Chapter 3
A Worthy Burden:
Reflections on the Journey of a STEM Professor of Color in Higher Education

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ABSTRACT

The author's path toward the STEM professoriate has been dotted by contingencies tied to his intersecting social identities. In this chapter, he shares the journey and the lessons in the hope that it provides the reader a nuanced picture of how STEM pathways may unfold for those from historically underrepresented backgrounds.

INTRODUCTION

The question of race is deeply embedded in the history of American higher education. As a term, 'race' is biological nonsense but, historically, skin complexion was a potent predictor of the ceiling for one's social positioning in the United States (US) (Solorzano, Villalpando & Oseguera, 2005). Some institutions of higher education merely replicated the social order of the day, actively barring people of color from any consideration of matriculation. Over time, however, the higher education system moved toward supporting and then mandating access for all qualified students, regardless of race or religion (Hannah, 1996). Unequal access to the education system meant unequal outcomes when measured in terms of representation within particular careers. For STEM professions, the inequality has been astounding (Algeria & Branch, 2015). In my field, the percentage of professors who identify as minority are well below their percentages in the US population (Nelson & Rogers, 2003). This inequality not only exists at the faculty level. Retention rates for underrepresented minority (URM) students still lag their white

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counterparts by orders of magnitude, with many of those leaving STEM (Science, Technology, Engineering, and Math) leaving higher education entirely (Chen, 2013).

There are many worthwhile questions to be asked about the experiences of people of color in STEM, but first, one must consider what it even means to be a person of color (POC) in STEM. The answers would depend on several highly variable social dynamics, most of which are not confined to the walls of higher education institutions. Examined differently, considering the parameters of the POC STEM experience is tantamount to considering what impacts the POC experience in the United States (US) at large. Age, personal history, nation of origin, and/or economic status may mediate or exacerbate the experiences of POC in the US, as well as public perceptions of them both within higher education and in the wider society. They subsequently also impact the coping strategies employed in response to those perceptions. The persistently low percentage of POC in STEM professions suggests, however, that there is something generalizable about skin color that effects who successfully navigates into the STEM professoriate. Understanding the journey of a STEM professor of color, therefore, requires the use of multiple lenses. Broad categorizations of performance trends in disciplines, graduation rates, and hiring practices are useful in identifying the scope of social inequities. Attending to solutions, however, requires digging into the varied experiences of the individual and being open to the unique nuances that ultimately determine the parameters of their experience. Through that micro lens, I am a sample size of one.

A few theoretical frameworks that attempt to explain the lived experiences of POCs in different contexts can be useful toward unpacking this experience. Assimilation theory (Nee & Alba, 2012), for example, is a decades-old framework that explains how immigrants and their descendants find connection to new environments. Ethnicity aside, many of my early experiences dovetail with this unique process of finding meaning. As my journey evolved, my resulting STEM praxis incorporates deep critical pedagogies (Darder & Baltodano, 2003) that both address unequal power structures and give a voice to those typically not shaping social narratives. These frameworks provide a structure that would come to inform how my own narrative developed.

In this chapter, I reflect on my experiences as a STEM professor of color, beginning at the point where my desires for a STEM career began to take a more formal shape at the undergraduate level. Currently, I am a Biology professor whose research focuses on the social context of the learning process from kindergarten to adulthood. I also teach Introductory Biology and a graduate class on STEM course design, all at a large, public research university in the Northeast US. My experiences to date, both positive and negative, varied significantly in time and place and were typically unique to where I was in my career pursuit. A common theme in the early stages, however, was that I usually lacked the language to articulate the social dynamics that informed my experiences regardless of the type of experiences. This articulation would come later, primarily as a function of the fact that I chose to pursue a research career that specifically studies this issue. This essay is partially a product of that articulation.

My journey is partially worth writing about because, as the data from federal reports mentioned above suggest, I am still somewhat of an ethnic anomaly in my field. Therefore, there are elements of my path that students considering STEM careers might learn from and/or be inspired by. It is also my hope that colleagues of color, navigating their own unique pathways, draw inspiration from the ways in which I choose to effect change that addresses representation in the field. All stakeholders in the academy do have something to gain from learning about the human experience, as told through the voice of someone who had to navigate some social hurdles in order to be successful. Telling this story and many other aspects of my practice can be burdensome. Efforts associated with confronting questions of race, culture, and class are often borne by those most invested in the solutions to those questions. In the literature,

this phenomenon is referred to as a 'cultural tax' (Baez, 2000). It is sometimes assumed that POC are most likely to have lived experiences that relate to those questions, and thus are best positioned to help institutions design solutions to them. However, if this responsibility is placed mostly on their shoulders without challenging non-POC colleagues to educate themselves towards this mission, then that work becomes an extra load added to the existing expectations of their faculty responsibilities.

Additionally, research and programming around these issues is usually emotionally taxing for the practitioner. When the construct being investigated resembles one's lived experience, or the experiences of those within one's culture, the outcomes matter on several personal levels. For this same reason, it is for me, a worthy enterprise. My journey, beginning as an international student of color at a Historically Black College (HBCU) in a southern major city to now, as a STEM professor of color in a predominantly white institution (PWI) in a mostly white region of the country, has taught me countless things about the intersection of blackness, science, and society. There are elements of my journey that I believe privilege me to engage in research, teaching, and faculty development on this topic with an appropriate mix of emotional investment and scholarship that allows the message of change to penetrate higher culture in unique ways.

My journey in STEM arguably began before I migrated to the US, but the American portion of my journey brought me face-to-face with contingencies that are unique to the experience of POC here. To this end, I tell my story chronologically beginning in the US. I begin by discussing the many influences of my path during my undergraduate years and the evolution of my thinking on race in the process. I will elaborate on some early experiences in the STEM professional world I encountered as a graduate student. I will also discuss the influences of the voices of the students from my early classrooms, whose warmth, generosity, and openness led me to choose a faculty career focused on education. The second section will detail the elements of my professional practice, describing how my historical influences have come to inform the fairly unique way I approach each element. Within this frame, I will discuss the ways in which my identity has exposed me to race-related situations and the coping strategies I used to remain professionally and morally mission-aligned. I will conclude by describing the relevance of my journey to the national conversation on the relationship between identity and education especially in STEM disciplines.

Influences for My Path

The Evolution of My Social Belonging

Social belonging is an academic concept often discussed in reference to disenfranchised identities (Walton & Cohen, 2007). As a term, there are some built in assumptions. There needs to be, by definition, some entity to which an incoming group needs to be attempting to feel connected. The 'us-them' dynamic that unfolds as a function of this is the spectrum along which individuals in the outgroup feel or don't feel a sense of belonging. The identity of who is 'in' the in or outgroups depends on location. As an international student of color, I perceived myself an outgroup member of not only white America, but of America itself. The fact that I shared skin tone with 99 percent of the students at my undergraduate institution only slightly alleviated whatever alienation I felt having migrated to America. This is partly because the historical racial dynamics in my country of origin did not contain the same level of fractiousness as the African-American experience in the US. Therefore, I had not arrived already primed with preconceived notions of how white America would perceive me, or any social limitations potentially

impeding my pathway to becoming a scientist. While my early experiences were not STEM-specific, they were important in my journey towards truly understanding what it meant to be both a numerical and cultural minority within a group where a majority group identity was dominant.

The subsequent learning curve was steep. As a black male in a southern city, I quickly found myself in situations where very specific assumptions about me based on my phenotype. For the most part, these lessons came when I was outside of the racially monolithic space of my undergraduate campus. For example, I sought out summer programs and internships as they seemed a natural way to figure out the aspect of science in which I wanted to spend the rest of my life engaged. These STEM summer programs often had explicit language in their advertising indicating that they 'strongly encouraged' minorities to apply. With such direct language, it was surprising to me that I was still one of typically fewer than five students of color enrolled in a student program enrolling over thirty students. What was equally confusing at the time, was the seeming natural tendency for the few students of color to immediately form affinity groups, often excluding the non-minority students in the program. The immediate recognition of one's minority status, and the grouping effect that stems from it has been well studied. Tatum (2017) discusses this phenomenon at length, partially as a way in which these groups re-arrest their sense of agency from dominant social norms. The grouping doesn't simply arise simply from numerical minority status but is also a function of the deep internalization of the social realities of their home communities. In a brutally frank dialogue, a young woman of color from one of the summer programs responded firmly when I asked about (what I perceived as) their lack of desire to racially comingle. She responded that I should consider myself lucky that I had the kind of upbringing that didn't provide reasons to naturally and instinctively distrust white Americans as an entire group.

Coming to terms with the concept of 'belonging,' both in STEM and in the US as an international student of color, meant that I had to better understand the social contexts of both the population to whom I connected the most phenotypically, and the population that primarily shaped the US social narrative. I had a sense that I had a lot of social and intellectual catching up to do. Though I enjoyed mostly excellent relations with all students from the aforementioned summer program, an incident later in the program was emblematic of my point. I organized a large mixed-race group of us to attend a cultural event in the downtown area. I failed to mention to the group that it was a hip-hop event, a detail I thought at the time to be irrelevant. From the outside of the facility it was clear that the event was mostly attended by people of color. Four cars traveled to the event, with the black students mostly grouping into one of them. Upon arrival, the three 'other' cars decided not to stay, with one occupant explaining to me the following day that though she could not fully articulate it she 'just didn't feel comfortable staying there.'

This was an important lesson in US Black-White race relations, one that would prove relevant to aspects of my later professional life. Science was then, and still is, a predominantly White domain if measured by the phenotype of its occupants. My beginning years exploring my particular interest in the field cannot be discussed without contextualizing that exploration within my growing understanding of my own sense of belonging. These early years provided experiential lessons that unintentionally prepared me for the social navigations I would have to employ during my more formalized STEM training.

Early Experiences in STEM

My experience in graduate school reflected the narrow, sometimes socially monolithic, culture that has characterized STEM for many years. Available time during the pursuit was supposed to be mostly reserved for the development of technical expertise in the area. Little room was available for true exploration

as it was assumed that by this point, one had fully decided the specifics of the expertise one wanted to develop (Gardner, 2008). Of course, this has been the basic model of STEM graduate education during the almost 150 years of its existence in the US. Graduate student education has always blurred the lines between apprenticeship and developing truly novel lines of inquiry. For someone like myself, who went to graduate school chiefly to explore better ways to aid conservation through ecological research, the training felt simultaneously useful and stifling. The development of a scientifically inquiring mind, where data would inform best practices and future understandings of ecological systems and behavior, eventually helped shape my science education broad practice, as described below. However, pursuing these skills while navigating an environment that was culturally and socially exclusive to me was an effect that I struggled with for many years, well into the degree.

Some of the incidents I experienced as a POC were simply continued examples of the ways in which people stereotype black males in certain situations. For the most part, I had gotten unfortunately accustomed to most of these stereotypes. However, within the academic space, one incident resonated deeply with me and played a major role in my developing understanding of the 'race question' paradox in STEM education. At a major academic society conference, I was readying myself to present a poster. Before the poster session began, I was feeding my coffee habit when a White gentleman approached me and asked me if I could ask my 'manager' to refill the milk containers on the table. After a few seconds of awkward silence, the sheepish gentleman apologized and carried on retrieving his milk-free cup of coffee. Somehow, after having experienced similarly structured stereotyping, and growing mildly numb to it over the years, it still took a few seconds for me to recognize that stereotyping was actually taking place. What is even sadder is that this was one of **three** separate times a similar thing occurred at this very conference in different years. For me, the cognitive dissonance always came when I attended the 'diversity' themed events at the same conference, where a smattering of students of color were paraded across the stage as evidence of the abiding work the society was engaging in to promote inclusion. Though the stereotyping and the diversity events did not involve the same people, they were held in the same professional space. I wondered, sometimes aloud, if the efforts being placed into 'upliftsuasion' (Kendi, 2017), matched the efforts needed to force society members to reflect on the implicit biases derived from navigating mostly white spaces.

As a graduate student pursuing a terminal degree, I was already embedded in a space that was mostly white. Many in that space pledged their willingness and resources to diversify the field, but the same pathway that led to my even becoming a graduate student in a basic science area was losing diverse students at much earlier stages. By the time five thousand or so fully formed scientists and their minions gather at a conference center in a major city, many diverse students who may have harbored an interest were long taught that their professional sense of belonging lay elsewhere. Being a member of this minoritized group while navigating a professional space requires some optical processing. Being periodically reminded that you are imagined in the minds of others to belong to an entirely different space requires a different and more profound type of mental gymnastics.

The culmination of my experiences in graduate school taught me three important things in separate bins. First, the disciplined pursuit of finding answers to complex problems was a skill that could transcend any subject area, and this skill was the most central aspect of the PhD experience. Second, I developed a deep understanding of the biogeochemistry, ecology, and economics of seagrass ecosystems. Third, and most importantly, it was critical that wherever I chose to apply my skills, it would be in an area that aligned with my professional and personal mission. While for some, this area overlapped with their area of technical expertise, my experience within the discipline, historic broad interest in improving the common

good, and chance events eventually drove my personal professional choices in a different direction. The pivotal moment came when I somewhat fortuitously set foot to teach my first college-level science class.

Voices From the Classroom

The ironic note about the beginning stages of my pedagogical career is that I was actively advised to avoid spending time on teaching. I was advised to seek Research Assistantships (RAs) because that arrangement allowed graduate students to spend more time doing the thing that 'really mattered' which was their bench and/or field research. However, teaching at least a laboratory section for a minimum of two semesters was a requirement of the degree so, regardless of that advice, I found myself face to face with twenty-four semi interested college juniors and seniors teaching Ecology lab. With virtually no training in pedagogical practices, I think I can safely say that we all 'survived' the semester, but collectively achieved far below what I have come to expect from my classrooms. The most salient lesson from that first experience was the lack of connection I had with the students and the perfunctory way in which that lack of connection manifested itself in the implementation of the course.

To describe my foray into STEM pedagogy as professionally cathartic would be an understatement. I have discussed the context of that transformation and its impact on me in other published works (Dewsbury, 2017). Here, I want to touch on its impact on how it spoke to me as a graduate student of color. In the classroom, I encountered a point in the STEM pathway where exclusive cultures and subliminal messages of belonging were being delivered to students in powerful ways. Structural configurations, which many took for granted, such as ethnic composition of faculty versus students, reinforced perceptions of which demographics typically pursued which careers. What was most interesting was the fact that no space was provided to dialogue with students about their lived realities and developing identities within the discipline. Even with the addition of 'active' technologies, pedagogy generally flowed in one direction.

This bore a frightening resemblance to my own undergraduate experience. Science as a discipline was bequeathed to undergraduates as an information packet, scrubbed clean of all its social black eyes (Tuskegee study, eugenics, etc.). In practice, it prided itself an esoteric space where prospective entrants had to learn the language to the satisfaction of the keyholders. The burden of responsibility of learning this language was placed squarely on the student. Nowhere within that space was there opportunity for the students to articulate their own futures. If anything, many of these disciplines prided themselves on their ability to sift through the masses and produce a chosen few, who will in later years emerge to do some sifting of their own. One consequence of that approach is that students of color leave STEM disciplines in droves (Seymour & Hewitt, 1994). Many who leave having failed to attain passing grades leave the institution entirely. Another large subset leave for disciplines that speak more to their passions, beliefs, backgrounds and visions for the future. Many of these students were high performing within STEM and were not driven away because of academic performance.

My teaching transformation came from what I learned when I interviewed each of my students in the following semesters individually. I taught a small class, and so I was able to spend upward of thirty minutes hearing them unpack why they had chosen their major and career pursuit. They elaborated on the roles their family lives and cultural structures played in their decision-making process and were honest about their naivete as it pertained to what they could do in science. For many of those students, career choices were made partly because of perceived associated economic mobility and/or status pertaining to said choice. In some cases, extended family members were relying on conventionally-aged freshmen to make the appropriate career choice such that one day there will be positive financial consequences for

everyone because of it. In response to learning these things, I reconstructed my pedagogy to speak to their lack of career knowledge but also facilitate the development of their sense of agency to articulate for their personal desires and passions. That semester was the start of my own practice of dialogue (Freire, 1970) as the central tenet of my teaching process. Their voices shaped the way in which I designed the curriculum for that semester, but the process set the stage for a science education career that seeks to recentralize the role of relationships in education. Their stories brought light and context to my own experience as a student of color both at the undergraduate and graduate level. From this experience, I embarked on a career to merge the process of inquiry and the logistics of pedagogical implementation to impact education praxis through the lens of equity.

My Professional Practice in STEM

Research into Teaching and Learning

At the core of research into teaching and learning are questions that ask why and for whom do we educate? My area of disciplined-based education research (DBER) can be argued to have come about partially because of a need to translate education theory into implementable strategies for student success in STEM disciplines. My personal experiences as a POC in this field have made me interested in how ethnicity factors into the discipline's most pressing research questions. In reflecting on the relationship between ethnicity and the pursuit of education, it is fair to be cognizant and appreciative of the social progress that has been made. Federal troops are no longer necessary to integrate public institutions, and schools like Harvard University do not have a 'Jewish admittance quota' anymore (Dershowitz & Hanft, 1979). High-profile campus clashes in the last decade (Yan, Pegoraro & Watanabe, 2018) have served as powerful reminders that despite this progress, much work still remains if higher education is going to fulfill its promise of social and economic mobility for all.

When research into teaching and learning focuses squarely on questions of equity, there is a tangible risk that the emotional connection to the topic will compromise the interpretation of the findings. Implicit assumptions about existing social power dynamics may bias the researcher to view those dynamics similarly in the classroom. Critiques like this has been leveled at this and other areas of research focused on identity, sometimes dismissively calling them 'grievance studies'. Some of these critiques are based on a more basic difference in world view between quantitative and qualitative researchers. The former assumes the validity of results to depend on scalability, and the degree to which samples are representative of the population for which it claims to speak. The latter privileges the power of the human voice found in more individualized narratives, arguing that much of this nuance is lost when said individuals are lumped into categorical bins. For mixed methods researchers like me there are levels of explanatory power in each.

As a researcher of teaching and learning of African descent looking at questions of equity in the STEM education process, there are a few things I consider with problems of potential bias and methodological approaches. First, this research area exists because as a society, there exists a moral arc that bends towards equity, and acceptance of this arc means that we need to better understand how we should get there. Social perceptions of equity will likely differ depending on one's political position, ideology, or general social positioning. Therefore, while not all research questions will take on an activist frame, the sense that somewhere in the future all students should have equal opportunity for academic success begs questions as to what it will take it achieve that. This is an important reality to embrace because

it posits that research on these questions, more so than other basic research areas, can never truly be politically neutral. However, non-neutrality need not negatively affect rigor. Adherence to unpacking the underlying causes of inequity in the classroom necessitates a broader understanding of inequity at large. This means that while quantitative methods can elucidate general patterns of progress or regress, personal narratives of how people navigate the STEM social ecosystem can provide clues on when and how those patterns differ.

Second, getting at the root of social inequity in education requires engagement, both with the voices of students and with the deeply personal data about their lives and progress. It is impossible not to be personally impacted by this, especially as a faculty of color. When I researched primary productivity in seagrasses, I was fundamentally interested in the long-term and deeper implications in their conservations. Whether a shoot of seagrass grew more quickly in the presence of one nutrient versus the other, though, had no emotional impact on me. However, when I humbly listen to the voices of students, especially those from historically disempowered groups, I am prepared to also be mentally and emotionally impacted by the process. The collective participation in the narrative and commitment to act upon what has been discovered is referred to as Participatory Action Research (PAR) (Kemmis & McTaggart, 2005). This blend of seeking deeper understanding, growing from the process, and putting the results into practice is particularly important when researching questions pertaining to equity. In this sense, being a faculty of color researching these questions does not privy me more easily than others to answers on all forms of inequity. It is very much a learning process from which changing definitions of identity, diverse coping strategies, and natural increases in diversity continue to shift and shape the ways in which inequity can unfold.

STEM Pedagogy

Like other aspects of my professional identity, my pedagogy has been greatly impacted by the voices of the students I have had the privilege of engaging over the years. In fact, it was their voices that spurred the calling I received to follow a professional path of teaching and science education research. The light that guides a 'calling' tends to call on something deeper within us. This 'something' speaks to attributes greater than skills and enjoyment, and often draws on experiences deeply embedded in our individual histories. For me, as an international POC, it tapped into my childhood, growing up as the son of a Baptist minister. In the former British colonies in the Caribbean, religious organizations were descendants of their parent churches in England, with a distinctly West Indian flavor. Small communities, such as the one my father pastored, were barely physically different from their historical agricultural origins. In the context of these communities the pastor was seen as both a spiritual and community leader. Much like the shepherd in pastoral farming, the pastor's own well-being was viewed to be umbilically tied to the health and flourishment of their flock. Though I do not currently practice religion, the idea of connecting my own success as a community leader to the success of the community members has re-emerged as a central tenet of my pedagogical approach. While there is a role for applying pedagogical frameworks to how we think of and approach teaching, the philosophy that members of the community can aspire to greater versions of themselves is what ultimately drives the process. This philosophy also underlies the structure and context of my in-class pedagogy.

There is a historical context to the evolution of STEM pedagogy, where, especially in the last decade, the culture is attempting to move away from the conventional filtration model to one that is more facilita-

tive and inclusive. Some of this has been driven by quantitative reports outlining how graduation rates and retention have an explicit demographic component. There is also a select percentage of historically disenfranchised students who have lent their voices to more vociferous movements arguing for deeper systemic change in higher education. These voices have unintentionally launched a debate on the role of higher education in explicitly promoting equity versus a more puritanical pursuit of knowledge and inquiry.

Much of the premise of the underlying argument for ideological non-neutral inquiry pursuit is based on the false notion that higher education existed for some single purpose at some point in history. Even a cursory review of the history of higher education would show that universities and colleges were never uniform in their aspirations. Some of the early New England colleges replicated social classism, and openly discriminated against those they deemed not worthy of further education. In later years, some, through federal mandate, were constructed explicitly for more practical and applied purposes. It was also within these hallowed halls that some of the most vociferous movements against racial segregation, LGBTQ+ discrimination, women's suffrage, and anti-war protests emanated. Thus, the process of higher education in diverse ways was always tied to social contexts. While there is value in the argument for students developing the resilience and critical thinking skills that help them avoid ideological echo chambers, polemics generating these arguments often ignore the everyday realities that students in a hierarchical capitalist system daily endure. My experience as a POC makes turning a deaf ear to these realities impossible, and deepens my empathy both for their experience, and their evolving abilities to develop articulations about it. In a perfect world, every student would arrive on a college campus having shrugged off every microaggression, and perceived any slight as an isolated, unintentional transgression. In reality, many have accumulated years of personal evidence of a society where those with power construct systems to reinforce and propagate those structures permanently. My own experiences have borne witness to the consequences of broad social ignorance to this reality, and thus, my pedagogy cannot ignore it.

To some extent, my navigation of STEM pedagogy as a POC has been in a position of privilege, in the sense that my experiences have appropriately positioned me to understand the salient messages expressed in the voices of the students in my classrooms. My commitment to building my pedagogy around the voices of students in the classroom is both a reflection of my past experiences but also the liberation opportunities I believe are present in listening to the voices of students during the teaching process. In this vein, my pedagogy is an act of liberation.

Faculty Development of Inclusive Teaching

In the early days of my faculty career, I focused, like most in my position, only on developing the courses which I taught as well as my research program. After a research presentation at a science education conference, I was asked individually by an attendee to speak to their faculty about inclusion in higher education pedagogy. That engagement began a long and continuing series of faculty development visits to institutions of higher education and academic society meetings to work with higher education faculty on inclusive course design. I never initially envisioned faculty development work on inclusive teaching to be a major part of my professional work, but in the context of building my identity around the skills of mine that are needed, it has been a transformative experience. Building on the scholarship of McIntosh (1998), and other authors who have explored the relationship between personal privilege and social positioning, my faculty development workshop challenges participants to reflect on themselves as critical agents in the process of transformation of their classrooms toward inclusion.

A few components of faculty development of this type make the process both challenging but also appropriate for the depth in which I personally engage in these activities. First, STEM faculty have been mostly grandfathered into a perception of science pedagogy that is divorced from how social structures operate and propagate over time. The idea that STEM instruction can somehow be purveyors of inequality is a confusing if not ludicrous concept to some. That perception means that the topic of race and the role of science in past and current inequities are often avoided in favor of a sterile march through content. Asking instructors to critically look at themselves and their pedagogy in this way can be uncomfortable, especially if said individuals hadn't fully considered themselves implicated in the inequity argument. In my experience, many workshop participants consider themselves on the 'right' side of the equity question, often subscribing to the color-blind ideology that became socially popular in the years following the passing of the Affirmative Action law. Professional development activities centered on how social privilege is accrued lay bare the farce that is meritocracy, especially in educational contexts. In the context of this differential in privilege, seemingly simple acts in and out of the classroom can serve to reinforce the power structures that generated the social privileges in the first place. Approaching the discussion in this particular way is important.

Faculty development on inclusion in STEM sometimes takes on a checklist approach, erroneously sending the message that dutifully following a list of prescribed steps guarantees an inclusive classroom. A lack of a more thorough examination of self and context can lead to the inappropriate use of strategies deemed to be effective from the literature. As in other aspects of pedagogy, plugging and playing a 'greatest hits' compilation is not particularly difficult. However, carefully examining the role that one's own history, and ignorance of the social context of education is a more long-term excruciating process. However, if inclusion is to be centered around the concept of dialogue, then the depth of self-reflection is crucial to making these approaches authentic.

A second crucial component of faculty development of inclusive teaching is the messenger, and the potential role that their identity play in the implementation of the experience. It is here that my journey as a faculty of color from international origins plays an important role in my ability to be effective. Racism, much like climate change, has been described as slow violence. The effects of the accumulation of events yield generational impacts that manifest themselves in diverse and unexpected ways. For colleagues of color, activities that entail educating others on the need for greater cultural humility can be a painful and gut-wrenching process. Recounting historical social injustices goes beyond an intellectual exercise, and too often triggers painful memories of personal experiences where they were victims of this mentality. Studies have shown PTSD from this slow violence can even have palpable physiological effects on the recipients and their offspring (Clark, Anderson, Clark & Williams, 1999). I have witnessed many colleagues become extremely emotional when revisiting experiences from their past, sometimes more than a half-century ago. With emotions that raw, it becomes very difficult for them to be saddled with the job of educating well-meaning but ambivalent stakeholders on the importance of deep reflection toward inclusion mindsets. While my work on inclusion and education holds great personal stakes for me, my comparatively lesser personal experience with its historical constructs often puts me in a better place to have that conversation. The protective effects of my inexperience were pointed out to me decades ago in discussion with the black female discussed in my 'personal journey' section. Therefore, I view working with faculty on the transformation of their classrooms toward inclusion as both a privilege and an obligation given my unique position to engage the topics with an appropriate mixture of passion and scholarship.

Recommendations to Others Based on My Journey

The incredible learning opportunities that have accompanied my journey as a faculty of color in a STEM discipline hold lessons for those seeking to learn what the uniqueness of this journey says about STEM in American higher education. While there is some value in understanding the black experience as a category, unpacking the nuances from individuals can unearth previously unknown aspects of how this experience is navigated. In this light, I discussed here my own journey as a reflection of the maturing internalization of my socially perceived identity and the impact it has had on my professional choices and behavior. Though this journey highlights my own choices, broader themes were present within them that are relevant to the more general POC experience American higher education.

Since my ethnicity-connected experiences really began as an undergraduate, much of the subsequent years were spent on a steep learning curve understanding the American experience as a POC. This was both an informative and humbling experience. Social psychologists have documented the parameters that govern identity formation. Some of the most powerful of these include one's daily social environment. When that environment changes in seismic ways (such as moving to a different country), the adjustment and assimilation process can be similarly fractious. Put differently, it is challenging to both undergo negative social experiences tied to one's identity while simultaneously learning why that same identity means something different in a new social context. Additionally, over time, mental energy must also be spent on determining one's choice of coping strategy. This is a sizeable task for an emerging adult and can complicate the act of finding meaning and purpose common to this stage of life. Nevertheless, it is an unrequested and often mandatory part of the navigation experience for POC. In the same way we do not choose our identity, we also do not govern how that identity is perceived in different contexts. The decisions over which we have power include our response and the depth to which we get educated about the social processes that generated this structure. That is a personal process, as is how the individual POC unpacks that newfound education for his or her own experience. More challenging is the silent cultural tax that many, including myself, pay for navigating this process.

In the context of my profession, cultural tax is defined as the added, unspoken responsibilities that POC perform in their position that are mostly tied to their identity (Diggs, Garrison-Wade, Estrada & Galindo, 2009). These include, but are not limited to, the additional students of color who feel more 'comfortable' being advised by someone of their identity and the diversity committees on which we are constantly being asked to participate. The decisions to engage or not engage in these responsibilities are not easy. On one hand, if I possess the skill sets around inclusive education, I feel somewhat responsible to use them to help my institution progress on the race question. On the other hand, progress on the race question cannot be solely shouldered by the POC at institutions of higher education. True equity is a collective responsibility, and sustained progress is not possible unless there is a full recognition and appreciation of that.

My journey as a faculty POC has also been marked by an even more silent tax, where microaggressions and slights in my direction served as nuisance reminders of the persistence of antiquated mindsets on race and inclusion. I feel a sense of privilege in being able to mostly rise above these real or perceived incidents, but it has been tricky. While positivists focus on the tremendous progress that society has made on race relations (and other issues), they are sometimes dismissive when institutional inequities are highlighted. There is some encouragement to highlight the good and suppress salient injustices, in the name of celebrating what has been achieved in the last century. However, this suppression does a disservice to the work needed to continue to address the inequities that persist. Additionally, the resil-

ience developed over time in coping with these incidents extracts an emotional and mental tax that those who have not traveled this journey do not always appreciate. My journey, however, is mostly a story of uplift, and its lessons ultimately point to a more pluralistic vision of equity in higher education. It is to this vision I turn now to conclude this story.

CONCLUSION

The most important lesson I learned in my journey as faculty POC is the reality that promoting equity is a responsibility all members of the community must bear. Two important reasons highlight this point. First, even though I am of African descent, my journey as it pertains to race in the US has been one of mostly incredible learning. In that process I had to unlearn false orthodoxies about other identities that in the past I stoically defended. I had to embrace both an intellectual and an introspective approach to unpacking the Black experience, both for my eventual area of scholarship and determining my own social navigation in the future. This experience of learning and reshaping one's thoughts on identity is exactly the process all members of the community, POC and otherwise, must embrace if inclusion is to be authentic and persisting. It was a process fortunately forced upon me as I sought to assimilate both the broad social environment of the US, but also the narrow world of the STEM professoriate. Second, my diverse history, and navigating new pathways in STEM opened my eyes to a unique role I can play in promoting equity in the education process. There are large numbers of people from all walks of life working in diverse ways to promote equity, each with their own reason for doing so. In my view, my intersectional identity affords me a bandwidth to engage in this work in a way that is fulfilling and hopefully impactful. In the process, it certainly has forced me to question and rebel against conventional structures, albeit the price of disruption can be at times steep. The impact, however, I have been able to generate, with the trust placed in me by my students, makes the entire venture a worthy burden. It is, as it might be for some charting similar pathways, still a continuing process of learning. But this nonstop learning is what the pursuit of social justice demands not only for the sake of the classroom, but also for broader, even national social vision of equity.

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APPENDIX

Chapter Questions

1. Why might the experience of an immigrant individual of color differ from a POC born and raised in the US? What cultural contexts (think different countries) might speak to these differences?
2. How can institutions of higher education re-imagine inclusive practices on campus (beyond multicultural centers and international festivals) to learn and grow from the diversity associated with international student populations?
3. What role can non-POC individuals play in lessening the load of educating others that POC now play? What barriers might non-POC encounter in this process?