a system that values some forms of knowledge over others (Khan & Jerolmack, 2013). In this meeting with the new CEO, it became clear that a Ph.D. was deemed

more valuable than a decade of work in the museum, or a lifetime of experience in the community.

Quijada Cerecer (2013) examines how policy reinforces the paradigm that academic knowledge is normative, and is inherently more valuable than cultural knowledge systems. This creates tension within the system and students begin to understand that their knowledge is not as valid as other forms of knowledge. "Placing academic and cultural epistemologies at odds with each other creates tensions for school leaders and manifests in leadership practices that hinder efforts to validate both types of knowledge systems and problems associated with creating a positive school culture" (p. 199). Bourdieu and Passeron (1977) argue that the knowledge systems acquired by the upper and middle classes are deemed by society as more valuable capital. A person born into a family that does not have access to this knowledge could, with a serious amount of resources, access that knowledge through formal schooling. The problem then becomes one of one privilege (Yosso, 2005). Should museum youth programs focus on training youth to assimilate to the dominant societal norms for success, or could there be alternate ways of being and of participating in museums that are equally as important? Should museum programs teach students how to develop a sense of belonging in higher education? Should they prepare students for the reality that no matter how hard they try they probably will not belong?

Meritocracy and Repressive Tolerance

Youth who are not part of the dominant culture, namely students of color and students from low-income communities, are led to believe that they have equal access to higher education, academic knowledge, and careers of their choosing. They are taught that if only they work hard, they can achieve their dreams, and that if they fail, they did not work hard enough. This is the myth of meritocracy (Miller and McNamee, 2004). Resources exist to support

students in their endeavors for mobility, but these resources can often only provide just enough to keep hope alive, and not enough to truly overcome all of the barriers. “Repressive tolerance (Marcuse, 1965) ensures the continuation of the system by allowing just enough challenge to the system to convince people that they live in a truly open society, while still maintaining the system’s structural inequality. It functions as a pressure cooker letting off enough steam to prevent the whole pot from boiling over” (Brookfield, 2005, p. 9.)

Although she does not use this term, Seraphina regularly noticed examples of repressive tolerance in a workplace that hangs posters of interpreters on the conference room doors, but that does not allow them into the conference room. Her co-workers are led to believe that they are being prepared to be the future leaders of the institution, but opportunities for advancement are limited to assistant roles while management positions are promoted almost exclusively to external candidates. Seraphina is beginning to question the assumptions about who is qualified to do the work. She feels that she has been overlooked a few too many times. She sees her supervisor’s frustration when he isn’t included in meetings about the training of interpreter training, despite having the job title *Interpreter Training Supervisor*. She wants to speak out and say “If you think someone else knows better, then hire them to do this job, but they won’t because this work is beneath them. But if we are the people who are hired to do this, then why do we have to get approval from someone we don’t even know.” She does not feel that she has the authority to say this, but one day she might.

Summary

With my second question I attempt to understand the relationship between the interpreters and the museum. My question was “*In what ways have these experiences been influenced power and privilege within the institution*”? Through this question, Eldora, Neethi, Seraphina and I

interrogated the complex dynamics of a program designed for low-income youth and youth of color that is embedded within an academic institution that is predominately white and middle class. There are clear differences between the culture of the interpreter department and the culture of the museum-at-large, and the divide between the two have grown larger in recent years. On the surface, the museum is an archetype for good youth engagement, but to the people who are part of it, there are subtle reminders that they are unequal. I do not know for certain if any of the perspectives that these women share about the museum would be considered accurate by anyone else in the institution. I do not know if the CEO considered the implications of the changes he made to the departmental hierarchies, or if he is aware of the tension that has resulted from these changes. Is there a connection between the racial and cultural background of the youth interpreters of this museum and the technocratic hierarchy that has usurped the creative authority of the interpreter department? I cannot say for certain, but Seraphina believes so. “I just feel like we are treated as if our work isn’t as important. I don’t know if it is because of the race or ethnicity of our team, but I think it could be easy to make that connection.”

Chapter 6

Conclusion



A painting by Eldora Ruiz (pseudonym). Sent via email January 16, 2016.

After our meetings, Eldora and I continued to email. I asked if her work ever inspired her art. She spent the next few months working on this painting. She sent this email and photo.

Dear Andrea,

I apologize for the tardiness of these pictures yesterday was definitely not the best weather of going out for a photo shoot. The painting blew away so many times, but it endured! Unfortunately I still wasn't able to get the shot I wanted, but I hope these images will help you out. There is minor damage to the painting, however you can have it if you'd like. To be honest, I was thinking about what I would do for the painting for over two months. I wanted to show diversity and I wanted to tell a story. Usually I paint and follow my thoughts and ideas, but I wanted this painting to be special and meaningful. At first, I had an idea of taking pictures with the inspiration of Cubist artist Pablo Picasso and his use of geometric shapes. However weeks passed by and I couldn't concentrate or I would get frustrated at my prototypes. So I refrained from prototyping and thought an exhibit located in the upper wing of Metro Science Museum. I thought about the senior interpreters in our program and the differences we all share. Every single one of them is like a lego piece, different color and shape but similar goals. Without the different pieces, there won't be a design. I thought, what could possibly be more beautiful than interacting with another human being to share life? I started off by first making an outline of 8 circles and I connected each line to another, one after the other and as I was doing that I remembered when I went to the Museum of Art and was blown away by the Tiffany Stained glass section. Beautiful colorful stained glass made me feel at ease, calmed and reminded me of flowers growing. So I added that idea and connections to tie in the representation of human interaction and the main theme of diversity (Jan 18, 2016).

Eldora, Neethi, and Seraphina

In this paper, I present portraits of Eldora, Neethi and Seraphina, three of the one hundred young adults who work as science interpreters at Metro Science Museum. These portraits offer a glimpse into the lives of three young women who, at the age of fifteen, found jobs that they grew to love. A sense of community grew within their department that allowed them to make meaning of their work. Their interactions outside of the department, however, were laden with subtle insults and well-meaning discrimination. The museum takes pride in this youth development program, and for many years has provided dynamic visitor experiences while helping youth to become successful in their chosen career fields. This study presents a counter narrative that shares the experiences of three women, presented through my lens as a social justice educator seeking change to the social and cultural dynamics, dominant voices, and sources of authority of museums.

Seraphina was born and raised just a few bus stops away from the museum. Her Guyanese-American family includes parents, aunts, uncles, cousins, and grandparents who all grew up in the neighborhood. Her mother insisted she work at the museum, and Seraphina despised it for quite a while. Eventually, after being entrusted with precious responsibilities and having her skills recognized by peers and supervisors, she grew to love it. She was promoted from volunteer to paid interpreter, then to senior interpreter, and now supervisor. After one year of hating her job, and six years of loving it, she plans to make this her life's work. Graduating soon with an Urban Studies major, Seraphina is acutely aware of the racial tensions that still exist in American culture, and wants to do work in museums that address these problems.

Neethi still does not know how she was called for an interview, but is grateful that she was. She grew up living part-time in Trinidad and part time across town with her parents, sister

and brother. Despite the long bus ride, she and both siblings now commute twice a week to the museum. She has attended archaeology camps in Colorado, interned in other museum, and networked with scientists from numerous fields, all in less than three years of work. With an academically driven mother and a father who served as primary care-giver, Neethi is sensitive to the role of gender in career decision-making and is currently exploring a multitude of possibilities that extend far beyond the nursing option that her mother steered her toward.

Eldora was born and raised just a few blocks away from the museum and even attended some programs there as a child. Her family came to the United States for a better life and education, and the museum has played a large role in Eldora's achievements thus far. She applied to the job in the hopes of finding some mentorship, and in the process became a mentor to many others. Though she has experienced much sadness in life, all that she does is directed toward making other people happy. Now she is a Senior Interpreter, and hopes to be the first person in her family to graduate from college. In the months since we last met, she has changed her major to human services, having realized that her passions lie in helping others. She is also working on a series of painting that are inspired by our conversations.

It is rare for a teenager to remain in her first job for seven years. It is even rarer that she use the word "love" to describe it. Each of the women was tentative when they came into the work at the age of 15. None of them excelled at science or at public speaking. Each of them was urged by a member of their family to give it a try, despite their reservations. The job was structured in such a way that they were supported throughout the process, that they had someone to look up to who also started as a teen, who was also from the neighborhood, and who had advanced within the program. They were not expected to be great on their first day of work, but were offered training and professional development to gradually increase responsibility in a way

that was both challenging and manageable. Now, as they move into the next phases of their careers, hopefully they will-be agents of change.

Becoming Agents of Change

So this month in particular sparked huge interest in race, class, relations and how bad it is to make that association, to connect that one race to that one class, or how people are denied opportunities because of their race or class, and um, it seems really hard to think about going about fixing that, but also if I had that, power or that money or that anything that could help do something about that (Seraphina.)

Eldora, Neethi and Seraphina are on the precipice of understanding the power dynamics that affect their work. They can eloquently articulate the ways in which their lives have led to their work in the museum, and how their work in the museum has subsequently impacted their lives. They can thoughtfully critique their experiences within the museum, though they may not have the academic terminology to apply to it. They are strong, they are resilient, and they have an interminable desire to do good not for themselves, but for others.

Resilience is “ it is an individual’s ability to translate a stressful or adverse situation into a source of motivation, to thrive and increase competence in the face of adverse circumstances” (Andrews 2012, p. 7). These women are resilient. They are resilient because they have navigated through and graduated from the public education system of a major metropolitan city. They are resilient because they have not succumbed to the lowered expectations that society has for young women with brown skin. They are resilient because they know that their race, their language, their culture, their faith, their upbringing, their gender, and their experiences are assets, and are valuable to their work.

Critical pedagogy requires that we notice inequity in the system, we critically reflect upon our roles within that system, and that we take action to enact change. The emancipatory knowledge acquired through critical reflection cannot be unlearned. It presses us to enact change. Critical consciousness requires praxis. It is not merely an intellectual exercise about power, but an active process that requires us to observe, reflect, experience dissonance, and take action so that cultural revolution may be realized (Freire, 1985).

Through their work, Eldora, Neethi and Seraphina develop skills, confidence, a sense of purpose, and ownership over their experiences. They become more critically aware of their possibilities, which can lead to opportunities to cross boundaries and challenge their oppressors (Coburn, 2011). Giroux (2005) suggests a critical-border pedagogy that recognizes how and why inequitable differences exist within society, set up conditions in which youth can cross over into workplaces dominated by the ruling class, and make hierarchies and relationships visible so that youth can envision ways to overcome these structures. Through this pedagogy young people can observe how knowledge is constructed and engage with “ safe spaces and conditions for young people to interrogate their values and beliefs, to experience difference and to increase their understanding or capacity to produce knowledge about their identities” (Coburn, 2011, p. 481.)

These women are beginning to develop a more critical lens. They are beginning to recognize that structural inequalities exist. *Conscientization* is the development of a critical awareness, and a shift in his or her reality. It is paired with a desire to take action and to become an agent of change, both for one’s own self-interest, and for the dissolution of the oppression of others (Freire, 2000). Eldora, Neethi and Seraphina are beginning to observe the world with skepticism of what they have always considered to be normal. Through work and through formal education, they begin to know that they need not take for granted what is given to them as truth.

Through the support of their peers, supervisors and mentors, these women are beginning to transform their own understanding of the world and the contributions that they want to make to their chosen fields.

Critically Analyzing Museum Practice

I use a critical pedagogy framework to analyze power structures within Metro Museum. Critical pedagogy allows me to scrutinize the power dynamics that currently exist, but goes a step further in creating a call to action for students and teachers to become agents of change. Critical Race Theory more specifically addresses mechanisms of oppression through a lens of race, ethnicity and culture. These theoretical perspectives are complimentary to the methodological approach of portraiture, which calls for the voice of the participant and the lens of a critical researcher to create counter-narratives of tension and love and metamorphosis amidst adverse forces. I also include elements of critical autoethnography, in which I include my own life experiences from both my childhood and my current work as a museum educator.

“The role of critical pedagogy is not to extinguish tensions. The primary role of critical pedagogy is to lead students to recognize various tensions and enable them to deal effectively with them” (Freire and Macedo, 1987, p. 355). In his essay on conscientization (2000), Freire notes “just as there is a moment of surprise among the masses when they begin to see what they did not see before, there is a corresponding surprise among the elites in power when they find themselves unmasked by the masses” (p. 50). To enact change, we, as educators, museum workers, and members of society, must question the policies and procedures that we perceive as normal, recognize that our practices “are never neutral but always embedded within racialized and imperialist (as well as gendered, heteronormative, classed, ethnocentric and nationalist) discourses that our pedagogy might either perpetuate or challenge” (Taylor, 2006, p. 540).

While each of these young women has unique life histories, aspirations, work experiences, and cultural backgrounds, their work as museum interpreters parallel in a number of ways. From subtle acts of oppression within the institution, to powerful transformation, these women have shared experiences that offer an alternate understanding of the work of youth who work as interpreters in science museums.

Some readers will be skeptical of this approach. Our scientific training has engrained in us in rigorous, objective, and quantitative approaches to science. We teach about experimentation and trials and verifiability of results. Some readers will see this as merely storytelling, tainted with the subjective point of view of the author. Ten years ago I would have been skeptical of this approach as well. It was a long and arduous transition from being a quantitative to a qualitative researcher, and still a longer road to embrace a critical autoethnographic approach to writing about power and privilege within the academic institutions that have supported my career over nearly twenty years.

I do not claim that these are the experiences of all youth interpreters in all museums. In fact the experiences of most museum educators, who are white, degree holding, and middle class, are likely very different. However I believe that there are common threads that connect these women to other young men and women from underrepresented communities who take the risk to seek meaningful work in science museums. I believe that the institutions that these young men and women immerse themselves in are often built upon the values and norms of the affluent, white, highly educated population that dominate the science museum community. Those values and norms can become a pervasive but invisible culture that can oppress as much as it embraces youth staff, even in youth programs intended explicitly for low-income youth or youth from communities of color.

I also know that there are other young adults, in other museums, and in other facets of life, who have been in a room full of people and felt all alone, faced comments and glances that make them question their abilities, have been resilient in the face of adversity, and who have experienced meaningful work that has changed the ways that they see themselves and the institution. I also hope that there are other members of the dominant culture who look around the homogeneity of the workplace and notice that something is wrong, or who work with teens but know that they could be doing better.

I do this work both as an insider and an outsider. I know the cultural tensions of a low-income, first generation college student in a professional setting. By virtue of my skin color and education, I am afforded more of a voice, more access to resources, and more of a chance to prove myself worthy of advancement in a supposed meritocratic system. I do not fear that the police will act aggressively toward me because of the way I look. I never have anyone make fun of my accent, or act surprised when I use big words. I don't have my citizenship questioned, nor do I live with the burden of being judged for my ethnicity. My privilege is with me always. As a white, hyper-educated middle class woman, I am part of the demographic that dominates the museum landscape. However I hope that I can use my privilege in constructive ways and to continue to learn from young people like Eldora, Neethi and Seraphina, as well as others who are from an infinite number of identities and cultures that are underrepresented in the field.

While this discussion is framed through my own lens as a researcher, I make every effort to present the point of view of the participants through their eyes and their words. I present a counter narrative to the typical evaluative papers that museums use to procure funding and disseminate practice. I also do not present multiple sides of the story. I did not seek out feedback from the CEO or the program director that might dispel misconceptions or shed light on a

complex issue. I present what Eldora, Neethi and Seraphina know to be true, drawn from their experiences as interpreters, supported in part by background information from other people in the interpreter department. It is different from the narrative that the dominant voices of the institution put forth to the field as authoritative and expert. That traditional narrative presents the interpreter program as an international model for youth engagement that transforms the lives of poor and minority youth through collaborative engagement with the institution. Much of this is true, however the dominant narrative fails to critique the ways that shifts in institutional culture have fundamentally altered the power dynamics experienced by the participants. Amazing things still happen for and because of youth in the institution, but the institutional perspective of how those great things happen need not be the only narrative that is provided.

References

- Adams, J. D., Gupta, P., & Cotumaccio, A. (2014). Long-term participants: A museum program enhances girls' STEM interest, motivation, and persistence. *Afterschool Matters*, 20, 13-20.
- Adams, J. & Gupta, P. (2013). Creating a space for agency and identity around science. *International Journal of Critical Pedagogy*, 4(2).
- Adams, T.E. & Holman Jones, S. (2011). Telling stories: Reflexivity, queer theory and autoethnography. *Cultural Studies Critical Methodologies*, 11(2) 108-116.
- Andrews, D. C. (2012), Black achievers' experiences with racial spotlighting and racial ignoring in a predominately white high school, *Teachers College Record*, 114 (10) 1-46.
- Aliakbari, M. & Faraji, E. (2011). Basic principles of critical pedagogy. *2nd International Conference on Humanities, Historical and Social Sciences*, IPEDR, 17, 78-85.
- Amos, Y. T. (2010). "They don't want to get it!" Interaction between minority and white pre-service teachers in a multicultural education classroom. *Multicultural Education*. 17(4), 31-37.
- Andrews, D. C. (2012), Black achievers' experiences with racial spotlighting and racial ignoring in a predominately white high school, *Teachers College Record*, 114 (10) 1-46.
- Anderson, M. (2015). Why schools need more teachers of color-for white students. *The Atlantic*, Aug 6, 2015. Retrieved from: <http://www.theatlantic.com/education/archive/2015/08/teachers-of-color-white-students/400553/>
- Ash, D., & Lombana, J. (2013). Methodologies for reflective practice and Museum Educator research: The role of "noticing" and responding. In D. Ash, J. Rahm, & L. M. Melber (Eds.), *Putting theory into practice: Tools for research in informal settings*. (pp. 29-52). Rotterdam, The Netherlands: SensePublishers.
- ASTC (2009). *Youth Programs in Science Centers*. retrieved from <http://www.astc.org/wp-content/uploads/2014/11/Full-Doc.pdf>
- Belton, B. (2013). Radical youth work: developing critical perspectives and professional judgement. *Youth & Policy*, (110), 96-110.
- Bloom, C. & Erlandson, D.A. (2003). Three voices in portraiture: Actor, artist and audience. *Qualitative Inquiry*, 9 (6), 874-894.
- Boler, M. (2004). Teaching for hope: The ethics of shattering world views. In D. Liston & J.Garrison (Eds.), *Teaching, learning, and loving: Reclaiming passion in the educational practice* (pp. 117-131). New York: Routledge Falmer.

- Borrero, N. E., Yeh, C.J., Cruz, C. I. and Suda, J.F. (2012). School as a context for “othering youth and promoting cultural assets. *Teachers College Record*, 114, 020307, 1-47.
- Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). Cambridge, England: Cambridge University Press.
- Boylorn , R.M. & Orbe, M.P. (2014). *Critical Autoethnography: Intersecting cultural identities in everyday life*. Walnut Creek, CA: Left Coast Press,.
- Brookfield, S. (2005). Undermining the very democracy we seek to create: Discussion practices in adult education and the dangers of repressive tolerance. *Studies in Continuing Education*, 27, (2), 101-115.
- Brookfield, S. (2009). Engaging Critical Reflection in Corporate America, in *Transformative Learning in Practice: Insights from Community, Workplace, and Higher Education*. Eds. J. Mezirow & E. Taylor, San Francisco: Jossey-Bass.
- Brookfield, S. (2003). Putting the critical back into critical pedagogy. *Journal of Transformative Education*, 1(2), 141-149.
- Brown, A. L. (2012). On human kinds and role models: A critical discussion about the African American male teacher. *Educational Studies: Journal of the American Educational Studies Association*, 48(3), 296-315.
- Brown, C (2004). The museum’s role in a multicultural society. in *Reinventing the Museum: Historical and Contemporary Perspectives on the Paradigm Shift*. G. Anderson, ed. Oxford: Alta Mira.
- Brown, S.V. (2000). The preparation of minorities for academic careers in science and engineering. In G. Campell, R. Denes, & C. Morrison (eds.), *Access Denied: Race, Ethnicity, and the Scientific Enterprise*. New York: Oxford University Press, Inc.
- Bryan, N., & Browder, J. K. (2013). “Are you sure you know what you are doing?”—The lived experiences of an African American male kindergarten teacher. *Interdisciplinary Journal of Teaching & Learning*, 3(3).
- Cannady M. A., Greenwald E., Harris K. N. (2014). Problematizing the STEM pipeline metaphor: is the STEM pipeline metaphor serving our students and the STEM workforce? *Science Education* ,98, 443–460 10.1002/sce.21108
- Chan, S. (2013). Learning through apprenticeship: belonging to a workplace, becoming and being. *Vocations and Learning*, 6(3), 367-383.
- Chapman, T.K. (2007) Interrogating classroom relationships and events: Using portraiture and critical theory in education. *Educational Researcher*, 36(3), 156-162.

- Chi, B. Dorph, R. & Reisman, L. (2014). *Evidence & Impact: Museum-Managed STEM Programs in Out-of-School Settings*. Lawrence Hall of Science. retrieved from: http://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_089887.pdf
- Coburn, A. (2011). Building social and cultural capital through learning about equality in youth work. *Journal of Youth Studies*, 14 (4), 475-491.
- Cooper, C., Gormally, S., & Hughes, G. (2015). The case for re-imagining ways of working with young people in education and youth work. In *Socially Just, Radical Alternatives for Education and Youth Work Practice* (pp. 1-16). Palgrave Macmillan UK.
- Custer, D. (2014). Autoethnography as a transformative research method. *The Qualitative Report*, 19(37), 1-13.
- Darder, A. (2015). Introduction in A. Darder, M. Baltodano and R.D. Torres (Eds). *Critical Pedagogy Reader* (pp. i-x). New York: Taylor & Francis.
- Dawson, E. (2012). *Non-participation in public engagement with science: A study of four socioeconomically disadvantaged, minority ethnic groups*, Unpublished dissertation, Kinds College, London.
- Dawson, E. (2014). Equity in informal science education: developing an access and equity framework for science museums and science centres. *Studies in Science Education*, 50(2), 209-247.
- Delgado-Bernal, D. (2002). Critical race theory, Latino critical theory, and critical raced-gendered epistemologies: Recognizing students of color as holders and creators of knowledge. *Qualitative Inquiry*, 8(1), 105-126.
- Denzin, N. K. (2003). Performing (auto) ethnography politically. *Review of Education, Pedagogy & Cultural Studies*, 25(3), 257-278.
- Denzin & Lincoln (2011). *Sage Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.
- Diamond, J., John, M. St., Cleary, B. and Librero, D. (1987). The exploratorium's explainer program: The long-term impacts on teenagers of teaching science to the public. *Science Education* 71: 643-656.
- Dillard, C. (1994). Beyond supply and demand: Critical pedagogy, ethnicity, and empowerment in recruiting teachers of color. *Journal of Teacher Education*, 45 (1), 9-17.
- Duncan-Andrade, J. and Morrell, E. (2008). *The Art of Critical Pedagogy. Possibilities for Moving from Theory to Practice in Urban Schools*. New York: Peter Lang.

- Ellis, C. (2004) *The Ethnographic I: A Methodological Novel about Autoethnography*, Walnut Creek, CA: AltaMira Press.
- Ellis, C. & Bochner, A. (2000). Autoethnography, personal narrative, reflexivity: Researcher as Subject. In N. K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp.763-791). Thousand Oaks, CA: Sage.
- Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: an overview. *Historical Social Research/Historische Sozialforschung*, 273-290.
- Farrell, B., & Medvedeva, M. (2010). "Demographic Transformation and the Future of Museums." Washington, D.C: Center for the Future of Museums.
- Feinstein, N.W. & Meshoulam, D. (2014) Science for what public? Addressing Equity in American science museums and science centers. *Journal for Research in Science Teaching*, 51 (3), 368-394.
- Feistritzer, C. E. (2011) *Profiles of Teachers in the U.S.*, National Center for Education Information. Washington D.C.
- Figuroa T. & Hurtado, S. (2013). Underrepresented racial and/or ethnic minority (URM) graduate students in STEM disciplines: A critical approach to understanding graduate school experiences and obstacles to degree progression. *Association for the Study of Higher Education Conference*. Los Angeles.
- Freire, P. & Macedo, D. (1987). Rethinking literacy: A dialogue. in A. Darder, M. Baltodano & R. D. Torres, *The Critical Pedagogy Reader* (pp. 354-364) New York: Routledge Press.
- Freire, P. (1985). *The politics of education: Culture, power, and liberation*. New York: Greenwood Publishing Group.
- Freire, P. (2000). *Pedagogy of the Oppressed*. New York, NY: Continuum International.
- Fine, M. (1994). Working the hyphens in N. Denzin & Y.S. Lincoln (Eds) *Handbook of qualitative research*. (pp. 70-82) Thousand Oaks, CA: Sage.
- Garibay, C. (2009). Latinos, leisure values, and decisions: Implications for informal science learning and engagement. *The Informal Learning Review*, 94, 10–13.
- Giroux, H. A. (2011). *On critical pedagogy*. Bloomsbury Publishing USA.
- Gomez, M. L., Rodriguez, T. L., & Agosto, V. (2008). Who are Latino prospective teachers and what do they bring to US schools? *Race Ethnicity and Education*, 11(3), 267-283.
- Gurt, G.A. & Rueda Torres, J.M. (2007). People who don't go to museums, *International Journal of Heritage Studies*, 13(6).

- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist studies*, 14(3), 575-599.
- Harrison, G. (2014). Accent and 'othering' in the workplace in John Levis & Alene Moyer (Eds.) *Social Dynamics in Second Language Accent* (pp. 255-272). Berlin: De Gruyter.
- He, Y., Bettez, S. C., & Levin, B. B. (2015). Imagined community of education voices from refugees and immigrants. *Urban Education*, doi: 0042085915575579.
- Hobbs, S., McKechnie, J., & Simpson, A. (2016). The risks faced by adolescent workers in the United Kingdom. *Young*, 24(1), 53-65.
- Hoffman, K., Llagas, C., & Snyder, T. D. (2003). *Status and trends in the education of Blacks*. Washington, DC: U.S Department of Education, National Center for Educational Statistics.
- Holt, N. L. (2003). Representation, legitimation, and autoethnography: An autoethnographic writing story. *International journal of qualitative methods*, 2 (1), 18-28.
- Hood, M. G. (2004). Staying away: Why people choose not to visit museums. In G. Anderson (Eds.), *Reinventing the museum: Historical and Contemporary Perspectives on the Paradigm Shift* (pp. 150-157). Oxford, UK: Rowman & Littlefield Publishers.
- hooks, b. (2003). *Teaching Community: A Pedagogy of Hope*. New York: Routledge.
- Hooper-Greenhill, E. (2004). *Museums and their Visitors*. New York: Routledge.
- Holman Jones, S. (2005). Autoethnography: Making the personal political. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (pp.763-791). Thousand Oaks, CA: Sage.
- Jackson, T. O. (2015). Perspectives and insights from preservice teachers of color on developing culturally responsive pedagogy at predominantly white institutions. *Action in Teacher Education*, 37(3), 223-237.
- Jayakumar, U. M. (2008). Can higher education meet the needs of an increasingly diverse and global society? Campus diversity and cross-cultural competencies. *Harvard Educational Review*, 78(4), 615-651.
- Khan, S. & Jerolmack, C. (2013). Saying meritocracy and doing privilege. *The Sociological Quarterly* 54(1), 8-18.
- Kalin, R., Rayko, D. S., & Love, N. (1980). The perception and evaluation of job candidates with four different ethnic accents. *Language: Social Psychological Perspectives*, 197-202.

- Kincheloe, J. (2007). Critical pedagogy in the twenty-first century: evolution for survival. In Peter McLaren and Joe Kincheloe (eds) *Critical Pedagogy: Where Are We Now?* Peter Lang, New York.
- Kincheloe, J. (2008a). *Critical Pedagogy Primer*, Peter Lang, NY, NY
- Kincheloe, J. (2008b). *Knowledge and Critical Pedagogy: An Introduction*, Springer Netherlands
- Kincheloe, J. (2011). *Key Works in Critical Pedagogy*. Sense Publications, Netherlands.
- Kohli, R. (2012). Racial pedagogy of the oppressed: Critical interracial dialogue for teachers of color. *Equity & Excellence in Education*, 45(1), 181-196.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Education Research Journal*, 32(3), 465-491.
- Lawrence-Lightfoot, S. (2005) Reflections on portraiture: A dialogue between art and science. *Qualitative Inquiry*, 11(3), 3-15
- Lawrence-Lightfoot, S., & Hoffman Davis, J. (1997). *The art and science of portraiture*. San Francisco: Jossey-Bass.
- Lynn, M., & Parker, L. (2006). Critical race studies in education: Examining a decade of research on U.S. schools. *The Urban Review*, 38(4), 257-290.
- Mayan, M. J. (2009). *Essentials of qualitative inquiry*. Left Coast Press.
- McLaren, P. (2009). Critical pedagogy: A look at the major concepts, in *The Critical Pedagogy Reader*, 2nd ed Ed. Antonia Darder, Marta P. Baltodano, Rodolfo D Torres. in Routledge NY.
- McLaren, P. (2016). *Life in Schools: An Introduction to Critical Pedagogy in the Foundations of Education*. Routledge, Taylor & Francis: New York.
- McNamee, S. J., & Miller, R. K. (2009). *The meritocracy myth*. Rowman & Littlefield.
- Miles, M.B. & Huberman, A. M. (1994). *Qualitative Data Analysis: A Sourcebook of New Methods*. Thousand Oaks, CA: Sage.
- National Science Board [NSB]. (2014). *Science and Engineering Indicators 2014*. Arlington, VA: National Science Foundation.
- Olitsky, S. (2006). Structure, agency, and the development of students' identities as learners. *Cultural Studies of Science Education*, 1(4), 745-766.
- Perez-Huber, L. (2011). Discourses of racist nativism in California public education: English dominance as racist nativist microaggressions, *Educational Studies*, 47: 379-401.

- Perez-Huber, L. and Solozano, D.G. (2014). Racial microaggressions as a tool for critical race research, *Race, Ethnicity and Education*, 1- 24.
- Pierce, C. (1970). Offensive mechanisms. In F. Barbour (ed) *The Black Seventies*, p. 265-282) Boston: Porter Sargeant.
- Quijada Cerecer, P. D. (2013). Independence, dominance, and power: (Re)examining the impact of school policies on the academic development of indigenous youth. *Theory into Practice*, 52-196-202.
- Reed-Danahay, D. (1997). *Auto/ethnography*. New York: Berg.
- Richardson, L., & St Pierre, E. (2008). A method of inquiry. *Collecting and interpreting qualitative materials*, 3(4), 473.
- Riegle-Crumb, C., Moore, C., & Ramos-Wada, A. (2011). Who wants to have a career in science or math? Exploring adolescents' future aspirations by gender and race/ethnicity. *Science Education*, 95(3), 458-476.
- Rivera, L. (2015) *Pedigree: How Elite Students Get Elite Jobs*. Princeton University Press.
- Rossatto, Allen & Pruin (2006). *Reinventing Critical Pedagogy: Widening the Circle of Anti-Oppression Education*. Rowman and Littlefield: New York.
- Saldaña, J. (2015). *The coding manual for qualitative researchers*. New York: Sage.
- Sandell, R and Janes, R. R. (2007). *Museum Management and Marketing*, London: Routledge.
- Scott, S. V., & Rodriguez, L. F. (2015). “A Fly in the ointment” African American male preservice teachers’ experiences With stereotype threat in teacher education. *Urban Education*, 50(6), 689-717.
- Shagoury, R., & Power, B. M. (2012). *Living the questions: A guide for teacher-researchers*. Stenhouse Publishers.
- Shonfeld, R. & Westermann, M. 2015 *The Andrew W. Mellon Foundation Art Museum Staff Demographic Survey* https://mellon.org/media/filer_public/ba/99/ba99e53a-48d5-4038-80e1-66f9ba1c020e/awmf_museum_diversity_report_aamd_7-28-15.pdf
- Seiler, G. (2001). Reversing the "standard" direction: Science emerging from the lives of African American students. *Journal of Research in Science Teaching*, 38(9), 1000-1014.
- Solorzano, D., Ceja, M., and Yosso, T. (2000). Critical race theory, racial microaggression and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, 69, 60–73.

- Solorzano, D. G. & Yosso, T. J. (2002). Critical race methodology: Counter-storytelling as an analytical framework for education research. *Qualitative Inquiry*, 8(1), 23-44.
- Storksdieck, M. Haley-Goldman, K. and Jones, M. C. (2002). *Impact of the New York Hall of Science Explainer Program on its Former Participants*. Institute for Learning Innovation. Annapolis, MD.
- Sue, D. W., and Constantine, M. D. (2007). Racial microaggressions as instigators of difficult dialogues on race: Implications for student affairs educators and students. *College Student Affairs Journal*, 26(2), 136-143.
- Tilley-Lubbs, G. (2009). Good intentions pave the way to hierarchy: A retrospective autoethnographic approach. *Michigan Journal of Community Service Learning*, p. 58-69.
- Tilley-Lubbs, G. A. (2014). Critical autoethnography and the vulnerable self as researcher. *Multidisciplinary Journal of Educational Research*, 4(3), 268-285.
- Tilley-Lubbs, G. (2016). Reconciling two selves in the same body. Manuscript submitted for publication.
- Taylor, L. (2006). Wrestling with race: The implications of integrative antiracism education for immigrant ESL youth. *TESOL Quarterly*, 40(3), 519-544.
- Villaverde, L. E., & Carter, R. A. (2014). Critical pedagogy of experience, caught in the loops of seeing and being. *Interrogating Critical Pedagogy: The Voices of Educators of Color in the Movement*, 132, 17.
- Wells, C.P. (2013). Microaggressions in the context of an academic community. *Seattle Journal for Social Justice*, 12 (2), 319-348.
- Whitehouse.gov (2015). Remarks by the first lady for the opening of the Whitney Museum. retrieved from <https://www.whitehouse.gov/the-press-office/2015/04/30/remarks-first-lady-opening-whitney-museum>
- Yosso, T. J. (2002). Toward a critical race curriculum. *Equity & Excellence in Education*, 35(2), 93-107.
- Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education*, 8(1), 69-91.

Interview Prompts

These questions were used to begin the first interview. The conversations thereafter deviated from this script based upon the topics that each participant chose to discuss.

Tell me about yourself.

What is your job here?

How long have you been here?

What do you like about your job?

What do you not like about your job?

Think back to your very first day of work, what do you remember about it?

What has been your most rewarding day of work?

What has been your hardest day of work?

Who are some people in other departments that you interact with?

Tell me about your family.

What does your family think about you working here?

What kind of jobs do members of your family have?

How do you describe your job to your friends?

What is a time where you really felt like this was somewhere you belonged?

Are there ever times where you feel like an outsider at work?

Why doesn't the museum hire older people with science degrees to do this work?

What do the people who read this paper need to know about interpreters?

Is there anything else that I need to know?

Data Collection Timeline

Date	Location	Activity
March 2011	Midwest Science	Pre-dissertation Pilot Study
April 2011	Midwest Science	Pre-dissertation Pilot Study
May 2012	Astro Center	Phase 1- 5 days of observations and interviews
September 2012	Metro Museum	Phase 1- 3 days of observations and interviews
January 2013	Exploration	Phase 1- 4 days of observations and interviews
April 2014	Metro Museum	2 days of shadowing Eldora and Neethi
Feb 2015	Metro Museum	2 days of shadowing Eldora and Seraphina
March 2015	Metro Museum	2 days of shadowing Neethi and Seraphina
April 2015	Metro Museum	Phone interviews with admin staff
June 2015	Metro Museum	1 day of shadowing Eldora and Seraphina
July 2015	Metro Museum	2 days of shadowing Eldora, Neethi and Seraphina

Participants at Metro Science Museum

	Portrait participants
Eldora Ruiz	Senior Interpreter, Age- 20
Neethi Joseph	Advanced Interpreter, Age-19
Seraphina Persaud	Training Supervisor, Age- 21
Andrea Motto	Researcher, manager at University Museum, Age- 40

	Other informants
Shanti	Current director of department, Age early 30's
Connie	Former director of department, Age late 50's
Aurelia	Former Administrative Assistant, Age late 30's
Cece	Advanced Interpreter, Age 19
Amir	Interpreter, Age 21
Samantha	Interpreter, Age 18
Jade	Advanced Interpreter, Age 20
Carlo	Interpreter Supervisor, Age 27
Minnie	Interpreter, Age 23
Naseem	Interpreter, Age 18

	Other characters represented in the portraits
Dezzy	Former colleague and museum consultant who accompanied me to the consulting project ten years ago at a small museum
Robby	Advanced Interpreter, Age unknown
Kamyon	Interpreter supervisor, Age early 20's
Felix	Training supervisor, Age early 20's
CEO	CEO of museum, Age unknown
Candela	Eldora's mother, Age unknown
Mona	student at University affiliated with University Museum, age 22
Jevan	student at University affiliated with University Museum, age 19
Ashton	student at University affiliated with University Museum, age 20