

DISSERTATION

EXAMINING THE LIVED EXPERIENCES OF HIGHER EDUCATION ADMINISTRATORS
OF COLOR WITH STEM RELATED DOCTORAL DEGREES

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ABSTRACT

EXAMINING THE LIVED EXPERIENCES OF HIGHER EDUCATION ADMINISTRATORS OF COLOR WITH STEM RELATED DOCTORAL DEGREES

The imperative to increase the representation of historically minoritized groups (HMG) in science, technology, engineering, and mathematics (STEM) careers by addressing systemic barriers in the United States remains a formidable challenge with profound implications. By 2036, the majority of high school graduates in the United States will be people of color (Ellsworth et al., 2022), necessitating that research-intensive institutions, particularly historically white institutions (HWI), implement robust systems and structures to mitigate systemic challenges faced by students of color. Failure to address systemic barriers discourages people of color from pursuing careers in STEM and academia, perpetuating systemic inequality and depriving higher education institutions of opportunities to foster equitable and just environments.

This study investigates the lived experiences of individuals of color who earned STEM degrees and pursued careers as higher education practitioners or administrative staff. These practitioners are crucial in supporting both students of color and white students. However, the hiring and retention of staff have become increasingly challenging during and after the Covid-19 pandemic (Bichsel et al., 2022; Fuesting, 2023; Zahneis, 2022, 2023). This study applies Critical Race Theory and Socialization as a conceptual model to offer a unique perspective on people of color who have earned doctorates and chose to work as practitioners in higher education, a topic that is relatively underexplored. Through narrative inquiry as a methodological approach and analyzing the data through a CRT lens, four themes emerge with a central theme of the commitment to opportunity informed by the participants lived experiences. The four themes are

(1) Alone Together; (2) Stewardship: Service Beyond Obligation; (3) A New Equilibrium: Environmental Validation and Déjà Vu; and (4) External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment. The narrative themes showcase how the staff who chose to work as higher education administration staff were determined to create an environment that cultivates talent and increases a sense of belonging for students, faculty, and staff.

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DEDICATION

I dedicate this project to my parents, Mary and Bryan Sr.; my wife, Brielle; my sister, Brooke; and my nephew, Xhadien. You all have been foundational to who I am and who I am becoming.

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CHAPTER 1: INTRODUCTION

The objective of increasing representation of historically minoritized groups (HMG) in science, technology, engineering, and mathematics (STEM) careers through addressing systemic barriers in the United States is an ongoing challenge with significant ramifications (National Academies of Sciences, 2023). By 2036, the majority of high school graduates in the United States will be people of color (Ellsworth et al., 2022) and research-intensive institutions, particularly historically white institutions¹ (HWI), will need to ensure they have the systems and structures in place to address systemic challenges that students may face. For example, high schools with a majority population composed of Black or Latinx have less access to advanced placement courses (Patrick et al., 2020). In college, research shows that STEM courses disproportionately disadvantage people of color, with Black women being the most impacted (Hatfield et al., 2022). Aspiring graduate students of color are more likely to need more financial assistance and be recruited by private for-profit graduate institutions (Velez & Heuer, 2023).

As researchers, scholarly contributions by people of color are deemed less valuable even though their scholarship demonstrates higher levels of innovation (Hofstra et al., 2020) which limits the impact on efforts to diversify the professoriate (McGee et al., 2019; McGee & Robinson, 2019; National Academies of Sciences, 2018a, 2018b, 2019; National Academies of Sciences & Medicine, 2019, 2020; Posselt, 2016, 2018, 2020). Failure to address systemic barriers can dissuade people of color from pursuing a career in STEM and in academia (Gibbs & Griffin, 2013; Robinson et al., 2015; Slay et al., 2019). As a result, systemic inequality continues to be reproduced, and institutions of higher education miss opportunities to make an equitable and more just environment for those who have been historically marginalized.

¹ I use historically white institutions (HWI) versus ‘predominately white institutions’ (PWI) to emphasize systemic inequities and structural barriers.

One aspect of the STEM workforce that is in need of exploration is people of color who earned STEM degrees and chose an alternative pathway by pursuing a career as a higher education practitioner/administrative staff. Practitioners' contributions are instrumental in higher education as scholarship demonstrates how staff members of color play a pivotal role in the development and support of students of color and white students (McGee, 2021a). However, hiring and retaining staff has become a heightened challenge during and post the Covid-19 pandemic (Bichsel et al., 2022; Fuesting, 2023; Zahneis, 2022, 2023). My objective is to explore the lived experiences of staff who earned doctorates in STEM and chose to pursue a career in academia as an administrative staff member with the aspiration of showcasing how the experiences of staff, particularly the transition from graduate student to staff. My framing takes a unique perspective into the experiences of staff of color to learn from their experiences as well as their motivations to create environments that cultivate a sense of belonging and a psychologically safe environment which can accelerate learning and a sense of belonging for members of their institutions (Edmondson, 2018).

Research Question

The research question guiding my inquiry is “what are the lived experiences and motivations of administrative staff of color who have earned doctorates in a STEM field?” I am pursuing this population of staff for several reasons. First, HWI connections to justifying and promoting the inferiority of people of color can be tied to intellectual underpinnings in STEM fields and the exploitation of Black bodies for the betterment of advancing science and medicine (Roberts, 2011; Washington, 2008). Recognizing the historical underpinnings in STEM is critical in examining the culture and lived experiences, as the culture in STEM was rooted in racial inferiority, which has been utilized to justify systemic inequality.

Second the alternative pathway of joining higher education as an administrative staff /practitioner versus joining the faculty is underexplored and can provide a new lens into STEM education and staff experiences. Being that those in STEM roles who have completed their degrees have a more relatable experience to those who are in the process of pursuing or currently enrolled in a doctoral program in a STEM field, they can share unique knowledge that can help the students navigate the environment as well as work with other staff and faculty to create systemic solutions to ongoing challenges. A potential benefit is that students of color could focus on efforts like diversity, equity, and inclusion (DEI) work out of passion versus engaging in DEI efforts due to their experiences of their institution not living up to their commitment to creating an inclusive and nurturing environment (Naphan-Kingery et al., 2019). Thirdly, the campus climate experience of staff offers a lens into some of the implicit and explicit norms and customs within higher education. If we maximize all the knowledge and expertise of our community members, my argument is that we will move closer to not only having institutions that produce the most advanced scholarship but also a campus climate that can benefit all stakeholders due to taking a systems approach to how staff, students, and faculty, influence each other to fulfill the mission of their respective institutions.

To inform my exploration, I utilize Critical Race Theory (CRT) as a gateway to the experiences of staff of color as to how they became motivated and socialized into their staff roles. Being that affirmative action has been banned across all higher education institutions in the United States (Walsh, 2023), and efforts to ban CRT continue to rise (Miller et al., 2023), it is imperative to explore the staff experiences as efforts to understand inequality through race and other dimensions of diversity through intersectionality as they continue to be challenged. The conceptual model equipped is Weidman and DeAngelo's (2020) socialization model. Weidman's

previous socialization model is one of the most cited socialization models applied to understand the role acquisition process of graduate students to the professoriate (Weidman and DeAngelo 2020). Aligning my theoretical and conceptual approach with my research question will enrich the literature by extending the bounds to graduate students in STEM motivation and socialization to alternative roles in academia.

Given the limited research on my topic, I had to incorporate several research areas to provide a more comprehensive review. A more robust review of my theoretical and conceptual frameworks is explained throughout Chapter Two. Building off the theoretical and conceptual models in Chapter Two, I organized the literature review into three sections. The first section is focused on the experiences of graduate students of color at HWI and the factors that influence the career choice of graduate students. The second is focused on the experiences of staff members of color at HWI's, and the last section is on the role of service that faculty of color experience at HWI. I chose to incorporate the focus on faculty service, specifically racialized labor, which has a disparate impact on faculty of color (Padilla, 1994). Being that many graduate students may have had an interest in a research career, whether in industry or in academia, there may be insights into the experiences of faculty of color and the racialized labor that they engage in that garner exploration.

Chapter Three explains my methodological approach. I utilize narrative inquiry to bring forth the stories shared by the staff of color. Narrative inquiry focus allows for opportunities to center the lived experiences of stories to inform the literature (Kim, 2016). This alternative narrative can be acknowledged as a counternarrative within CRT, which centers the experiences of people of color to spotlight the unacknowledged and underappreciated contributions and perspectives of people of color (Delgado, 1989; Delgado & Stefancic, 2017). Chapter Four presents the findings

from the study. The findings were informed by the previous literature and by my applied theoretical and conceptual frameworks. The overarching theme that connects the four themes is rooted in the commitment to opportunity through creating and enhancing processes for marginalized populations to be heard, valued, and experiences leveraged for achieving their goals and aspirations.

Within the overarching theme of being committed to opportunity which can also be referred to as diversity, equity, and inclusion (DEI) work, four themes surfaced. Those four are: (1) Alone Together; (2) Stewardship: Service Beyond Obligation; (3) A New Equilibrium: Environmental Validation and Déjà Vu; and (4) External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment. The themes highlight their experiences in graduate school which informed their sensemaking and their motivations to enhance the academic and professional trajectory for graduate students in STEM (Weick et al., 2005). Chapter Five concludes with future implications, and research recommendations. I am hopeful that my study will assist leadership in higher education to learn, celebrate, and invest in the development and improvement of the experiences of staff to help further their mission for everyone in the community, resulting in a more significant appreciation for staff in higher education.

CHAPTER 2: LITERATURE REVIEW

I begin chapter two with an overview of the theoretical and conceptual frameworks guiding my inquiry. This chapter starts by providing an overview of CRT's inception and application in the field of education. Next, I provide a review of socialization and its application as a conceptual model, followed by an explanation of how incorporating both frameworks inform my approach. The literature review continues by connecting distinct components of the literature. I provide a review of the literature pertaining to the graduate experience for students of color and their career choices. The next section goes into the literature on faculty service, particularly the racialized labor by faculty of color. My rationale is to incorporate a section on faculty of color's racialized labor for two reasons.

First, it provides another lens into the experiences of faculty of color's labor that graduate students may also participate in during their training, and if the labor is not appreciated, it can signal an additional challenge that students of color may expect if they choose to pursue the professoriate. Second, faculty are also personnel within academia so providing insight into another key component of higher education provides an opportunity to explore the synergies and divergence for my research. Lastly, I share literature pertaining to the experiences of staff of color in higher education. While there is much focus on students and faculty, an examination of the scholarship on staff can highlight the synergies between staff and faculty of color.

Theoretical Framework

Critical Race Theory

CRT materialized in the 1970s by legal scholars and civil rights activists as a continuance of the momentum and insights from radical feminism and critical legal studies (Crenshaw, 2010; Delgado & Stefancic, 2017; Howard & Navarro, 2016; Solórzano & Yosso, 2001; Solórzano, 1998; West et al., 1995). Some of the foundational scholars of CRT in the legal field are Derrick

Bell, the first Black tenured professor at Harvard Law, in stewarding CRT into legal studies along with Kimberlé Crenshaw, Richard Delgado, Neil Gotanda, Mari Matsuda, Phillip Nash, Kendall Thomas, Patricia Williams, and other legal scholars (Delgado & Stefancic, 2017; Ray, 2022; Tichavakunda, 2024; West et al., 1995).

Critical race studies came as a critique of critical legal studies because there was limited scholarship that viewed race as a salient factor that impacted legal precedent (Crenshaw, 2010; Tichavakunda, 2024). Outlined by DeCuir-Gunby et al. (2009), CRT's tenets are the enduring nature of racism, the concept of whiteness as property, interest convergence, a critique of liberalism, systemic inequality that impacts intersectional identities (intersectionality), and counter storytelling to amplify marginalized voices. In other words, CRT confronts ideologies like colorblindness and neutrality that sustain racial disparities, advocating for practical applications of its theories (Bell, 1980; Dixson & Rousseau Anderson, 2018; Parker et al., 2019). Collins and Bilge (2020) explain that "intersectionality investigates how intersecting power relations influence social relations across diverse societies as well as individual experiences in everyday life. As an analytical tool, intersectionality views categories of race, class, gender, sexuality, nationality, ability, ethnicity, age, and other identity categories as interrelated and mutually shaping one another. Intersectionality is a way of understanding and explaining complexity in the world, in people, and in human experiences" (p. 2).

There is an activist component to CRT that bridges from theory to practice. For example, Derrick Bell departed from Harvard Law's inability and hesitation to hire more faculty of color, resulting in Harvard having a 100% decrease in faculty of color amongst the faculty ranks at Harvard Law (Delgado & Stefancic, 2017; Ray, 2022). In essence, CRT scholarship critically examines unjust historical narratives, practices, and policies toward marginalized groups, the

progression of exclusionary practices, and the requisite measures for establishing an equitable society (Delgado & Stefancic, 2017). Since its inception, extensions of CRT have emerged in legal studies to focus on additional marginalized populations as well as academic fields. Some of the second iterations of CRT include AsianCrit, BlackCrit, Discrit, LatCrit, and TribalCrit (Delgado & Stefancic, 2017; Dumas & Ross, 2016; Yosso, 2005).

Critical Race Theory in Education

Scholarship by Ladson-Billings and Tate (1995) introduces how CRT can be utilized in the field of education. Although CRT's application was not explicit in the field of education until Ladson-Billings and Tate (1995), there was research with a focus on how students of color experience the educational culture within their schooling environment. For example, Howard and Navarro's (2016) 20-year review of CRT analyzed scholarship during the 1970s and 1980s on educational climate. Their analysis reveals that early studies may not have centered on race, but there was emphasis on addressing educational inequities. Ladson-Billings and Tate (1995) propose that social inequity is grounded on three interrelated components summarized as follows: race critically shapes American inequities, the United States is rooted in a legacy of property rights, and exploring this nexus offers a powerful lens to unravel and address social injustices.

Building on Ladson-Billings and Tate (1995) foundational work in education, CRT scholars have developed five tenets aimed to guide researchers, policymakers, and practitioners in the pursuit of creating equitable opportunity and systemic equality. The five tenets, as described by Howard and Navarro (2016), are as follows: first, the centrality of race and racism along with intersecting social hierarchies. The second tenet is to challenge dominant ideology by confronting prevailing narratives to amplify marginalized voices. The third tenet is the

commitment to social justice. The fourth tenet is to value experiential knowledge by valuing the lived experiences and stories of people of color. The last tenet, taking an interdisciplinary approach, means adopting a multifaceted perspective, and incorporating diverse academic disciplines.

CRT Tenets Utilized

My research operationalizes all five tenets in CRT in education. The first tenet I plan to equip is the centrality of race and racism. The historical legacy of the United States and institutions of higher education is rooted in inequality with emphasis on race and racism as a driver in addition to other categories for imposing subordination such as gender and neurodiversity. To learn more about how the other forms of subordination impact staff, I incorporate intersectionality to investigate the nuances and systemic barriers of my research questions. The second tenet, challenging the dominant narrative, is achieved by challenging the notion of meritocracy and color evasiveness through interrogating fields in the academy, such as STEM at HWI's. The third tenet, commitment to social justice, is utilized through a transformative practice that highlights how minoritized doctoral students' decision to work in the academy has not been explored. The fourth tenet utilized is valuing experiential knowledge through counternarratives which allows me the opportunity to center the stories and experiences of my participants in an assets-based approach versus a deficit-based approach. The fifth tenet of utilization, the need to be interdisciplinary, is critical to understanding the historical and legal landscape to inform praxis.

Conceptual Framework

Socialization

Socialization is a reciprocal relationship where an individual learns the culture, expectations, and values of the organization with the outcome that the individual becomes part of

the community and/or organization (Corcoran & Clark, 1984; Staton & Darling, 1989; Tierney, 1997; Tierney, 2008; Tierney & Bensimon, 1996; Van Maanen, 1976). While there are various models of socialization in higher education (Austin, 2002; Austin & McDaniels, 2006), I utilize Weidman et al. (2001) updated socialization model for two reasons. First, it is the most cited and utilized theoretical framework for addressing socialization for doctoral students (Weidman & DeAngelo, 2020). Second, scholars' critiques have led to an updated model to reflect all forms of knowledge that students bring into higher education, especially those from minoritized backgrounds (Weidman & DeAngelo, 2020). Since there is not a comprehensive socialization model for staff in higher education, I utilize Weidman and DeAngelo's (2020) conceptual model to learn how their socialization process as students influenced their motivations to pursue the administrative side of the academy. Figure 1 is an overview of Weidman and DeAngelo's (2020) socialization model.

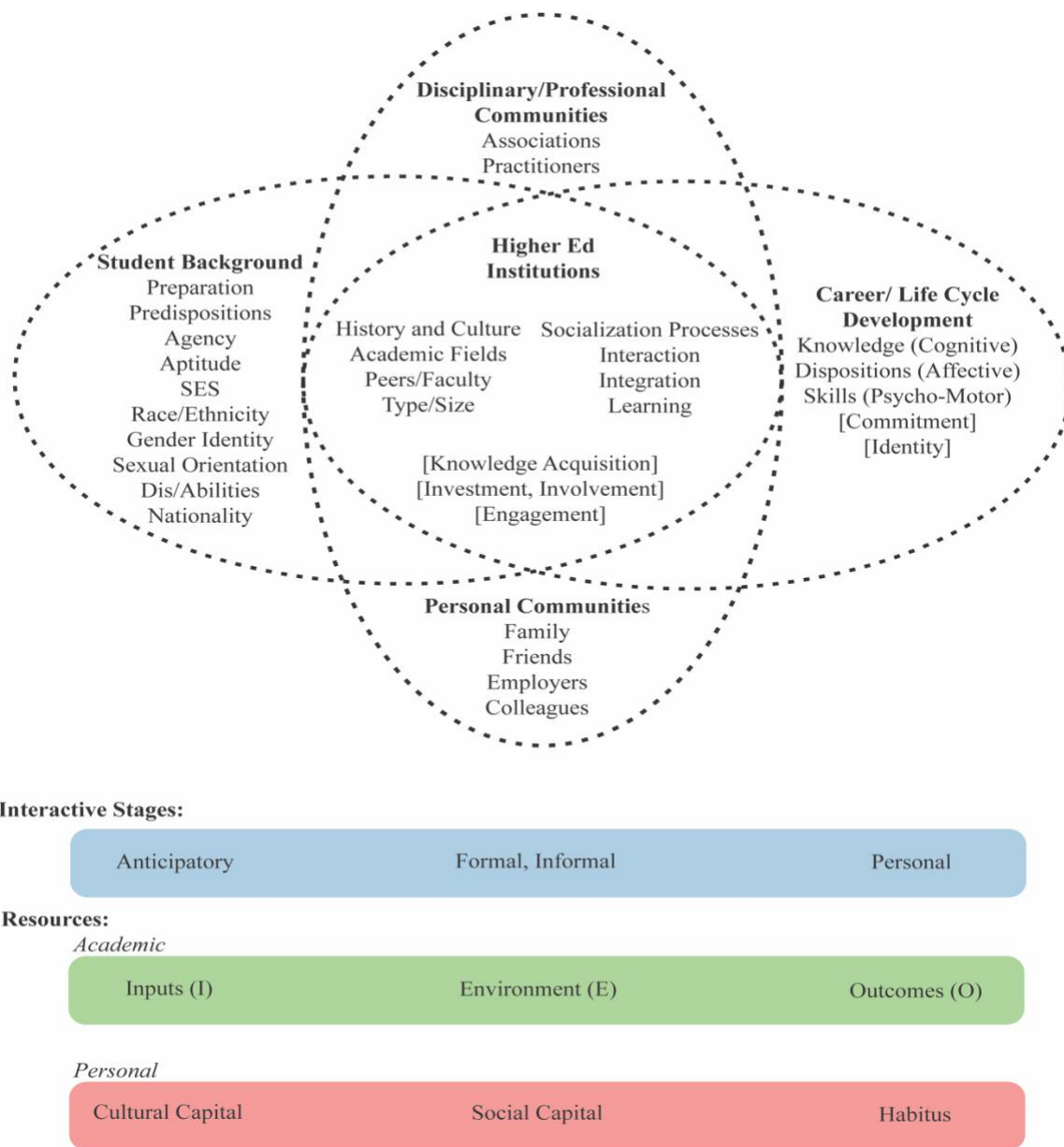


Figure 1: Recreation of Weidman and DeAngelo’s (2020) socialization model

Weidman’s Socialization Model

The foundational socialization model of Weidman’s (2001) graduate socialization model was adapted from Weidman’s undergraduate socialization models (Weidman, 1979, 1984, 1989). Weidman drew on scholarship from Thornton and Nardi (1975) which focused on the four stages of professional role acquisition. Along the X-axis in Figure 1 are the four stages of role acquisition (anticipatory, formal, informal, and personal), which were grouped and conceptualized as inputs (I), environments (E), and outcomes (O). The development of the I-E-O

framework is rooted in Human Capital Theory (Becker, 1975) and Status Attainment Theory (Sewell et al., 1969) within the fields of economics and sociology (Weidman, 2006). The inputs (I) are the unique attributes, demographics, values, and prior academic preparation. The environment (E) characterizes the organizational structure, and formal and informal interactions with members within the organization, which influences the individuals' learning. The outcomes (O) of socialization are described as the fluidity and growth of knowledge and capabilities that occur during the graduate training of the student. In Weidman and DeAngelo's (2020) model, they identify two types of resources, academic and personal, that students utilize throughout their development.

The I-E-O framework is housed under resources and nested under the academic section. The orientation under the academic section makes a more explicit connection to the student's background and demographics (I), the influence of history and culture within higher education institutions (E), and the outcomes (O) which are connected to the career path and development of the individual. The personal resources explicitly highlight the work on cultural and social capital from Bourdieu's (1986). For the purposes of this framework, cultural capital is showcased by the resources that students enter with (e.g., intellectual assets and curiosities informed by lived experiences). Social capital is produced through interactions both within and outside the academy. Habitus continuously evolves through the social and cultural capital which ultimately complements both personal and career metamorphosis. In the next section, I share how Thornton and Nardi's (1975) four interactive stages of socialization are incorporated within the context of higher education. I start by explaining the anticipatory stage, transition to the formal and informal, and conclude with the personal stage. It is important to note that the progression

through the interactive stages does not necessarily occur linearly. Rather, they are informed by one another.

Anticipatory Stage. During the anticipatory stage, prospective graduate students discover and gain insight into the expectations, norms, traditions, and values of their graduate program (Weidman et al., 2001). Some things the students learn are departmental rhetoric and they become more familiar with the habits and behaviors that can be taken for granted in the workplace. It also showcases all the unique attributes and lived experiences that the students bring into the graduate program they matriculated to.

Formal and Informal Stages. The process of the formal and informal stages occurs simultaneously but they are both distinct once they matriculate. During the formal stage, students matriculate and are onboarded into their respective programs, and they begin to engage in what Weidman et al. (2001) refers to as “role rehearsal” (p. 13). The student matriculates into the program and learns the habits associated with being a student in the program (e.g., presenting at conferences or learning how to deliver a lecture during lab meetings). During the informal stage, students learn the unwritten rules in their program. The students start to develop their own relationships with peers and other faculty within the department. All factors are informed by a student’s personal and professional communities, institutional culture, and departmental climate.

Socialization Processes: Interaction, Integration, and Learning. The socialization process occurs during the formal and informal stages. During the socialization process interactions are defined as the communities and relationships developed with colleagues (peers), professional networks, administrative personnel (e.g., administrative staff), and faculty. This occurs both within and outside of their respective academic programs and includes the hidden curriculum on how to be successful (Weidman et al., 2001). During the integration period,

individuals learn if they feel a sense of belonging and alignment within their departments and institutions. This corresponds with important shifts within the personal stage as individuals are also deciding what aspects of their identities and values align with their academic discipline. Learning is woven into the entire process as individuals discover if the environment, they are entering validates their past, present, and future work.

Personal, Professional Communities and Novice Professional Practitioners. Personal communities refer to the support networks (e.g., family, friends, significant others) the student has throughout their tenure in higher education. The role of the support networks starts pre-, post, and throughout the socialization process. The support networks can help students navigate the cultural shifts of transitioning into a new environment as well as influence outcomes. The role of professional communities in the socialization process helps the student understand their field of study and the curriculum developed to enhance the development of future scholars and their profession (Austin & McDaniels, 2006). In the novice professional practitioners' phase, the individual evaluates if and how their experiences and commitments to their work and actions can be sustained and elevated or if there are new misalignments between their commitment to their work and the identities and values that are most salient to them.

Personal Stage. Lastly, the personal stage is where students begin to develop their own professional identity within the field. The student develops the habits and skills required to excel professionally and starts to formulate connections and broaden networks through outlets such as conferences or invitations to present their scholarship. The career/life cycle development is in alignment with the personal stage where the outcomes of the students' experience pre-acceptance and post-graduate are reflected in the career choice pursuit.

The opportunities presented by equipping CRT and socialization as theoretical and conceptual frameworks into the experience of staff of color who graduated with a doctorate in STEM are fruitful. Utilizing socialization as the conceptual model with CRT as the theoretical framework will serve as guideposts to go through the trajectory of the graduate students turned administrative staff. To fully appreciate the experiences, I examine the socialization of the staff as graduate students and then as staff. Being that research into the motivations of staff within my criteria is limited, it is critical to understand how their experiences as graduate students informed their choice as well as how they are navigating the current landscape as staff.

Saliency of Campus Climate in Graduate Education

The literature on the impact and opportunities of having a productive campus climate has been pivotal within higher education (Posselt, 2016, 2020). Golde and Walker (2006) highlight how one of the essential functions is to create stewards within the respective student's disciplines and prepare future generations of scholars to advance scholarship and ingenuity. When novel and innovative research materializes, it should warrant recognition, but the process of evaluating ideas over people can be contradictory to those who are from underrepresented groups who are more likely to be in the numerical minority within their doctoral discipline. For instance, Hofstra et al. (2020) analysis of dissertations in STEM over the span of three decades showcases how those who come from underrepresented populations innovate at higher levels than those who are in the majority, but their ideas are more likely to be discounted, which can contribute to why they may not choose to pursue the professoriate.

What's equally concerning is the knowledge that does not come to fruition due to attrition (Golde, 2005; Golde & Dore, 2001). The role of attrition could be due to various factors such as funding from departments, campus climate challenges that lead to isolation and marginalization

(Harper & Hurtado, 2007), average time to completion, and lack of visibility to other fields beyond the professoriate are amplified for women and those who come from historically underrepresented groups (Golde & Walker, 2006). These are all pivotal through the socialization processes, specifically how isolation and marginalization can happen during various phases of the graduate training (Ali & Kohun, 2006) and staff orientation, particularly during the formal and informal stages of socialization (Sallee, 2011). This is a crucial time as a demonstrated commitment to diversity by creating opportunities for access and engagement across various dimensions of diversity can lead to a stronger sense of belonging (Hussain & Jones, 2021). For the purposes of my research, I focus on campus climate, particularly examining how environmental and interpersonal dynamics impact the trajectory and socialization experiences of graduate students of color at HWI's.

Impact of Campus Climate Socialization by Graduate Students of Color at HWI's

Research on campus climate, particularly regarding marginalization and alienation experienced by graduate students of color, has garnered much attention in the literature (Blockett et al., 2016; Brunsma et al., 2017; Harper & Hurtado, 2007; Hussain & Jones, 2021; Turner & Thompson, 1993). Blockett et al. (2016) literature review of Black graduate students' socialization to the professoriate showcases four themes that are most salient for Black students. Their analysis indicates four distinct areas: departmental and institutional cultural and interpersonal dynamics; mentorship and collegiately; career development and network expansion; and isolation and exclusion. Inquiry into other underrepresented groups has also been a focus in the literature, particularly around marginalization and isolation. Scholarship by Solórzano (1998) investigates how gender and racial microaggressions impacted the career trajectories of Chicano and Chicana undergraduate, doctoral, and post-doctoral students. The

findings highlight the significance and impact of racial microaggressions and sexism on the scholars' experiences, such as faculty having lower performance expectations of them, which negatively impacts their sense of belonging on their collegiate campuses.

Solórzano's work corresponds with scholarship by Gildersleeve et al. (2011) on the racialized experiences of Black and Latinx doctoral students in education. The objective of Gildersleeve et al. study was to understand how Black and Latinx doctoral students experience the culture of doctoral education at their PWI. The findings led to the construction of a narrative entitled "Am I Going Crazy" (Gildersleeve et al., 2011, p. 94). The "Am I Going Crazy" narrative is a representation of the questioning, uncertainty, and disbelief that the participants experienced within their doctoral program. Gildersleeve et al. found that students felt compelled to self-censor in academic and social settings and often questioned whether their advisors and/or peers believed in their academic abilities, resulting in a decline in their sense of belonging. The most common way that this would occur would be due to microaggressions which research has shown has a subtle but cumulative impact on minoritized populations (Solórzano, 1998; Sue et al., 2007). To counter their experiences, the participants sought out peer support networks with individuals that they could relate to due to their adverse experiences.

In STEM, this could be in lab settings where students of color feel a heightened sense of isolation due to a non-cooperative work environment. Rodriguez et al.'s (2022) scholarship on the impact of lab settings on students of color finds that the environment they experience devalues and does not recognize the unique talents and contributions that they bring to their research groups. A critical finding by Rodriguez et al. (2022) is graduate students of color disengaged in DEI work were strongly suggested to engage by their lab due to their identity,

which adds an additional responsibility and source of labor that often goes unrecognized and under-appreciated.

Building off previous literature on the experiences of students of color at HWI's, Slay et al. (2019) examines the tension of HWI's and DEI work by utilizing a campus climate framework to interrogate STEM doctoral programs where race-conscious admissions were banned. Slay and colleagues found that most of the efforts in DEI work within the departments focused solely on the structural component of diversity. In other words, the department's DEI priority and emphasis were on compositional diversity versus enhancing recruitment and yield practices and addressing the systemic barriers and challenges that deter graduate students from marginalized populations from excelling within STEM. Slay et al. (2019) calls the practice of focusing on DEI during the recruitment and yield phase but devalued once matriculated as a "bait and switch phenomenon" (p. 256). Even with an increase of students of color, the students' experiences within their departments were unaddressed which highlighted the disconnect between how the faculty made meaning of the initiatives in contrast to the students.

For instance, student participants articulated how recruitment efforts increased but the development of faculty to serve as mentors for those who are the most marginalized had not been addressed. As a result, the students questioned their experiences and wondered if this was the environment that could enhance their development within their respective fields, which affirms scholarship (Gildersleeve et al., 2011; Solórzano, 1998). Slay et al. (2019) demonstrates that more research needs to be dedicated to how to address the behavioral and psychological challenges that can arise within departments and those efforts have been continued.

Research efforts into how DEI is implemented at HWI's was advanced by Perez et al. (2020) exploration into how graduate students of color are socialized into DEI efforts during

their time in graduate school at two HWIs across various disciplines. The findings from Perez et al. (2020) are parallel to the findings by Slay et al. (2019) that showcase how the commitment to DEI served as a recruitment tool, but in practice, the emphasis on DEI became less salient due to two factors. First, the students believe that some of the faculty were not equipped with the skills to engage in DEI in a meaningful and proactive way that demonstrated the importance of DEI's merits in STEM. Second, graduate students highlight how they were discouraged from participating in identity-based organizations that aligned with their backgrounds. Although engaging in DEI related topics was not favored by some of the faculty in Perez et al. study, the students were able to expand their personal and professional networks and gained supplemental support during their graduate training by engaging in DEI activities.

Colleagues Perez et al. (2020) interrogation of the racialized experiences of Black doctoral students reinforced past scholarship of students of color feeling excluded due the racial and discriminatory encounters, but they persisted and credited their determination to their faith and commitment to social justice by graduating and creating more opportunities for the next generation of Black men (Johnson & Strayhorn, 2022).

Environmental Impact on Career Choice

As graduate students progress throughout their graduate training, their desire to pursue the professoriate decreases (Austin, 2002; Fuhrmann et al., 2011), with the most significant changes occurring for women and people of color (Gibbs & Griffin, 2013; Golde & Dore, 2001). Some of the factors that impact the trajectory are the social and cultural dynamics in the department, financial support, as well as the lack of work-life balance that many deem necessary to be successful (Fuhrmann et al., 2011). Gibbs and Griffin (2013) focus on the factors that influence the career choices of graduate students within the field of biomedical sciences. They

found that students interested in a faculty career believe that their career objectives could be met by pursuing the professoriate. For those who decided not to pursue an academic career, their interest in joining the academic ranks decreased due to value alignment and workforce factors which was more significant for women and people of color. Gibbs et al. findings show that minoritized groups' motivations did not align with their experiences in STEM. Their motivations were strongly tied to conducting research and praxis impacting communities who shared similar backgrounds, which may not seem as valuable based on their socialization.

An example of this is research by Haley et al. (2014), which examines how students of color's career choices were influenced by their faculty relationships. Haley et al. found that students' motivations were rooted in their desires to serve as role models by fostering an environment that showcased possibilities within their professions as well as impact their communities. This is demonstrated by graduate students choosing an institution that is more aligned with teaching versus a research-driven institution. Contributions by Jaeger et al. (2017) concluded similar findings in their work regarding the motivations of graduate students of color in STEM fields. Jaeger et al. examines how graduate students interpreted the impact of opportunity-driven interventions that would expand the participation of students from minoritized backgrounds. Students of color were intentional in finding targeted programs for people of color that could help them reach their career objectives. They also found that interventions such as affirmative action came as a tension point for those in the majority because of the belief that it gave people of color an advantage which would ultimately limit their career options. Other factors that could impact career choices can come from external factors that can impact the environment.

Scholastic contributions from McGee (2021b) found how Black graduate students are influenced by the Trump administration's negative commentary regarding STEM, which lowered the desire to pursue a career in STEM. In another study, Blackburn and Lawrence (1995) found that graduate students of color who were active in advocating for more just and inclusive practices due to racialized experiences are more likely to pursue a career in the academy. The unique contribution my research adds is that none of the literature regarding doctoral students of color's career choice explicitly examined what roles students pursued in academia beyond the professoriate. As a result, there is an opportunity to explore the learnings and motivation of those who choose an alternative path within higher education.

Faculty Service

Service in academia is commonly attributed to faculty and is contingent upon the institutional type and mission. For the purposes of this study, service is defined as tasks and activities that are not essential for advancement amongst the faculty ranks (Baez, 2000). In this case, those activities will be deemed those that are outside of the scope of producing and advancing scholarship and fulfilling teaching responsibilities. According to Baez (2000) (as seen in Blackburn and Lawrence (1995)) there are two types of service, internal and external. Internal service is defined as fulfilling university responsibilities for the betterment of the institution (e.g. participating in conference presentations for alumni and student conferences). External services are activities that reside outside of the contracted responsibilities of the faculty (e.g. providing consultation through serving as a board member for a corporation or non-profit organization). How service is weighed is contingent upon the institution type and the disparate impact can vary based on whom and what is asked to fulfill that obligation. At research one institutions, the distribution of who is asked to contribute to institutional service disproportionately impacts

women and faculty of color (Baez, 2000; Tierney & Bensimon, 1996; Turner, 2023; Turner et al., 2008; Zambrana et al., 2023).

The impact is often referred to as “cultural taxation,” which was first coined by Padilla’s (1994) scholarship focused on the tax that minoritized faculty face at HWI’s by serving in and completing service-related tasks assumed due to their identity regardless of scholarship alignment. It is referred to as a cultural tax because the labor that is called upon from minoritized faculty is viewed as beneficial to the HWI but does not merit additional compensation or advancement toward tenure. The tasks that these faculty are called upon may be connected to serving and leading DEI-related responsibilities (e.g., leading or serving on various committees or taskforces).

Padilla (1994) highlights how the efforts put forth by these faculty usually reflect positively on the institution but at the detriment of the faculty since the service provided is not reciprocated in the recognition needed for career advancement. Hirshfield and Joseph (2012) built on Padilla’s (1994) work on cultural taxation on faculty by showcasing how other forms of labor (e.g., socioemotional support) are expected more by women in comparison to men. It should be noted that cultural taxation is not bound to institutional type. Briggs et al. (2022) examines how cultural taxation was experienced by Latinx graduate students at a Hispanic Serving Institution (HSI). The findings showcase how they experienced tokenism and isolation within their departments, and did not engage in effort focused on enhancing the climate or providing opportunities to those who came from diverse backgrounds, partly driven by their desire to avoid stigma, which reinforces literature on campus climate (Harper & Hurtado, 2007). In addition, the experiences of the women affirmed similar experiences by Hirshfield and Joseph (2012), where the women described more experiences with shouldering the socioemotional labor

within the institution. In other words, Briggs et al. (2022) demonstrates how cultural taxation manifests itself in diverse ways, which could contribute to power dynamics between faculty and students, that influence the level of engagement, awareness of, and willingness of some graduate students to engage in work connected to DEI.

The paradox is some faculty of color view service with an altruistic framework to address barriers in the academy. Baez (2000) examines how faculty of color's commitment to service as a mechanism to counter systemic inequality within the academy improves the outcomes for not just the members of marginalized groups but for everyone in the academy. Scholarship by Antonio (2002) describes such service work as a "cultural tax credit," which is defined as "the benefit(s) garnered from performing racialized equity labour, in contrast to cultural taxation, which results in costs(s) from this labour" (p. 1110). Cultural tax credits take an asset-based approach and create opportunities to enhance the career trajectory of the minoritized students while disencumbering the responsibility that these students experience due to being minoritized. It is crucial to highlight that Rosales et al. (2023) emphasizes that experiences connected to DEI-focused labor do not necessarily correlate as a tax.

For instance, those who are engaged in DEI service work can expand their networks yielding access to more opportunities that could facilitate their career growth by being connected to those in fields or in roles that they may not have been accustomed to. For clarification, this does not mean that faculty of color do not have a commitment to their research objectives. Hamilton et al. (2023) showcases how faculty of color's desire to make an impact through their research was equivalent and equally congruent to their white colleagues. The variance comes from faculty of color's expanded responsibilities beyond the classroom to impact broader society

that went beyond their individual accolades. This commitment is also demonstrated by staff who are engaged in DEI service-driven work, but the toll endured manifests itself differently.

Staff of Color Experiences in Academia

Literature pertaining to the socialization experiences, career development, recruitment, and retention efforts for staff has garnered attention that mirrors experiences by faculty and students of color at HWI's (Steele, 2018) with most of the attention on student affairs practitioners of color (Cho & Brassfield, 2023; Sánchez et al., 2021). Scholarship by Luedke (2017) explore how HWIs can enhance their retention strategies by examining the challenges and barriers faced by administrative personnel of color. The findings showcase how staff of color were in environments that undervalued their unique contributions and talents, were tokenized and unrecognized for their work and other duties that may fall beyond their formal responsibilities, and the importance of productive supervisory practices and collegial support which ultimately can impact retention and mirrors the experiences of faculty and students (Gildersleeve et al., 2011; Harper & Hurtado, 2007; Turner et al., 2008).

Unrecognized forms of recognition and appreciation impact was affirmed through Stelle's (2018) study, which found that when staff encountered an unwelcoming and marginalizing environment, it impacted recruitment, retention, and advancement of staff of color. Ironically, staff who experienced feelings of marginalization found relief due to factors such as the Covid-19 pandemic, which allowed for staff of color to not have to be in environments where they were hyper-visible and marginalized but also showcased how their needs to be dedicated resources aimed to address the experiences for staff of color (Hamilton et al., 2023). The role that staff contribute toward the development and sense of belonging for students, particularly those of color, depicts the holistic development that all personnel contribute toward contributing to the

mission of the institution. To illustrate this Luedke (2017) found how staff of color took a more holistic approach to student development in comparison to their white counterparts. Staff of color made efforts to learn about familial and external circumstances that were impacting students in addition to their academic development. In turn, students felt welcomed and valued by the staff of color due to the intention of creating meaningful connections which created opportunities for honest and transparent conversations since there was trust established between the students and the staff.

Some of the challenges pertaining to engaging in DEI work amongst faculty and students of color align with staff experiences. Hamilton et al. (2023) showcase this by examining how staff were impacted by engaging in DEI service work. The findings highlight how administrative personnel engagement in DEI surpassed their formal responsibilities to help cultivate a positive ecosystem within the university. The actions that were displayed in going beyond their requirements for the betterment of students would limit time for professional growth and development. A critical distinction to make is that Hamilton et al. (2023) focus on staff of color and their white counterparts who were engaged in DEI work. Hamilton et al. found that the white staff engaged in diversity work were recognized more and granted more opportunities within their career trajectory, which was a stark distinction from people of color who engaged in DEI efforts that went beyond their formal responsibilities. Navigating formal and informal responsibilities increases the likelihood of encountering racialized incidents that may not garner the attention needed to create a more inclusive campus climate (Briscoe, 2022).

Minimizing the racialized incidents either experienced by staff or that staff help to address are characterized as microaggressions which are experienced most frequently amongst people of color with Black students reporting the highest encounters (Ogunyemi et al., 2020).

This behavior by administrative staff, such as student affairs professionals, to be agents for change and advocates for students while deprioritizing the mental and emotional well-being which can lead to lower retention for staff of color (Hutchings et al., 2023).

Summary

This literature review puts a spotlight on the similarities of the racialized experiences of graduate students, staff, and faculty of color. The utilization of CRT and socialization as frameworks as a lens to review the literature shows the synergies between faculty, staff, and student experiences. All three populations have a higher likelihood of experiencing behaviors that heightened a feeling of isolation and marginalization, which ultimately impacts a sense of belonging along with recruiting and retaining multidimensional talent. The literature reinforces how more attention is needed to improve the campus climate. The costs of not addressing it inhibit a productive and inclusive learning environment to manifest.

A critical lens to examining the campus environment and appreciation of the contributions that staff bring to higher education will be accomplished in this study by examining people of color who have advanced to earning a doctoral degree in STEM but pursued an alternative route as an administrative staff member. This is critical as scholarship in higher education has an impact on STEM retention by showcasing that minoritized and those in the majority matter and can be successful in STEM (Salazar et al., 2022). This unique perspective can enhance opportunities to recognize the impact that staff has made along with how this unique set of individuals provides additional insight into how the campus climate can become more welcoming to help in the recruitment, retainment, and advancement of students, faculty, and staff.

CHAPTER 3: METHODOLOGY

Jones (2013) and Bhattacharya (2017) discusses how qualitative researchers are interested in inquiry that focuses on human-centric experiences and the sensemaking process undertaken to make meaning of those experiences. Through a critical lens, critical qualitative research critiques how power dynamics reinforces systemic inequality for subordinate groups (Jones et al., 2013). Hence, the purpose of critical qualitative research is to work in conjunction with people to implicitly and explicitly impact ways of knowing while also working to inform social change to impact inequality through a historical lens, (Carspecken, 2012) as cited in (Jones et al., 2013).

To guide my critical qualitative research, I chose to equip narrative inquiry as my methodological approach to gain a deeper understanding and appreciation of the phenomena through narratives. This section begins with the development of narrative inquiry as a methodology. Next, I focus on the role of the researcher when equipping narrative inquiry. Thereafter, I will provide my positionality as it is critical for the researcher to be reflexive throughout the qualitative research process. The final section explains my participant recruitment and sampling, interview structure, data collection, and analysis, followed by consent protocols.

Narrative Inquiry

Narrative inquiry is a methodological approach utilized in many academic disciplines (Bhattacharya, 2017; Jones et al., 2013; Kim, 2015). The work of narrative inquiry derives from the philosophical underpinnings of Dewey's (1976) experience paradigm, which appreciates the systems and structures that individuals encounter (Clandinin & Rosiek, 2007; Clandinin & Connelly, 2000). Bruner (1986) scholarship was noteworthy in advancing narrative inquiry in social science research, and there have been earlier references in fields such as educational

philosophy and by scholars at the University of Chicago (Jones et al., 2013). Bruner (1986) demonstrated that our search for truth is either through pragmatic means (often referred to as quantitative research) or narrative means (qualitative research). In other words, the narrative school of thought operationalizes stories to understand the lived experiences and actions of people (Jones et al., 2013; Merriam & Tisdell, 2015).

The introduction of narrative inquiry into the field of education was by Connelly and Clandinin (1990). They argue that narrative inquiry provides a narrative point of view from which to experience and narrate the phenomena within one's research. Clandinin and Rosiek (2007) built on prior scholarship, adding that narrative inquiry recognizes and centers the experiences “but also an exploration of the social, cultural, and institutional narratives within which individuals' experiences were constituted, shaped, expressed, and enacted—but in a way that begins and ends that inquiry in the storied lives of the people involved” (p. 9). Their work also recognized “how to put knowledge in the service of enhancing human experience” (p. 14).

Jones et al. (2013) appreciated how “stories are how we make sense of our experiences, how we communicate with others, and through which we understand the world around us” (p. 34). And yet, stories and narratives have a unique distinction. Kim (2015) identified how narratives are descriptions of moments that construct the story organized in a “temporal sequence and...linear organization” (p. 8); and story is “a detailed organization of narrative events arranged in a [story] structure based on time although the events are not necessarily in chronological order” (p. 8). Utilizing narrative as an investigative approach provides an opportunity to understand the daily intersections one makes with the world by engaging in storytelling (Leavy, 2009 as cited by Kim, 2015). This is most notably seen in the utilization of CRT at its genesis through counternarratives (Delgado, 1989; Delgado & Stefancic, 2017) .

At the formation of CRT in critical legal studies, scholars Bell (1980), and Delgado and Stefancic (2017) argue that the legal field needs to be more cognizant of the power of narratives. Delgado (1989) articulates that “stories, parables, chronicles, and narratives are powerful means for destroying mindset – the bundle of presuppositions, received wisdoms, and shared understandings against a background of which legal and political discourse takes place” (p. 2413). Delgado’s (1989) scholarly contributions strengthen how stories and counterstories are only effective if they are “noncoercive” meaning they “invite the reader to suspend judgment, listen for their point or message, and then decide what measure of truth they contain. They are insinuating, not frontal; they offer a respite from the linear, coercive discourse that characterizes much legal writing” (p. 2415). Narrative inquiry as an anchor for my methodological approach provides the opportunity to acknowledge and validate the “quotidian stories that frequently go unnoticed” (Kim, 2015, p. 23).

Researchers’ Role in Narrative Inquiry

When describing the role of the researcher, Jones et al. (2013) provide a quote from hooks (1989), which states, “I want to know your story. And then I will tell it back to you in a new way. Tell it back to you in such a way that it has become my own. Re-telling you. I write myself anew. I am still author, authority. I am still the colonizer, the speaker, and you are at the center of my talk” (p. 151-152). There is a special relationship that exists where I am being trusted with the stories of the individuals, and I use hooks’ (1989) words as a warning while going through the interview process with my participants/co-authors. As a result, I have been intentional in my reflexivity by consistently writing and reflecting on my own experiences to ensure that I am centering their voices (Kim, 2015). I was conscientious of the rhythm, tone,

pauses, and all other linguistic dialects that took place during the interview as the stories shared can make my coauthors vulnerable (Kim, 2015).

Positionality

I am a Black cisgender man whose mental model is informed by my upbringing in the southern and midwestern regions of the United States. When I matriculated into my undergraduate institution, I intended to major in a STEM field. During my classes, I was often the only Black man in my classes and felt isolated during my time. I heard Black students could not make it in STEM fields, and I was determined to make sure that nobody experienced the feelings I had the first time I heard that. I was never taught by anyone in STEM with whom I could identify. That led me to pursue a path in the field of education to work in the academy to help support students who felt like they did not belong or could not make it. I then started working with many Black and other minoritized doctoral students in STEM, and the journeys that I went through to get to that point were nothing short of inspiring. I was a part of their support system during their training, and I wanted to pay it forward as most of my support system came from administrators on campus who believed in me and presented me with opportunities to explore. Many of the doctoral students are/were the first or only in a substantial timeframe to graduate from a minoritized background with a doctoral degree in their academic department. I am motivated by showing how all aspects of the academy are needed for positive outcomes for students, faculty, and staff. My hope is that the stories of my coauthors will help demonstrate how being seen by someone can make a transformative and generational legacy change.

Research Approach

Participant Recruitment and Sampling

I utilized network sampling to start the recruitment process. The rationale for utilizing a network sampling strategy is due to the participant criteria identified below (Merriam & Tisdell, 2015). The criteria I developed for my study are as follows: identify as a person of color, have completed a doctoral program in a STEM-related doctoral program, and be currently or previously employed as an administrator in higher education or be a current doctoral student who has reached all but dissertation (ABD) level and has secured a position as an administrator in higher education post-graduation. The aim of the criteria was to reach a wide range of individuals who could be in junior to senior-level roles.

For my recruitment strategy I utilized professional networks developed throughout my tenure in higher education. In my career, I have worked in public and private four-year institutions in the northern, southern, eastern, and western regions of the United States. My experiences give me the unique opportunity to have an intentional and strategic approach to participant recruitment (Creswell & Creswell, 2017). In addition to utilizing network sampling, I utilized snowball sampling to expand opportunities to utilize the professional networks of participants resulting in a larger pool of candidates to collaborate with (Merriam & Tisdell, 2015). I distributed emails to potential candidates asking if they would participate, which are located in Appendix B with an optional follow up located in Appendix D. All participants earned a \$25 gift card for participating. I then coordinated with the respondents to set up a virtual interview through the video conferencing platform Zoom. See Table 1 for a breakdown of the participants.

Table 1*Participant Profiles*

Participant Number	Pseudonym	Interview Date	Born in the United States (Yes/No)
1	Brittany	August 2023	Yes
2	Santiago	August 2023	Yes
3	Noemi	August 2023	Yes
4	Michael	August 2023	No
5	Janet	September 2023	Yes
6	Ryan	September 2023	Yes
7	Joy	September 2023	Yes
8	Lupita	September 2023	Yes
9	Kayla	September 2023	Yes
10	Ray	September 2023	Yes
11	Jason	September 2023	No
12	X	September 2023	Yes

Consent

All participants completed consent forms and met the participant criteria. Once I received IRB approval, I added my IRB number to the consent form along with the research protocols. Sample copies of the forms are located in Appendix B. Participants were made aware that they could withdraw if they chose. All interviews were conducted and recorded via Zoom. All data was stored in my Colorado State OneDrive, password-protected, and uploaded into the coding software Dedoose. No identifiable information was reported or kept in written form. Any potentially identifiable information in the audio interview was redacted in the transcript. All data was stored in a password-protected device accessible only to the co-investigator and advisor. When the interviews were completed, I deleted the recordings and notified them that I would retain the transcripts and notes no longer than seven years after the study was complete.

Data Collection

Participants received an email explaining the research project with the IRB approval number, which is found in Appendix B. Once they agreed, participants who met the criteria completed consent forms, which are also found in Appendix B. All interviews were designed as semi-structured and lasted between 35 and 60 minutes. Interviews were transcribed by Zoom, and I replayed the audio transcript several times to ensure accuracy by correcting grammatical and linguistic errors. To protect the privacy and safety of the participants, the waiting room feature on Zoom was enabled, which prevented anyone from entering the interview without approval. Before the interviewee and I started the recording, I prompted the participant to select a pseudonym or be known as Participant X. After notifying the interviewee, I provided instructions for the participant to change their name in Zoom prior to the recording to reflect the change in the transcript. Once their name was changed in Zoom, I notified the interviewee that the audio file was the only thing that would be recorded during the interview, and I would delete the audio-only file once the transcripts were complete. Participants were notified that they could request for the interview to be paused, end, or skip any questions that they did not feel comfortable answering. All the audio files were deleted after being transcribed, and the transcripts were stored in encrypted folders on my Colorado State OneDrive and in a password-protected and encrypted database on the coding platform, Dedoose. Only my advisor had access to the data collected and copies of my handwritten notes were stored and locked in my personal safe.

Interview Structure

I conducted semi-structured interviews to assist in keeping the interview focused while opening opportunities for exploration (Kim, 2015). I chose this type of interview because it

capitalizes my strengths as a conversationalist, builds rapport, and allows for a more fluid conversation between myself and the participants. The interviews ranged in duration from 35 to 60 minutes. A copy of the interview questions can be found in Appendix A. During the interviews, I took notes and wrote memos in my interview journal. Journaling is critical for the researcher as it creates the opportunity to simultaneously connect the data with reflections from the researcher throughout the data collection process (Clandinin & Rosiek, 2007; Kim, 2015). I notified the interviewee that I would be writing notes and there would be no identifying information written. Between interviews, I wrote my reflections in the journal that was stored to connect the data to the literature.

Data Analysis

I utilized an inductive coding approach by applying in vivo coding, which takes short phrases or words from the participants as codes that match the socialization phase along with my theoretical framework during my first reading of the transcripts (Jones et al., 2013; Saldaña, 2021). I also went through a deductive process through my data analysis by examining if there is supplemental evidence to ensure reliability and validity within my work (Creswell & Creswell, 2017). Once loaded in Dedoose, I highlighted direct quotations from the transcript to center of the participants' voice and lived experiences (Saldaña, 2021). After completing my first round of coding, I reviewed the memos I had written in my journal and wrote the connection points on the post-it notes feature in Dedoose that were congruent with where I had made that connection in the literature. Once those connections were made, I went through a second cycle of coding to condense the number of codes by reanalyzing my work. After completing the second cycle of coding, I had a reduced set of codes, and I reorganized them through the narrative coding techniques of broadening, burrowing, storying, and restorying (Kim, 2015). As described by Kim

(2015), broadening occurs when the researcher makes a description of the participants' environment, values, as well as connections to the literature while referencing the memos from the interview. While burrowing, the researcher is examining emotions, feelings, or dilemmas around specific events that have influenced or impacted the participants' experiences.

During storying and restorying, the researcher identifies options to illustrate the significance of the lived experiences for the participants. I completed this process several times to create several narratives that emerged from the data and my analytical process. After the process was completed, the codes were grouped into themes. The overarching theme that arose from the analysis was the commitment to opportunity. The opportunity to be heard, seen, and appreciated by the unique talents and lived experiences that marginalized populations endure due to the lack of appreciation of DEI is rooted in the commitment to opportunity by addressing systemic inequality and inequities.

Summary

Choosing narrative inquiry as my methodological approach to guide my inquiry creates an opportunity to appreciate the lived experiences of the staff of color who participated in this study. By conducting semi-structured interviews, I could capitalize on my knowledge and expertise to create opportunities for deeper exploration into their experiences. Being that some of the experiences could potentially surface past traumas or troubling experiences, I actively reminded participants could skip any question they wanted or end the interview at any time. My understanding of the literature and knowledge within the field of higher education provided a unique analytical lens to the data as I could generate follow-up questions that could develop deeper trust with the participants allowing for a rich experience that may not have been shared otherwise. Applying this approach allows for the voices of the participants to be amplified and

their experiences to be appreciated and leveraged to help create more inclusive and nurturing of the entire community within their institutions.

CHAPTER FOUR: FINDINGS

The purpose of my research is to explore the motivations and lived experiences of administrators of color who earned doctorates in STEM and chose to pursue a career as an administrative staff member. Informed by theoretical and conceptual framework and empirical research four themes surfaced. Through my methodological approach the are four themes are (1) Alone Together; (2) Stewardship: Service Beyond Obligation; (3) A New Equilibrium: Environmental Validation and Déjà Vu; and (4) External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment. The Alone Together theme is informed by the experiences that resulted from being the numerical minority and marginalized in their departmental and school climate during their graduate training as a person of color. The subsections in the Alone Together narrative are Breaking Down the Walls and Power Dynamics: Resistance. The Breaking Down the Walls narrative resulted from participants realizing that they will need to serve as trailblazers within their graduate program so that they can showcase that other students who come from similar backgrounds can see their trajectory as an opportunity that they may not have realized. The Power Dynamics: Resistance reflection point showcase the influence that faculty had within their career journeys and how they are using what they learned to inform their practices going forward.

The Stewardship: Service Beyond Obligation narrative is centered around students' commitment to opportunity through being active in DEI efforts, participating in outreach activities, developing mentorship programs, and serving as mentors or tutors for students outside of their formal teaching responsibilities. One subsection entitled Systems Lens to Classroom Instruction provides a unique lens through those who were born outside of the United States.

The New Equilibrium: Environmental Validation and Déjà Vu theme shows how participants transition from newly minted doctorates in STEM to now becoming administrative staff. As administrative staff, they often see moments that remind them of themselves or their experiences and want to make sure that they provide support. In addition, there are experiences where they shared how their supervisors and teams showcased appreciation for them working with them along with their contributions, which is entitled environmental validation. On the other end is the Déjà Vu narrative. In this section, the experiences described are similar to the isolation that many experienced in graduate school. The isolation resulted from a form of stigma or through the perception that their choices to become administrative staff resulted in faculty feeling like they lost one of their future colleagues because of the notion that they could do the same work as faculty, but there was value misalignment.

Lastly, the External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment narrative describes the external forces that either a) showcased opportunities for higher education to create more inclusive environments and participants desire to improve the departmental climate, and b) the impact of the Covid-19 pandemic in the thought process and/or exposure to networks and forms of support that helped inform career choices going forward. I will start with the narrative, Alone Together, and transition to the other narratives described.

Alone Together

The Alone Together narrative was described by nine out of twelve participants (Adela, Brittany, Jason, Joy, Lupita, Noemi, Ryan, Santiago, and X) with the saliency articulated most by the women of color. This narrative delves into the experiences of graduate students turned administrators while navigating the complex landscape of STEM at HWIs. These experiences fundamentally shape their perspectives on graduate education. Specifically, the socialization

process that they and others experienced. The narrative poignantly captures the pervasive sense of isolation felt by those who constitute a numerical minority, which profoundly influences their perceptions of the STEM fields. However, while being the only one in the department, they were still able to make the necessary connections with other people of color at their HWI, which empowered them throughout their graduate journey. This was most noted amongst the women of color but was not absent from the experiences of the men in this study. The narratives are woven together to share how they are connecting yet occurring in different moments in time and space. Lupita's experiences guide the introduction to the narrative.

When Lupita started her graduate orientation at her HWI, she could count how many Black people were in her department. Being the only Black person in her department, along with being a first-generation college student, impacted her sense of belonging. She shared how she felt “jaded” because she did not “see myself represented and or being well welcomed into like a space in that way.” Her first-generation status was also a factor because “no one had ever navigated” her career trajectory. She worked “these really, really odd hours,” and her family did not “quite understand...the type of support I needed” due to the unconventional work schedule. While the composition of her class made her skeptical, she found solace with the other Black women throughout the graduate school.

The validation Lupita received came from affirmations from her Black women colleagues. Her colleagues would share affirmations such as “you can do this. You belong here. Don't be afraid to ask for help.” The encouragement served as fuel for Lupita as she was also managing her familial obligations. Sharing the bond of motherhood, Lupita and some of the other Black women would actively find time for their children to connect as well as “develop connections as mothers as well as resonate with some of the obstacles” they had to manage. As

she approached the end of her graduate training, Lupita wanted to do more for her community. She shared how it became “really apparent to me towards the end of my program that I wasn't leaning into my like community in the way that I could cause there were all these different people that could be around to support me.” As a result, Lupita became more involved with the Black Graduate Student Association (BGSA) and was receiving support that mirrored her connections with the other Black women colleagues.

Ryan echoed Lupita's sentiments as Ryan also felt that she did not belong in her program. Ryan shared how “it was and is challenging to be the only person of your identity in spaces where you get messages that maybe you don't belong there. I got a lot of those along the way.” She continued by sharing how she “did not see a lot of black male faculty, or black faculty in general,” which made her feel additional pressure. Ryan recalled how “being the only person on top of having all the pressures of like. If I fail, then everybody like me fails right, and nobody will ever be allowed back again. Carrying that pressure, carrying those imposter fears.” Due to a chance of serendipity, Ryan's lab was located next to a lab that had a Black woman scientist. Being able to connect with her colleague brought much joy to Ryan. She said “it was really good to see her face on the whole. You know, in-research spaces...we were talking about a lot of the same challenges right like, why are we the only 2 people?!” Even with being the numerical minority, Ryan was grateful for the other Black woman scientist as she was glad that “[they] had each other.” Ryan's experiences serve as motivation to help other graduate students find their purpose and realize their full potential in academia. Whether they are “people of color, or other marginalized groups who might find themselves being the only cause we're we have a lot of work to do to diversify academia.” She wants to help students “build that confidence early...to have networks of people around them” that would be necessary for success.

Breaking Down the Walls

Joy also felt isolated as she “barely ever saw any Black students,” and it was customary to “be the only one in your department.” Despite the obstacles in her way, she was determined to earn her degree because she understood the opportunities it would provide for people who came after her. Joy was determined to “break down those walls” so that others at her institution would question if people who look like her could complete the program. She continued by saying, “I wanted there to be a clear path through it and then, because of the things that I faced, that would have made other people say, forget it. Why do I want to do this?” In short, her goal is to ensure that people following her would not “have to have the same fights.” One of the obstacles she had to overcome was helping people appreciate the attributes she brought to the department, but Joy was often ignored by other members of her department, making her feel like she was unseen. Joy jokes that if you wanted someone to “actually encourage you then this is not the department for you.”

As a result, Joy’s experiences reinforce the notion that she was there “to learn about the field and opportunities,” and she “was not looking for them to create those other or fulfill those other spaces in me...cause if I had been expecting that it would have been problematic.” While she may not have seen many Black students in her department, she, like Lupita, connected with other Black graduate students through the BGSA and the Black Cultural Center (BCC) at her institution. The support she received from the BGSA and the BCC resonated deeply for Joy. She said “the support I got from the Black community really made me want to stay and give back cause I really felt like there were people there who had the capacity to change the world, but they were not in an environment that was nurturing. And so, for me, creating an environment where I

could support future students and help them to know that they could do it.” She continued by saying:

You shouldn't have to be the *strongest person* to make it in engineering or in higher ed or anything else. There's nothing wrong with giving people support, and you should want to give people support and if our institutions are relying on the way things were done 20 to 30 years ago, when everyone was a man and everyone was white for the most part. Then we're doing ourselves a disservice because we're setting up artificial boundaries for who can do what versus really being able to exploit the skills and the passions that people have that it really does require intentionality in creating spaces that allow people to connect and feel that sense of belonging. That space should exist in the sciences as much as exist anywhere else. Anyone who says this is, you know, this is math, this is science, we don't do well, that's BS. We in some ways need it more because our work does not draw on our humanity. So, we've got to. We have to be more intentional about addressing those pieces of ourselves because of that.

Santiago echoed similar sentiments as he experienced being one of a few, or the only person of color in their STEM programs. Santiago said not seeing “anybody like him” heightened his understanding of STEM. He shared how “STEM is a very privileged space because a lot of the things that was occupying [his] mind outside of science was not being discussed in the science spaces. There's oftentimes a lot of push to not have conversations about race, inequity, and things like that, and science, a lot of people think of it as like an apolitical place and things, and so it's that in itself makes it feel very isolating.”

For X, his sense of isolation came as a form of culture shock. He explained how during his undergraduate experience he “was used to being on campus, and never felt like, the token

black person in the room. I never felt like my race was under a microscope at all times. I never felt that sense of I'm representing my whole race, because I'm the only one in the space.” As a graduate student, he became “the only black student in my graduate school cohort of over 40 students and one of the only students of color.” That experience made X feel an immediate “sense of isolation.” Initially, he “didn't have the words to describe it but stereotype threat definitely experienced a lot of that, I didn't have the vocabulary to even understand that until later on.”

Jason's socialization differed from the other participants due to him spending much of his upbringing in Africa before moving to the United States. Growing up in Africa, he saw Black representation in many professions, which normalized what he thought he could accomplish. For example, he “saw black doctors” all his life, and his “mom was a teacher,” which informed his mindset as “you don't question who you become or who you want to be.” However, he did note that “It's very different here in the USA. If you're the only one, you start questioning, do I belong here?” He continued by sharing how being born in the United States could have impacted his sense of belonging. He said:

If I had grown up here. I can know for sure that I'll be not feeling right at every point, because you're being reminded at every point from when you were one years old. Until you're an adult, you're always reminded you're different, or you, you're here. All these things everything. It could really start messing with you like, why am I always being or in singled out? Right? So, I understand that point. I understand the need for that sense of belonging. So, when I mentor my students, when I mentor new faculty of color. you know, we talk about that and remind them that you're supposed to be here, and it's very important that you're here.

One of the instances that this became salient for Jason was during his graduate orientation. Jason was one of two Black graduate students in the entire department. Even though Jason had cultivated a sense of belonging, he had a situation during his graduate training that showcased how the cost of being hyper-visible due to race. Jason and one of his white colleagues had to miss a seminar. The next day, someone said to Jason, “I didn't see you at the seminar.” Jason was confused because his peer only asked him and not the person who also missed the seminar with him. It reinforced to Jason that if he “missed a seminar, everyone will notice, because the black guy is not here right. But if my friend is white and misses the seminar, nobody would notice...I think I started really questioning a lot of these things, and I became even more conscious of my own color.” The experiences he had navigating his STEM career, whether through conducting research or teaching, he concluded that he “had to change the way science was being done. I had to change who gets into science. I actually did not know what this work diversity, equity, and inclusion. I had no clue or even social justice. I did not have the language to talk about it...If I could do anything in this world, I would work with people who come from underprivileged backgrounds, empower them, and get them into spaces where they are not.”

Brittany's involvement in the STEM student organization for historically underrepresented groups (HUG) at her graduate institution gave her the opportunity to process experiences that challenged her sense of belonging. She could talk to members in the organization and say, “Hey, this experience happened to me, and I didn't have the words...at the time that I experienced a microaggression...and so just being able to process and debrief was really helpful”. In addition to Brittany, Janet's involvement in creating more inclusive environments in STEM gained traction due to the “racial equity issues that were happening” in the United States which made her more “introspective about [her] own racial identity.” Similar to

Brittany, Janet was faced with microaggressions and when they occurred, she was able to lean on the women of color for support and vent out her frustrations. For example, Janet was mistaken for another woman of color and she recalled how:

...it was just a very strange experience, and I remember having another woman of color who was there, and I told her about this experience, and she was...only or one of the few black women in the at that research site. She said, yeah, when I first got here, I remember faculty member, mistaking me for another black student and so I think kind of the affirmation that things that I was experiencing or feeling wasn't just me imagining it. I think that that that was really important without having to explain why I was upset by it.

Ryan also shared similar challenges as Brittany and Janet in which Ryan would connect with Black colleagues on frustrations that were “deal with identity” and was appreciative of the fact that she was able to find a place “to vent to share those frustrations.” Specifically, Ryan was able to connect with another Black woman who served as an administrator and helped give her and her friends space to recalibrate. Ryan shared how the administrator was “a wonderful person who would check in on us too and make sure everybody was okay. We could just go to her office.” Ryan would share her frustrations, and the administrator would say “sit down...this is a safe space for you like you can just be who you need to be in this space. Before you get back to it. But just having that place where you could go just when you needed to get away.”

Adela’s experiences prompted her to question the care for her development. The behaviors of her advisors made Adela feel like they did not “care about my personal growth.” The concerns were “‘What's the data? Are you getting the work done?’ It was more about how I was supporting their career; I need to get this data so that they can publish the paper and get tenure.” She continued by sharing how she really felt her gender similarly to how Joy described

during her graduate training. Adela shared how she, “never felt like [her] advisor was like you're a woman in the room how can I make sure that you're listening to and respect it as a woman in this really male heavy space, whereas in academia or in administration like my advisors, my mentors and bosses, and this space have definitely, like brought attention to that and we've been able to speak about it.”

Power Dynamics: Resistance

The Alone Together narrative also emphasizes the role that the faculty have in the environment. For five, they particularly highlighted the power dynamics that shape how an environment can impact the sense of belonging, confidence, and career trajectories for people of color in STEM. Santiago shared how “being face to face with, so many issues that are impacting students, I wanted to be in a position where I can help people sort of acquire that agency for themselves where they don't feel they don't get to a situation where they feel stuck and stagnant.” He continued by sharing how “there's a very strong tendency to preserve current structures and those oftentimes do are disadvantage to people from minoritized backgrounds.” As a result, he would consider the “counter narrative or path towards that and...continue to associate or work within a system while, like, fighting, actively fighting against it.” Power dynamics also came into play for Santiago. He shared how graduate students are often in “very vulnerable positions” due to as their PI is “your boss, your manager, your mentor, the person that trains you, the person that coaches you, but then also sometimes your friend and also kind of your colleague and it's so many hats and it really does, it really does lend itself to setting yourself up to being a really toxic situation because so much of your progress can be depended on your relationship with this one person.” He encountered students who felt that their PI's did not have “adequate training for mentorship,” which led to many students who “love their science and then hate the situation that

they are in so there's something to be said about that.” Santiago continued by describing how the impact of the STEM culture can have a negative effect on the mental health of the current and future generation of STEM professionals. He said:

...we have grind culture that, like, work twice as hard culture that comes out of being keenly aware that we're seen as less than in a lot of spaces...and trying to be this overachiever and then being rewarded for that, right, our entire education system rewards that...we're rewarding this kind of toxic behavior that some of us built in order to continue to sustain this, this perfect persona that...we don't have a space to just sit back and be like, who am I and how can he help empower people to literally just take better care of themselves, and what does that look like?

This is especially critical for members of minoritized backgrounds he emphasized how having “a community...is definitely that emotional psychosocial support and also dealing with I think what I realized that this process is you really can't talk about DEI without talking about trauma.” It was experiences described by Santiago that connected to Noemi’s experiences, which motivated her “need to be in a role that can intervene between PI’s...and the students because [she] realized there was a lack of support there probably because of the isolation.” Lupita recalled how in STEM, faculty diversity still needs to improve, and she often wonders “How do we make sure that the student is mentored in a way that seems equally equivalent to their majority student counterpart...how do we develop your like STEM identity...how do we provide academic mentorship in a different way” where students feel that validated in their experiences in STEM.”

Ryan rarely received affirmations of her contributions from her PI directly, but she later learned how her PI would support her in a way that was beneficial to her development. She shared that her:

...research mentor actually thought I was doing really good work, but he never said that to me directly...the positive feedback comes from someone else instead of directly for the person who felt that way. And that would have changed everything for me if my research mentor had told me directly, like, I think you're doing really good work. And so those kinds of things just really challenged my belonging like, just not feeling like you're adequate you know, feeling like I had to do things a lot in the lab to show that I knew how to do, to do things like to do science to really think about science and just constantly proving myself...I don't need to do that. I think the people who know my work know me. And you know, I think that is yeah. I just don't need to do that anymore. And it's so freeing, so freeing.

She continued by sharing an experience that she acknowledged may have been with positive intent, but “the impact was confusing” when navigating her career trajectory. There was a faculty member who identified as a white man who she and some of the Black women graduate students established a positive relationship with. When discussing career opportunities, the PI shared that they should not:

...become academic faculty, because...you'll get pulled into lots of other things. People want you to be in engage in service, and they want you to teach, and they want you to be on all their like DEI committees. And then, when you apply for tenure, your tenure is going to be challenged because you have been distracted doing all of these other activities and not furthering your research program. That's what's his message for us...I think he

thought he was trying to. Coach us, I guess, but it kind of felt a little bit like, oh, like, maybe I shouldn't.

Brittany recalled a classroom experience with a faculty member in class where she ended up crying in front of her peers as she was put in a “sink or swim baptism by fire” situation. The answer she provided to a scenario did not meet the faculty member’s expectations and she was made an example of in the class. In that moment, Brittany reflected how you “try your hardest to demonstrate that you are worthy of being able to share intellectual space with the with other people, and especially when. You know, you're one of the only and then to be immediately shut down.” She was not in the “right headspace” and asked to be excused to go to the restroom, and the professor “said no, you can turn around in your chair.” There was another faculty member in the room who did not intervene, but Brittany speculates that it was due to that faculty member not having tenure while the teaching faculty did. Students in class who found her in the bathroom acknowledged how that situation was uncalled for, and they would support her if she wanted to make a report, but Brittany did not. It was “one of those moments throughout my Ph.D. I kept remembering that moment and that feeling, and could draw resilience from it, but I could have built resilience in a way that wasn't so traumatic in the process.” Fortunately, she found more people to connect with “through the beautiful times and also the troublesome times that these communities and relationships were forged.”

X made the connection through his efforts to help graduate students learn effective mentorship practices before joining the faculty ranks. Building off Lupita’s experiences, X realized “a huge discrepancy in many cases between the identities and backgrounds and privileges that our high school students are coming from versus where their mentors are coming from.” As a result, he and the organization partnered with the education school at his institution

to conduct mentor trainings. The training allowed X to see the work needed to develop the mentoring capabilities for aspiring STEM professionals. As the mentor training was happening, he wondered, “Why do we have conversations like this for grad students like, why isn’t that a thing?” That “was one of the motivations for me applying for the DEI fellowship to be able to work on bringing those sorts of conversations to Ph.D. students so that I would say that one community had the greatest sort of impact in terms of like that part of that pivot towards administration.”

Navigating power dynamics causes Brittany and Noemi to continuously reconceptualize what resilience is. Brittany and Noemi’s experiences led them to rethink the narrative around resilience and the costs of it. Brittany and Noemi both shared similar sentiments about how they don’t think “it’s fair” or “should be expected” for “people to be resilient.” Resilience comes up often for Brittany because “of the ways in which [she] been able to persevere through the difficult times and just continue to push through. When I was experiencing harm and pain, but it also comes from the space of not giving others the benefit of seeing me down internally.” Brittany continued by sharing “I think there is something really there about what resilience means to individuals because of the potential negative connotations and stereotypes that it's placed based on social identities.”

Noemi shared the same sentiments as Brittany, adding that “we shouldn't be expected to be resilient and even though we are it's because we were kind of forced to be and I.” She continued by sharing how resilience can oscillate between being “worthy, valuable or capable and if it's the latter, then I'm not going to do it. because that's how I spent most of my scientific path, my journey, always trying to prove that I belong somewhere and that I was worth the

investment or worth the risk that they were taking by accepting me or hiring me.” Noemi’s focus has revolved on taking “resilience and resistance” to more of a focus of “community support.”

Stewardship: Service Beyond Obligation

The Stewardship: Service Beyond Obligation narrative is told through the experiences of nine participants (Adela, Brittany, Joy, Lupita, Michael, Noemi, Santiago, Ray, and X). Each of them shared various experiences of their service-driven work to enhance the experiences of those from HUG. Their expressed desires and commitments came from being engaged in early outreach programs from high school-graduate school, being engaged in national organizations for HUGs, and paving it forward by showcasing their commitment to opportunities by serving as role models and mentors. Participants' leadership is analyzed as an intervention for those who may have questioned whether they belong in STEM, with the goal of helping shift the trajectories of the students they encounter. The Stewardship: Service Beyond Obligation narrative begins with Brittany and how her lived experiences pre- and post-graduation training impacted her career.

As a woman of color and FLI student, Brittany recognized her impact as a “trailblazer.” As she enhanced her capabilities in STEM, she made sure to “keep those pieces of [her] identity connected and at the forefront, rather than feeling as [she] had to shed or ignore them on the path to doing scientific research.” Her actions followed her learnings as she proactively made a choice to “stay engaged and be service-oriented” to her community. Through participating in research programs for HUGs, Brittany developed the habits and behaviors that were instrumental to her development. She recognized how leaders of HUG research programs “extended the knowledge to me, and I wanted to extend that knowledge or pay it forward to somebody else.” In other words, she was “trying to give back as [she] was receiving.” She showcased her commitment be

serving as the “scientific older sibling” for students.” She utilized her skillset that went “beyond offering the empathetic care and support” by “knowledge sharing...and unpacking the hidden networking and hidden curriculums” that hindered the development of students. Beyond developing aspiring students in STEM, Brittany leveraged her “social capital” to gain trust and resolve challenges that would occur between faculty and students. For example, she worked with a faculty member in designing a DEI course in STEM. Brittany was grateful for the PI because the PI “was willing to admit what she didn't know and leverage that knowledge to help advance her own students.” The work that Brittany was engaged in as a graduate student was being accomplished “before I fully became a staff member”.

Noemi shared the same communal values to developing future scientists just as Brittany. She accomplished this by starting and serving in leadership roles for graduate students of color in STEM and outreach efforts focused on K-12, community college, and undergraduate students. In addition, she expanded professional development opportunities by creating mentorship programs for graduate students. Her motivation for starting the mentorship program and being involved in outreach came from her noticing that her peers “were not getting... mentorship and support in their labs or from PIs,” and she wanted to help them expand their support and professional networks. Noemi explained how “mentorship was so important to us and our trajectory, and I wanted to do the same thing for other folks that looked like us or came from our communities.” Noemi was also fueled by the tensions she witnessed between what she was advocating for and faculty priorities. She shared how:

...for the longest time me and a few of my colleagues who are trying to convince ourselves that we could be a PI and a DEI leader at our institutions...maybe it can't be like a R1 university because we were learning very quickly that PI's had no time they had

so much pressure on them they could barely like, mentor or teach...so how are they going to be these like systemic change agents that were needed even though a lot of them said they cared and like they did as much as they could and our minds, it was kind of temporary.

When engaged in DEI work with PIs that could make her more objective in her experiences, her standards were not achieved. For instance, Noemi's efforts in DEI work resulted in her receiving invitations to serve on committees that focused on enhancing the experiences for graduate students in STEM at her graduate institution and for an external organization focused on increasing women's representation and belonging in STEM. Noemi was honored to be involved, but there were unbecoming challenges she would soon discover, particularly for the external organization. She noted how the women's organization in STEM "was very white, and so I didn't really feel like I belonged or that the topics of discussion just didn't give exactly what I needed because there wasn't much intersectionality going on." Soon after, Noemi chose to depart from the external organization.

Santiago echoed Brittany's notion of "trailblazing," but he added that "it's not always an enjoyable experience." As a man of color who often reflected on his "social and cultural identity," he often thought about the privileges that STEM provided. His analysis of trailblazing in STEM comes from "a history of exclusion" in STEM, and he wanted "to combat the systemic barriers that were not reserved for people like me to begin with...we're really trying to make a space in this space that wasn't initially built for us." He continued that his pursuit of being in STEM is also rooted in his ongoing pursuit of "chasing privilege." He continued by sharing how:

...many people in my position don't get an opportunity to sit in a lab and think about these types of questions, you know, especially when so much out in the world is it

impacting us and affecting us and so many different levels to just be able to tune all that out and just be like, you know what, I'm a focus on themselves today...that's like to me the pinnacle of privilege.

Santiago's experiences influenced him to be in a role where he could serve as a resource for future generations of aspiring STEM students who had "an experience that I didn't have."

Michael's efforts are engrained in "the importance of justice and equity." He recognizes that creating a more diverse and inclusive environment "is going to be a constant struggle and we need to have so much more work to do." His orientation to enhancing the climate for students helped him "understand who [he] was, and that really resonated with some deeper desires for myself...that helped me motivate me" and maximized "many areas of my strengths and my passions and my values." He remains committed because:

Some people think we're sort of living in a post-racial society... and there's a certain endpoint...there is no endpoint because there will continue to be communities that have will be marginalized...to grapple with what it means to create equitable systems and structures...Thinking about inclusion and belonging, how do we set up systems and structures to help people be inclusive in terms of the programs and policies that we set.

Joy's involvement in creating opportunities for HUG was put on display through her involvement in a national STEM organization for HUG and by leading local programs at her graduate institution. Joy shared how her free time was dedicated to running programs on diversity, and in her "free time...I was always around running the freshman mentoring program...advocating with the Provost around the lack of Black grad students." It got to a point where Joy had done so much work focused on diversity recruitment that she "could do that in [her] sleep."

As she advanced in her career, she supplemented her outreach by teaching. Joy had a class that she has been teaching at an institution. She shared stories about the gratitude she received from students on “the impact of being in [her] class and being in a space where it was majority minority...seeing those students and knowing that I created a space for them...really help them find their own voice to be comfortable in their own skin. To know that they had someone who was there to support them.” She continued by saying how her former students “are professors and department chairs” and knowing that she “had some small role to play in helping them to get to that path is just been phenomenal. I love what I do.” Leveraging her recruitment and outreach expertise led Joy to create a group for staff that focused on diversifying and “supporting the graduate student pipeline.” What’s important to note is that Joy did this with no concern for a title but about doing the work necessary for students to have opportunities to pursue their dreams and find a sense of belonging in graduate education.

Lupita was fueled by countering the narrative about students of color as “having deficits” that are higher in comparison to non-students of color. Lupita recalled how:

...it was seeing other students that had similar backgrounds to me that needed like that push of you actually can do this. You belong here. Being able to share my story and...saying if I can do this, you can do this type of thing, which I thought was really important because I feel like when you're at predominantly white institutions, research one institutions and you're a person of color, you don't see people like that. And they're certainly not talking to you in that way or like being encouraging in that way. I feel like a lot of the experiences that those students had were about being tokenized or about letting me save the poor student of color... thinking of these students as having deficits. I really

felt like it was important that there be spaces, and voices to say, like, no, you're not a token and you're just as smart.

Adela was an FLI student who also participated in a research program aimed at increasing the representation of HUG, just like Brittany and Lupita. She had a supportive community from the research program she participated in, and she was committed to paving it forward for future leaders in STEM. As a member of the FLI and Latina community, Adela wanted to make sure that other people of color, as well as members of the FLI community, or those who graduated from a community college, could pursue a graduate degree in STEM. She wanted to play a role in “helping change people’s lives for the better.” Similar to Noemi, Adela “started an outreach organization...specifically focused on doing outreach to low-income communities that brought together, you know, people with similar interests.” The efforts that she worked on were “the types of things that I think are really like impactful for the community.” Her efforts reinforced “the type of work that I like to do was often like advocacy focused and like pointing out like inequities in the in the systems that we have for people to be successful at the institution.”

The community that Ray developed during his graduate training “was probably my number one influence” to pursuing the path to administration. While at his graduate institution, he established a chapter of a national STEM organization for HUGs, just as he did at his previous institution. He “always” attended the organization’s annual conferences, which were “vital” to providing Ray with the opportunity to “see role models of people that were from my background doing what I wanted to do,” and it provided him a method to “give back to the community as well” and “not be punished for it.”

Ray continued by sharing how “some universities don't allow or prefer students to just kind of be in the research lab, and not necessarily doing anything else, and I think initially, I was offered that level of balance to do both when it was in the interest of the university.” Ray’s path to administration grew after he attended the annual conference for the organization he was involved in, and he met a professor who also served as “the Associate Dean of DEI.” The faculty member led their own research lab and served as an administrative leader. Ray explained how the faculty member “knew the struggles that I was going through as a Ph.D. student knew how difficult it was because she had been there, herself before and also being in tune to what other concerns of students from marginalized backgrounds.” As their relationship blossomed, Ray “realized that this is something that I could potentially pursue. I knew it was very difficult, because there's not too many of those roles per university...she's coming from my background...She’s just a scientist like me.”

X shared memories from as early as high school where he had the opportunity to participate in a STEM pipeline program after getting encouragement from “a science teacher who was really invested in me.” That experience was X’s first opportunity to participate in research, and once experienced, he “didn’t look back.” When he entered graduate school, he recalled how “so much had been given to me in terms of people investing in me, participating in all these pipeline programs. So, I knew in grad school I wanted to give back. From the very beginning of grad school, I got involved in different pipeline and outreach programs, DEI, and I mean outreach work more generally.” During his graduate training, he heard about an opportunity to work with his institution’s diversity office on “large scale programs and projects and initiatives” that were “extremely gratifying and rewarding” as well as an “an eye opener for [him].”

Systems Lens to Classroom Instruction

Another aspect where the service-focused orientation resonated was through participants' experiences as a teaching assistant (TA) as graduate students. Jason wanted to impact "people who really struggle to make it in this world" and found a passion for it through education. A critical moment for Jason occurred as a TA for an introductory STEM course as a graduate student. During the course, he realized how many of the students of color "wanted to do medicine, or they come like pre-med," but as time progressed, the number of students pursuing pre-med decreased. Seeing the decrease "really bothered" Jason, and he wanted to "understand why it was happening that way." To learn more, Jason reached out to the students to figure out "where they were having trouble." He learned that the students he tutored started learning "the material better than how they were getting it in a 300-person classroom...it wasn't much about the student not getting the material. It was just a change of environment, a change of approach." Jason reflected on how STEM was being taught, and he:

...noticed something is not right in the way these courses are being taught...how do you take somebody who who's very brilliant but just doesn't have their resources, the direction, the mentoring to get to that space, that's always been my focal point. I'm always looking at people who are so brilliant, but just doesn't have the resources or the people around them to get them to the next level. So, with a faculty position. Okay, I could do it, but I didn't feel like it would really save the people aspect that always drove me.

Michael had a similar experience as a TA, where he discovered a passion for teaching and helping others thrive in the classroom. Michael enjoyed "helping people" and he

“TA’d for a whole other year after that, and my research advisor was ok with that, and he saw my interest in that. He allowed me to do that, even though that took me time away from doing the research and even though he had funding for me as a research assistant. Just we just focus on that, and he saw my interest in that, and he also had an interest in science education, so that was cool.” As his passion for teaching grew, Michal’s curiosity grew, and he wondered:

...how do we help students to learn, especially given these chemistry undergrad courses, where it's huge lecture sections. And so, how do we help them? And a lot of things came to light in terms of like collaborative learning styles and the teaching styles, exact sort that and that's surprising because we're so used to typical lecture format...it was a huge awakening for me and also just the fact that I really enjoyed it.

New Equilibrium: Environmental Validation and Déjà Vu

The New Equilibrium: Environmental Validation and Déjà Vu narrative revolves around participants' transition into their administrative roles. 9 out of the 12 participants (Brittany, Janet, Joy, Kayla, Lupita, Noemi, Ray, Santiago, X) Participants felt overwhelmed and encountered challenges that they did not anticipate. Conversely, while feeling overwhelmed, participants found a sense of belonging and appreciation for their knowledge and expertise through their work environments, which centered bliss and fulfillment.

X did not anticipate, nor did he expect to become an administrator. His experiences led him to see how administrators “were coming in and out like a revolving door. It was like every year, practically, there was a new slate of administrators. So, my view of administrators was ...that kind of like come and go, and they're really aloof and don't really know much about student experiences.” X’s experiences helped him find a new appreciation for the role of administrators. He realized how:

There are so many positive things you can do in administration...I really didn't until I had these experiences. I wish more people would know that this is something that you can pursue as a career that can have a really huge impact on many people, on students depending on that kind of role, whether you're working with students or if it's postdoc-facing or faculty facing your staff facing you really have the unique opportunity to be able to help shape an institution which is a huge undertaking, but also a huge privilege.

The unique contribution of applying the skillset to address “problems using data to inform decision making and strategy...I wish that there were more pipelines, I guess, to careers like this.” Ray acknowledged how he was “a bit naïve” about how things were happening on the administrative side of academia. You learn, “There are hurdles that we have to deal with as well as administrators. It's not that administrators don't care. What we're also kind of having to work with one hand tied behind our back.” He learned that you:

...have to work within the limits of the university and realizing that these limits are in place because of decisions that are made from people above me, not because the administrators don't care. There's a lot of compassion from administrators to help students, but they might be limited in what they can do, and being on the other side of this... Now I see how I naïve. I was as a student when I was like seeing people not wanting help I took as because they didn't care, it was more because they were limited.

Brittany shared a similar appreciation as Ray for staff contributions. She shared “how intense the mechanics were of developing a program and the mental load of switching from one task to another very high level strategic to very detail oriented to the student in crisis and needing to be a compassionate healer for someone all in the same day and having to do that a lot over and over again.” Brittany leveraged her graduate training as an asset when challenges with faculty

and she “could speak from that experience to inform decisions that we're going to impact trainees.” Her experiences and problem-solving abilities helped “change things in a way that is towards progress rather than keeping us in older, archaic ways of defining success and belonging.” With this dedication would come new unknowns that would present unique circumstances that Brittany would learn to navigate.

Managing those unknowns and navigating those spaces while maintaining her own mental health can be a challenge. She “realized very quickly that people just assumed I had it together and I felt like I was regressing a bit to those early stages of my Ph.D. where I had to keep my composure, act as if I had myself together. I knew all the answers and the solutions while I was learning along the way, and I felt the responsibility of so many different individuals.” Brittany’s experience in “academic research environments where a lot of toxic behaviors get swept under the rug and can be continually perpetuated” serves as preparation for her to discern challenges in a systemic manner. She reflects on how she “didn't really know how to ask for help” and how being a resource now for others required her to adjust her support networks. Brittany described the adjustment as “a really, pivotal learning experience that I couldn't rely on the same support systems that I needed to seek out additional support systems for myself and being a caretaker for students was very hard.” Paradoxically, the Covid-19 pandemic “forced me to slow down to really reevaluate what I needed in order to sustain my well-being. Because if I was going at the same pace, I was going before the pandemic, I am pretty sure I would have had a nervous state breakdown at some point and just would not have been well enough physically or mentally to be able to handle everything that I was keeping trying to keep together inside.”

Joy’s socialization throughout her upbringing and training inspired her belief that “titles should not dictate the work; the people and the community do.” Her engineering training has

always helped her in solving problems and making an impact. That aspect always “keeps my job interesting” as she’s “always learning something new.” As she progressed through her career, Joy mentioned how she was probably overlooked for previous roles and could have let that discourage her as she moved up the ladder, but she needed to:

...decide if I'm going to give my all and lead without any of that or if I'm just going to stay in my little box...I had to make an intentional decision that I'm going to lead wherever I happen to be at this moment. This is where God has placed me in this moment. I don't have a title. I don't have clear authority, but I can actually make an impact.

Noemi’s transition to her role in higher education was described as a “beautiful transition.” The community she was coming into was “excited” to have her on the team. Ironically, it was odd for her at first because she forgot what that felt like. She shared that “it's actually odd to hear that people were excited that I was coming on board...you just don't get that kind of validation or anything like that in lab.” She constantly reflected and wondered, “Where would I be now” if she would have received the support she receives as a staff member. In Noemi’s role, she is “really loving feeling like my identity is welcomed, valued, getting wonderful, validations, affirmations. I'm getting the support I need. I have a community.” During her graduate training, she resented the feeling that she was in a position where “where I don't feel like I have to constantly prove myself” and that itself is “freeing... to just enjoy work and enjoy life... a well-balanced life.” She continued by saying that she wishes she “started experiencing this a long time ago and that I that I recognize as a huge privilege and that I wish could be afforded to all of us...as Ph.D. students.” When asked how she felt about the work, she elegantly said, “It’s more human-centered...I love it.” Ryan shared similar notions to Noemi as the support

she received for her transition has left her to be “pleasantly surprised.” She was surprised because she found that she had “more alignment with other people than” she thought initially and “everything is not a fight.” People who may not be aligned “will listen and take that feedback in” which was surprising for Ryan.

Santiago’s takeaways from his experiences were “that joy and happiness are so elusive as like one of the most elusive things and so for me, it's like again, I think it kind of goes back to chasing the privilege. I think for me, it’s like if I could find a spot or a position where that brings me a lot of joy. Then that's why I want to be.” The professional network he sustained “affected me because it literally was just me coming down to like, do I want to work with more people like, you know, side A or more people like side B, right and you know, side B outside of research enterprise was way more appealing for me at the time.” Santiago’s time as a staff member is a welcomed change which he described as a “collaborative and collegial environment” which was also shared by Ryan and Noemi. As a result, he does not think about feeling a sense of belonging due to being in “a more stable foundation for myself where I don't necessarily feel those same insecurities that I did coming into this space.” While he may be more secure the transition “was chaotic because I don't think that that pipeline is not really like fleshed out.” He leverages his training as a graduate student, but it can feel like a “building the plane as we fly it” mentality which could be overwhelming when transitioning into a new role, but his team members are “figuring it out alongside” him. Adela echoes a similar experience to Santiago as:

...there wasn't a great amount of onboarding like they just kind of you show up and they kind of just expect you to pick things up, which I don't think is a great way to approach things. But I think that I'm more naturally pick things up and the administrative side.

Even throughout her journey of frustration and ambiguity, Kayla found joy with the people and relationships that you she was able to foster which she “really loves.” She has found a niche in strategically navigating the workplace, especially when it comes to “systemically navigating” barriers that she has had have to overcome. In addition, she has found a “strong community and friendships and relationships between administrators.” Being in her current role now has impacted her sense of belonging as she is surrounded by more women of color and the communal environment versus the “sense of arrogance and competitiveness, an ego that people exude, and it's always critical” in STEM. She now gets that balanced approach of being critiqued but also positive feedback that reaffirms aspects of her responsibilities where she is excelling and helps “allow me to grow.” In STEM, she would be weary of commentary on “the way I dress,” whereas in her administrative space, where “like people like those things about me and like I find it fun and intriguing and that's how we bond over things, and it's nice to, have that community.”

Environmental Validation

Noemi and Kayla both shared circumstances where they were grateful for the support that they received from their supervisors. Their experiences with past supervisors have been unproductive and unsupportive during their graduate training. Noemi spoke passionately of how grateful she was for a supervisor who she said has a “beautiful soul.” Noemi’s usage of beautiful came from how her supervisor valued her contributions, mental health, and setting boundaries that provided the “well-balanced life” that Noemi thought was elusive in STEM. She felt:

...replenished in this work and how I feel like I can keep doing it because I have these people in my corner who see the value in certain things and see the value in me and we'll work really hard to make sure that I'm able to do what I can do in my position to help others along their research journeys.

Like Noemi, Kayla has “the best supervisor I've ever had. I can talk to her about anything.” She has a support system where she can share her successes, challenges, and frustrations without being judged. For example, Kayla was pregnant, and she expressed that she had to share ~~and had to share~~ the news with her supervisor, who is a woman. Kayla shared “how much of a relief it was to have to tell her in comparison to previous advisors” she had. She followed up by sharing how she thinks that is one key “difference of the sense of belonging that you feel in the sciences versus administration.” Ryan’s validation came from what may seem like a normal interaction, but the impact of it was priceless. Ryan was walking to make coffee and was greeted by multiple Black women who pursued the same path as she did. They:

...just looked at each other, and we didn't say anything, and we just stood there. We just took a moment to stand with each other, in this academic institution and it was such a moment of joy, like just joy that we are all here. We are all present. We all knew why we were standing...together and we did not need to talk about it. We did not need to ask each other...We were just grateful and thankful for every other person in this circle. And so that was just a real, joyful moment of just a presence, feeling, energy, such positive energy positivity. So, I think that's just a small moment that doesn't have anything to do with work but is more about being seen, having visibility, and having community.

For Janet, her need to connect with coworkers differs from her experience in in graduate school because it “doesn't feel quite as alienating or isolating.” She shared how she feels a sense of belonging and felt:

...very supported by my supervisor and by my department because they provide me with a lot of resources and connections to do the work I want to do. I think I would say maybe that that is also a difference. Whereas as a staff person, I feel like my belonging is tied

more to how supportive my supervisors are with my work, whereas in grad school, it felt more like I needed faculty or advisors and students to accept who I was as a whole person.

A common thread amongst the new equilibrium was the feeling of fulfillment within the roles and the impact being made at their institutions. That could be done through students expressing gratitude and their ability to relate to others to help cultivate confidence in students and staff. Ray finds the work “fulfilling” and “loves the fact that I get to engage with students nearly on a daily basis...I see myself in those students.” Ray’s experiences give him the opportunity to use his “years of experience as a former graduate student, as a former leader of student organizations and involvement went with national organizations to take what [he] learned to educate” others. He witnesses how:

...there's a lot of this imposter syndrome that's going on. I think that's a very big factor that they're dealing with within those first few weeks, and having been there, I'm able to relate to them. And I think that's been my biggest asset as an administrator that has very strong ties to working with students. I enjoy that very much, and the most rewarding factor of seeing them kind of overcome their imposter syndrome, overcome their hard shell, and open up to me as a counselor, not just as Ray the administrator.

The fulfillment Ray feels ties into what he wishes he had more of as a student. It took him “courage to ask for help and advice from other individuals that were not my faculty/advisor.” As an administrator, Ray acknowledged his efforts to make sure students learn from his circumstances. For example, he shared how he:

...suffered during [his] journey on my own before I finally took the courage to ask for help and advice from other individuals that were not my professor/advisor...It's a

discussion that needs to be talked about, because I think the struggles as a graduate student since can continue in the professional world. And I think underrepresented minority students need to under understand what they're getting into, because it's a very difficult environment to enter the Ph.D. Stem world. From those backgrounds. So, you have to kind of have some level of you know. Bring some of your street smarts. Bring some of your coping mechanisms that you have used throughout your life. and modify them to continue to support yourself in that journey.

Brittany's found her joy and fulfillment by seeing how people "continue to come back to me as a trusted resource and advisor, but also feel comfortable confiding in me the not only the issues that they're having but also celebrations and ways to continue to build community and uplift others." Students would share how they got into their graduate programs, and there would be moments where she would "give my all to support this person or these groups of people, they are. They have received it and come back and want to sustain that relationship." Brittany found it hard "asking for help" so people coming back to show support made that ask much easier. A key learning that she shared is to leverage your identity as assets by "defining our personal narratives not only from a space of let me share my story, but the ways in which we use our stories to help other community members in higher ed to create change that centers inclusion and belonging." Lupita, shared how:

...seeing the successes of students that I started with that were undergrads navigating the same stuff of like, oh my gosh, can I get to grads school how do I do it? I don't know how to transition. I'm struggling to like. Now some are faculty, some have started their own companies, some are like consulting. I'm seeing that transition from students to peer and then like navigating and doing really well is hands down like the best part.

Her fulfillment connects to her view as a “lifelong learner” as she gets to keep “using skills from my previous work and applying them in a different way, and so I love learning new things and learning new skills, and I feel like this transition has also been like I'm learning something totally new.” Lupita’s appreciation for cultivating a productive experience for students stems from her own lack of belonging during her graduate training. She explained how “when we talk about belonging, we have to make sure all of the students feel empowered, engaged, belong, and welcome. We're talking about belonging for a majority group. It was only a few of us and so like the things that they did to like, to foster belonging...weren’t as effective.” Lupita recalled a story at a retreat where she won a prestigious grant and the reaction of her peers when the announcement was made. She shared how:

...students gathered around talking about like I deserve to get that award for these particular reasons. I didn't know these students...I felt like I didn't want to be seen...this tool that they used to bring the community together was also a tool to like, you know, make students of color feel othered as well. So, I don't know that like belonging as a student was prior was prioritized because I feel like the folks making the decisions about what belongs look like cater to a majority and I wasn't in the majority.

Lupita’s commitment to students has helped her fill the gaps that she knows impacts students, particularly those from HUG. She hopes that her students learn that they “shouldn’t limit themselves” and:

...it's OK to show up as your authentic self in these spaces, and it doesn't make you less smart, less of a person, less capable, less deserving... also it's important for people to know that you're allowed to try things and decide that they're not for you and that's OK. So isn't, you know, for me, it's important. What's important about my story is that I paved

my own way, and I filtered out the noise because at the end of the day, prioritizing someone else's expectations over like your own desires is a disservice to yourself.

Students actively seek Lupita's advice and mentorship, and she is inclined to help because of the "lack of mentorship" during her graduate training. Lupita did acknowledge that she has had non-people of color mentors who were "very nice" and "well-meaning with no malintent." And yet, the mentors she identified with "instilled a little bit of like you can do it here." The mentorship Lupita experienced cultivated confidence in her abilities. For instance, she explained how some of her previous mentorship experiences where you "couldn't tell me that I wasn't smart. You couldn't tell me that like I wasn't a scientist because it was really affirming in that way because of the type of mentorship I had." As Lupita continues to ascend in her career, she often thinks about how she can impact mentoring holistically. She said:

...what type of policies do we put in place? What type of education do we have for like faculty because...How do we make sure that the student is mentored in a way that seems equally equivalent to their majority student counterpart? What does that look like? What do they need? How is the mentorship different? where are the levers or the things that like students of color...how do we develop your STEM identity so that you feel empowered ...how do we provide mentors, academic mentorship in a different way. So that you transition like STEM career where you're like, yeah, I'm so affirmed that I got this.

X shared how supporting students by providing programmatic efforts to engage has been "extremely gratifying." He continued by saying how "being able to help them in really tangible ways about like preparing for grad school with their statement of purpose, graduate school interviews, things like this. And seeing how much they benefited from the program and how

much they expressed that was just like and especially like having been in their position hat, I think, has been one of the most gratifying experiences so far.”

Santiago builds on X’s by emphasizing the life skills students need that go beyond the lab bench. Santiago witnessed a lot of gratitude from his students as he helped them think through their “goals and then what are your values and are they aligning and is there some conflict there? Are your goals actually enhancing your values or are they competing against them.” Santiago explained how those interactions allowed him to find fulfillment in his work. He said, “That’s the fulfilling part of my work is when people sit back and they’re like, you know what? I think I want to do this instead. Like that will bring me joy...that brings me fulfillment.”

Janet has also found fulfillment working with members at her institution who are interested in enhancing the climate through DEI work but:

...they’re not sure how to integrate that into their research or their teaching, and we’re able to talk through why it matters and, like, identify a couple of options and paths, and then it feels like, you know, they leave with the oh, now I kind of understand, or now I know where I can go or I feel much better about like, I can do this or working through like if they have some kind of uncertainty about some aspect of it helping them leave with the sense of they understand something more, and they can actually apply that I really love about this work.

Jason shared an experience where he was recruiting a student who attended an HBCU to earn a graduate STEM degree. The student was accepted into the program, and the faculty chair who Jason worked with said, “This was the best decision I’ve ever made in my life.” Due to Jason’s efforts, the department looked into barriers that limited students’ application to their programs and “ended up working with these people to drop all the GREs altogether, so they no

longer consider them now.” Jason helped them appreciate all the unique attributes that students, particularly those from HUGs bring into STEM research. He continues by sharing how he can tell “stories about every one of my black students, both women and men, that I've found in these little nooks in the US. I found them, and they just do incredible work.”

Déjà vu

Déjà vu: Stigma and Losing One of Us narrative highlights the challenges that mirrored the experiences of graduate students and administration. When students transitioned, some experienced joining a homogenous environment with a majority of the staff they worked with whites. As a result, those in administrative roles and experiences as staff can be fulfilled while also feeling like a neglected or overlooked population within higher education. A complex challenge that occurred was participants experiencing that the STEM community was losing one of them. The paradox through the experiences was that if the environments were congruent to the work environments as staff, then they do not know how the trajectory of their careers could have been shifted. The narrative begins with X's transition from graduate student to staff.

X experienced a comparable shift when he transitioned to being both a staff member and a graduate student. He was “swamped with work” and had “no time or bandwidth to get involved in like employee resource groups that would provide that kind of like staff level community and us as a team.” His team did not “have that much time to kind of like bond in really informal ways. So, community-wise, I feel like as a staff member can be a little bit kind of like isolating.” The isolation was heightened by being the numerical minority within the composition of the personnel. X said that “demographically, if you look at the staff list... it is predominantly white and probably white women especially. There are very few faculty and staff members of color...I feel like we don't ever really have that much of a chance to like you know. Spend time together,

get to know each other.” When he did encounter staff members of color, they affirmed each other such as “the head nod. I see you, kind of we acknowledge each other. We know that we're there” but the isolation felt X “didn't anticipate that.”

Lupita's challenge was linked to two areas. The first was the shift from being an individual contributor to learning the new team dynamics and autonomy over work productivity. She was on teams where “if I don't see you then, then you're not doing work.” It was not as if her “freedom was taken away in that aspect,” but the environment could be “very rigid and now you have to be formal because now you can't dress in a particular way you have to come to work and relate to people in a different way... You have to ask permission to innovate... you have to ask for permission for things.” Her sense of belonging as a staff was challenged as her experiences made her feel like staff are “a forgotten population, I feel like students are prioritized and faculty are prioritized, and I think often it's easy to forget like to be the backbone of making this institution or institutions work. So having or building a sense of belonging for staff is still a work in progress.”

Janet shared similar sentiments as Lupita around “the freedom for decision making and like project design that came with the research I had done in the past... I think once you are a staff person working for an organization, you have to think a little bit more carefully about how the work you're doing is aligned with what the organization is trying to do.” Alignment with achieving the goals of the institution felt challenging because “there is less effort on supporting issues of DEI for staff.” However, she found connections through an employee recourse group at her institution through the:

Asian American staff affinity group that is really active that even if I don't interact with them all the time, but in hearing and getting their emails, hearing how they're grappling

with different issues that that does make me feel like I belong... I think maybe it would be a very different experience if, like, I didn't have this kind of Asian American staff group that I knew I could connect with and I knew was active and responsive.

Part of the transition has come from the status hierarchy within higher education.

Participants acknowledged how staff. The inequities experienced by Kayla in the status hierarchy in academia made her conclude how, as staff, “you get treated like trash.” This was surprising as the staff she engaged were nice, but she “didn't realize how low tier staff were at a higher. In my opinion, staff are at the lowest tier, right? It's it is sort of a caste system in higher ed, and I think staff are considered the lowest caste and I think I had no idea that was how it was going to be.” In other words, she would have “all the responsibility without any authority.” Unexpectedly, Kayla realized how faculty would “treat me better” because she has a PH.D. in comparison to her colleagues who did not which she “was not expecting.” Kayla's time in higher education made her realize that the support for faculty and students is more complete in comparison to staff.

As Kayla advanced throughout her career, she was not surprised as to why students from HUG are interested in administrative positions specifically focused on DEI as “there is something to be said about that.” Her decision to pivot to an alternative route in higher education goes unrecognized because “it takes a lot of courage because that's a really hard transition for a lot of people and people do have a lot of judgment on that life choice...we don't give people enough credit. I think we see it as like a weakness, but I think it really requires a lot of strength to be able to make that transition and like that's not talked about enough.”

Joy's reflection reflects previous notions as she said that “no one really cares about staff.” Her time in academia displayed how decisions and priorities were made in the academy around

students and faculty can make staff feel like decision makers “don't care about how that impacts you” as staff. While staff may be “overlooked” they “believe in the mission of the university and we believe in what we can influence by being in a space” like higher education. Joy articulated that “some ways had a stronger sense of belonging as a staff member than I did as a student.” Throughout her time as an administrator, Joy developed “a very strong sense of belonging in a way, and I always emphasize, I never can overlook it. I have never been myself” or “the only black person in any of my offices or teams...I'm sure that that contributes for me a sense of belonging, that others who work in spaces where they are the literal only ones would not feel the same way.” Even under the status hierarchy challenge in higher education Joy was very grateful to have “such phenomenal staff to work with. When everything around you is falling apart you have folks you might even know that well. but who you just feel like, have your back and want to support you.” The key thing she knew going by transitioning to a staff role in higher education is that you cannot:

...have an ego about it. You have to accept the fact that you are going into a space where you will not be seen as an equal to the faculty who you were just working with. Yes, you will have a leg up meaning that they can never use the you wouldn't understand because... no, I went through a Ph.D. Program, too, I do understand...you can't use that line on me.

Adela realized that “there are certain things that I feel an administrator who is not faculty will have a very hard time trying to do or accomplish because they're not faculty like at the end of the day, sometimes faculty just want to listen to other faculty that they respect. On this intellectual side, in a way that they don't respect a lot of the administrators sometimes.” As a result, there could be “a lack of recognition of all the work that administrators are doing” but she

became “excited and hopeful when I see the impact of the work that we're doing.” The mission of the organization she is working with is to address climate change and she knows that she’s in a space that is going to need a “diverse workforce” because “climate change is going to impact all of us.” Janet added how, in her experience, she “feels like there's a misconception from students and faculty that like staff, I think there's an under appreciation of the skills that staff have, and also they're like ability and potential interest and like trying to understand what they do.”

Stigma

The feeling of stigma faced in the transition was a challenge that participants overcame, but it also can serve as a detractor. Ryan experienced stigma through her interactions with faculty. Ryan explained how “there was definitely some like proving that you are intelligent and capable and that you’re not going into education just because you couldn't hack it in research...you're actively making a choice to move to something different, and so there was definitely that element coming from faculty.” Lupita had a particular interaction with a faculty member where she was trying to match a visiting student with a PI. The PI said:

How would you know you're not a real scientist? How do you know? And so, I feel like that represents like, verbalize and un verbalized thoughts about people and how they choose to transition, or what types of transitions that they choose. That if you go and you get a particular degree and you don't apply it in a traditional way, uh, then like your credentials are devalued.

Adela’s expectations from others about becoming a professor made her feel bounded to a specific path. In particular, there “was a stigma to anything that was not the R1...if you're even thinking about anything that's not in an R1, you shouldn't say it because then your advisors won't treat you with respect, it's like you're not somebody that they should invest in.” X experienced

some of the same challenges from faculty due to some of the preconceived notions and beliefs as to why he did not pursue academia. He explained how:

...there's this underlying assumption that, like the best people, go into academia. The ones who can make it, and then everyone else is sort of like has to do something else. So, I think there's sort of at some points that underlying kind of like assumption of like, oh, yeah, you're just doing this thing because you weren't good enough for academia. It's not the kind of thing that people don't say out loud but is one of those things your kind of like you're reading the room. It's the reading between the line's kind of a thing.

Ryan had not experienced any form of stigma from students and staff from the student perspective; Ryan pointed how students she worked with were “more curious” because they were trying to learn about the career path and students. For staff, she did not feel much stigma at all, “They were just very much willing to help me acclimate as a new person to campus.”

Ray had the curiosity Ryan described, but the rewards of that curiosity created tension between Ray and his PI. When Ray notified his advisor of his desired career trajectory, the “relationship with him changed dramatically,” especially when he became more vocal about the “political climate” and being more involved on campus while “never at the sacrifice of my research.” His advisor viewed those as external factors that were “100% separate from the laboratory.” The more he “shared his intentions to become an administrator and maybe an associate dean one day and help change diversity efforts and recruitment and admission efforts at universities.” The relationship became challenging or, as Ray put it, “tarnished.” His advisor “did not want to support” his path and didn't want to write any letter or recommendations.”

Furthermore, Ray experienced stigma from his family. His desire to pursue the administration pathway led him to experience stigma from his family as well as his PI. Ray's family expected

him “to be a scientist...run your lab” or go the industry route. His family saw administrative as “you're just there to be a like a secretary or administrator, or something like that. They don't. They don't understand the role that I play in an institution.”

In spite of the stigma, participants found a way to utilize their experiences for the betterment of students, faculty, and staff. For example, X leveraged his expertise, data, and other assets to help students, faculty, and staff. He explained how “being a scientist and working primarily with scientists, it helps so much to be able to connect with the faculty because I speak your language...So, I think that aspect of things has helped as well.” X has also countered this stigma with support from his colleagues. X “felt very much welcomed by all my colleagues in the administrative space...and students as well felt have like explicitly told me that they feel very happy, knowing that there's someone who has been in their shoes recently who's an advocate for them. I've not taken that charge lightly, either.” Ray shares something similar, saying, “although I was heavily discouraged from it I stuck it out and realized that my thesis advisor doesn't necessarily have to be my mentor, and my mentors are people elsewhere, and I had my relationship with the Dean, who I was always supportive” through the national organization he was involved with as well as mentors at other organizations and through mentors at other institutions.

Losing One of Us

The Losing One of Us narrative was particularly salient for the women of color. Janet transitioned to a position focused on teaching pedagogy. Her advisors are “very supportive” of her pursuing alternative career routes, and she is grateful for their openness. However, she does encounter interactions that leave her surprised when interacting with faculty. When she asks about faculty members, research faculty are often “surprised,” but the interactions around women

of color in this path are particularly salient. Janet shares how members in the academy who have interactions with:

...women of color who have Ph.D. s in STEM, who move into DEI say, it's such a shame you've left science. And I what's hard for me with that is, you know, what does leaving science mean? Like just because I'm not doing research, does that mean I'm not a scientist anymore? So, I think that that umm, that I guess I often wish that people had a broader definition of what they thought being in science met.

Kayla had a similar experience where she had people in her network who would say, “You can't hack it, and that's why you're not staying to people telling you you're so talented.” Kayla felt most stigmatized when she took a position focused on STEM education, outreach and diversity work. Here she describes the experience:

[I] lost count of how many times people ask me why didn't I become faculty. Why was I doing this job? You know, other people, other faculty, even faculty of color telling me, well, you should have never left because we need more women of color faculty telling me you know it's changed. It's easier to change from the inside than the outside like you're doing a lot of judgment around that.

Noemi's experience echoed Janet's and Kayla's but it was the validation she received from the staff at her employer that differed from her experiences as a student. She shares that the validation she yearns for was not occurring in her lab, and there are:

...scientists who really wanted me to stay in academia or to stay in that, like post-doc and professor path cause they're just like, we're losing a scientist. If you do this, we're losing someone. Who cares about DEIB if you do this, you could be a PI and do everything that you're doing. I'm like, you're not modeling how you are, so I don't believe you.

She continued by sharing how limited affirmations were:

[I] only heard these affirmations or any kind of positive remarks or validation when I told them like I was considering leaving, they never gave that to me as a scientist. Or like when I was in it and I didn't realize how much that bothered me until I was nearing the end and realized that that's not necessarily normal and it shouldn't be normal, but it is normalized. And so, we're trained to be OK with not receiving any of that validation, and then when we become mentors, we do the same. But that's not natural. We should get that positive feedback. We deserve it. I like this new space I'm in. It's more human-centered.

External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment

The External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment describes the circumstances that resonated with how participants were learning their environments. Specifically, how external challenges in society resonated within the academic environment. This narrative was crafted through 7 out of the 12 participants (Adela, Brittany, Lupita, Noemi, Ray, Ryan, X). Ray was impacted by the Covid-19 pandemic, as well as the racial reckoning that occurred during the summer of 2020 after the murder of George Floyd and other Black victims of police violence in the United States. When George Floyd was murdered, the organizations he was involved with organized to highlight that academic institutions were not exempt from these experiences as students shared their concerns with “campus police” and not having “enough support for us.” As a student leader, he actively met with university leaders to “bring about change.” The efforts by the students and university leaders led to “some of the things” the students advocated for to be accomplished and “got the ball rolling for what was needed, I think, and I think it made faculty aware of the fact that these

students are also tied to the community, and especially as soon as a color they're not just here to do science, but they're here to be leaders in all facets of being professionals.”

For X, it was a reflection point where “all of a sudden, a lot of institutions were kind of like, oh, wow! I guess we should do something. I guess systemic racism is a thing. There's sort of a lot of that kind of going on, and it's not like [X's institution] wasn't investing in this space, but there was a sense of urgency.” As a result, X and his colleagues started a coalition for Black lives at his graduate institution. They “rallied support across the university from students from staff postdocs, and faculty from various schools. Black student orgs across the university as well as just like broader, affiliates and alumni support.” X's organizations met with senior leadership at his institution and engaged “with the university leadership and being able to move the needle forward a little bit and some short-term demands and some long-term demands I think, was hugely impactful cause. It showed me especially the importance of using the power that you have to effect positive change.”

The pandemic served as a reset for Brittany that would provide a sense of reflection in a moment that distributed with much “stress and anxiety” that she was managing not just for her community but also for the students that she worked with in her administrative role. She would use the “moment to really pause on the ways in which we were doing things before wondering why did we have to exist in these structural ways, especially from developing student programs.” She was in close proximity to her workplace and the pandemic helped her realize that she needed more separation from her work responsibilities and reevaluate her circumstances. She “needed to move, and I needed to take care of myself mentally, physically, financially, and separation was important for me to have as my healing journey.” Noemi credited prioritizing her mental health to her pursuing “therapy before the pandemic happened because [she] feel like I could have very

easily become overwhelmed. But I had learned during my Ph.D. with my therapist. What things I can control, and how, like, I can focus on that? It just helps you approach life in a much healthier way and still allows you to be effective.” She shared how “having a lot of that time away from the bench...allowed [her] to read a lot and immerse herself in social justice” literature.

Apolitical Environment

When Brittany first started in STEM, she thought science would be “an apolitical sphere” in which scientists were:

...pursuing knowledge for the sake of knowledge and growing, and it was early in my career that there were funding impacts of like government shutdowns and wondering if we were going to receive finances and such and also realizing the ethics behind the scientific decisions and processes that were being made.

In addition to the government shutdowns, Brittany reflected on the impact of the “Black Lives Matter Movement...and feeling a call to action.” Brittany recalled a memory where her Black colleagues would ask “why isn't anybody talking about this? And he, as a black man, was like. This isn't right. This isn't, you know, OK to just live our lives and go through it.” Brittany was an advocate for social justice throughout her graduate training, as there were targeted shootings of the LGBTQ+ community. She would often reflect on society and the impact it has on the communities and “impact our identities as scientists.” Furthermore, the 2016 election occurred, and Brittany left:

...wondering about the attacks on other minoritized individuals and the impacts on us over time really started to feel this. This inner part of me, that activist-oriented service oriented, being an advocate for those who are at the margins and wondering how could I

use the scientific training experience that I've had to problem-solve complex issues and think critically about the societal impacts of our work and start to pivot into a space that was more diversity

Noemi's recollection of the environment during the 2016 election "was just a mess," and Adela emphasized it was not just the outcome but "everything leading up to" it. Adela "always known that I wanted to fight against the types of things that Donald Trump was pushing. When I thought about how I can be most effective to me, administration was the most effective route." For Janet she was "stimulated by the Trump election" was she "wanted to get involved with more activism and advocacy work."

There were also other effects of governmental leadership as a factor. For Lupita it was the energy when President Obama was elected and the impact that had on her career. She explained how that event spiked her "interest in like policy and how I would bridge like my STEM career. for advocacy." The experience connects to Lupita's work now as she sees her role "related to advocacy and policy, which was like where I had started, and it kind of shifted into like, OK, let me do higher ed this is something that I feel very comfortable with transitioning into. I think it's related to this interest that I have in advocacy and policy." Ryan shared similar sentiments to Lupita as the 2008 election influenced her "outlook" on "what might be possible...in how we see ourselves like how identity impacts abilities to be leaders, So, that to be something that just the joy that people felt around, that around the people around me felt a lot of joy." Ryan's experiences reinforced how academia is not separate to what is happening in society. As a result, societal issues "can't be ignored" and she's "learning still how to do that, how to bring social issues in and not make it seem so divided. We do exist in society. It's like, logically, it makes sense practically it's a challenge."

Summary

To gain a better appreciation of the motivation and lived experiences of people of color staff who earned doctorates in a STEM field, I conducted 12 semi-structured interviews with participants who chose to become administrative staff members at HWIs. The participants' lived experiences in the study highlight their orientation to navigating their roles as administrative staff in higher education. Four themes emerge from the data: (1) Alone Together, (2) Stewardship: Service Beyond Obligation, (3) A New Equilibrium: Environmental Validation and Déjà Vu, and (4) External Influences: Covid-19 Pandemic, Racial Injustice, and an Apolitical Environment. These themes offer a unique perspective on the implicit norms in both graduate and staff environments at HWI's.

Alone Together sheds light on the participants' experiences as the numerical minority in their STEM departments, how they found community through identity-based organizations in which they were involved, and their desire to create a path for future scholars of color to follow. Stewardship: Service Beyond Obligation reveals how participants cultivated and nurtured diverse talent by creating opportunities for others to feel a sense of belonging and support in STEM fields. In A New Equilibrium: Environmental Validation and Déjà Vu, participants received validation and appreciation for their expertise while also confronting moments of isolation within their graduate departments. Finally, External Influences: Covid-19 Pandemic, Racial Injustice, and an Apolitical Environment examines external factors beyond participants' control that profoundly influenced their sense-making processes. The findings serve as an important contribution to the literature and are critical for helping HWIs create more inclusive and equitable processes that mitigate bias and inequitable practices.

CHAPTER FIVE: DISCUSSION

The purpose of my study is to explore the lived experiences of administrative staff who transitioned after earning their doctorates in STEM. My objective is to learn their motivations for joining the academy as administrative staff and how their experiences can inform higher education. Using CRT and socialization theory as my theoretical and conceptual frameworks, I analyzed their experiences as graduate students to explore their motivational and career trajectories to becoming administrative staff. It was critical to examine the experiences of graduate students and administrators because the original goals of all the participants were not necessarily to work in the academy in a position that did not align with becoming a faculty member. My methodological approach of using narrative inquiry allowed me to analyze the data using an approach that showcases a narrative of staff experiences within HWI.

The unifying theme that arose from the analysis was the commitment to opportunity. Participants experienced environments where they were able to feel appreciated amongst those that they could identify with and make sense of their experiences through the sensemaking process of interpreting actions and navigating their environments (Weick et al., 2005). The four themes are: (1) Alone Together; (2) Stewardship: Service Beyond Obligation; (3) A New Equilibrium: Environmental Validation and Déjà Vu; and (4) External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment. The theme, Alone Together, showcased how the participants were members of the numerical minority/the only person of color but forged connections with others who they identified with. They were determined to complete their degrees because they acknowledged the costs associated with not finishing their degree since it would only be harder for the future generations of people of color who follow in their footsteps. Through them working to be trailblazers and breaking down the walls of opportunity, they

worked to amplify opportunity and cultivate a community that can lead to environments that cultivate respect and a sense of belonging for the entire STEM community. They also showcased combatting power dynamics, specifically on how the way that power is distributed can impact a sense of belonging for people of color and how their influence on the climate can impact trajectories to address departmental climates for all students.

The Stewardship: Service Beyond Obligation theme highlights the experiences that impacted the participant's desires to engage in stewardship work to enhance the experiences for students, particularly those from HUGs. An important aspect is that none of the participants made complaints about the administration not doing enough. They created or engaged in methods, through their agency and advocacy, to make the impact that others had on them during their graduate training. Their orientation to stewardship work in STEM was influenced by their commitments to showcase pathways and opportunities that served as a pivotal point in their development and the need to reciprocate the mentoring, guidance, support, and care that they experienced or did not. The participants who were not born in the United States were the only ones who mentioned their experiences as TAs and how they wanted to make sure that students did not fulfill their dreams due to systemic and socialization challenges that disproportionately impacted HUGs. Their altruistic action for their communities demonstrates the importance of the environment and the circumstances that can prevent students from realizing all possible outcomes they can achieve. As such, the participants wanted to find ways to engage in these activities in an ongoing way that brought them a sense of fulfillment and gratitude for those who transferred their knowledge and expertise to them.

The third theme, New Equilibrium: Environmental Validation and Déjà Vu

describes the transition from being a graduate student to learning the role of being a staff member. Participants felt fulfillment through seeing themselves and others in the students that they engaged with to help create opportunities and experiences that they did not receive or that they knew could be beneficial to their development. Participants in this narrative experienced fulfillment and a sense of belonging through their environments along with an appreciation for the role of administrators in making an impact on the student experience. All were anchored in enhancing the experiences of students and providing them with the knowledge that they were transferred to them to others and not fall victim to the curse of knowledge where there is an assumption that a unique knowledge is known by another person they are interacting (Camerer et al., 1989). As a result, the ability to relate to the other person can create a stronger barrier to connection and reinforce imposter syndrome, resulting in a higher chance of lack of belonging. It challenges the deficit model by allowing those who may have faced systemic disadvantages to become a part of a learning environment.

Conversely, participants experienced a sense of déjà vu encountering similar experiences as staff members, just as they have as students. There was a commonality of their legitimacy in the academy being challenged as they felt stigma being that they were staff and assumptions that they did not possess certain skills because they were allocated to a certain role in the institution. The last narrative, External Influences: Covid-19 Pandemic, Racial Injustice, and Apolitical Environment, connects to parts of their career trajectories that were influential outside of the academy. Some of these challenges came from social tensions in society, the political landscape, and the Covid-19 pandemic. Although they may not have been a critical juncture throughout the study, external forces should be viewed as an influential component.

Implications of the Findings

Culture is a powerful phenomenon that can impact the trajectory of an individual's life through aspiring and affirming their experiences and sense of belonging. Who we recognize and the stories we tell about those in the culture we operate in matters. Higher education has a responsibility and obligation not only to the students and faculty, but also to our staff as well. This study's approach, examining staff with doctoral degrees in STEM through a CRT socialization lens, highlights how the motivations and experiences of staff of color make an at institutions both implicitly and now more explicitly. This altruistic lens showcases how staff of color's distinct experiences are rooted to ensure that HWI's are fulfilling their mission and living out its values of creating a welcoming, diverse, inclusive, and equitable community.

There are ongoing efforts by scholars to combat anti-DEI efforts, which claim that DEI is unproductive toward creating a collegial and inclusive environment (Harper & Associates, 2024). This not only impacts our students and faculty, but also the staff navigating this new landscape within the United States. When change occurs, our traditions must also shift. The findings from this study provide a glimpse into the environments that previous graduate students faced, what they appreciate, and what they wish was normalized in academia. Most importantly they showcase the opportunities and growth we can achieve.

Until the experiences of staff and staff of color are actively prioritized, then we may fix the symptoms to common tension points, but the systemic issues that remain when things do change will persist. An orientation shift from moving beyond symptoms to root causes of inequality starts with appreciation and utilizing all of the knowledge and experiences that our entire community possesses. As attributes such as race and ethnicity continue to be challenged within higher education, we must remember the learnings of how and why CRT is necessary, and

the opportunities provided by applying the framework. I hope that the findings from this study can help in establishing the processes necessary to create a transformative culture that paves new paths and creates new legacies, but it will depend on a culture that appreciates what often gets taken for granted. We all collectively participate in our environments, and once fully recognized, we will create an environment that is more just.

Future Research

This study provides opportunities for future contributions to the literature. As this is one of the first studies that focuses on those who earned doctorates in STEM and chose to pursue an administrative career in the academy, there are several opportunities for further exploration.

First, there should be continued exploration into those who earned doctorates in STEM and chose to pursue an alternative path in academia staff. More research into this environment can provide opportunities to enhance the climate in STEM through a systems lens connecting staff, students, and faculty. To expand on this study, future inquiry can focus on staff who earned their doctorates in non-STEM departments but choose to become administrative personnel. This will allow for more inquiry into how the experiences can differ based on historical, social, and cultural dynamics. In addition, future research should also consider institutional types. For example, are the experiences to enhance the climate different from those who attended community colleges versus those who graduated from a minority-serving institution (MSI)?

Future research should also continue to do a comparative analysis of those who are staff of color and from those who are not to examine if there are differences in experiences as well as their motivations for pursuing their desired career paths. Another contribution to the literature can focus on socialization experiences for staff of color based on their socialization to a

particular role. For example, the trajectory for tenure track faculty has the milestone for tenure, yet administrative roles do not have a similar checkpoint within their careers.

An additional research opportunity is to explore the trajectory to higher education from those who were born outside of the United States and decided to work in higher education, specifically in roles pertaining to enhancing the campus environment through community bridging/DEI roles. Also, scholars have an opportunity to explore the trajectory of doctoral degree-holding staff who pursued the community college administration along with their motivations to pursue it. Looking into their relationships with faculty at community colleges and minority-serving institutions could provide enriching insights. Since the participants in the sample all earned doctoral degrees in STEM, future exploration can explore the impact on doctoral students' trajectory, specifically of the likelihood of graduate students who choose to pursue the professoriate increases as a result of being in the network of someone who may come from a similar background and has completed the graduate training that they are pursuing.

Lastly, future research exploring the impact of graduate student organizations, particularly those focused on enhancing the experiences of an identity group within an academic discipline, can provide deeper insight into the career choices of students of color. Many of the participants shared the impact of student organizations and their leadership involvement, and although correlation does not necessarily equate to causation, there is an opportunity to develop a deeper understanding of how community practices and network connections can assist in retaining graduate students of color to pursue a path in academia. Furthermore, it would be advantageous for scholarly inquiry to investigate the experiences of students who have interacted with staff members holding doctorates. Analyzing the influence of such staff on students, as well

as the types of feedback and support provided, can yield valuable information to inform and enhance staff socialization.

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Appendix A

Interview Protocol Question Bank

- What was the most memorable experience after you were accepted into your institution's graduate program and why did you decide on the institution you enrolled in?
 - o Did you know what occupation you wanted to pursue when you were accepted to?
- Let's talk about your community at (X) institution. Can you tell me when you found "your people" and the role they played in your graduate training and career choice?
- Was there a time where your professional networks influenced your career choice when you first enrolled versus when you had or will graduate?
- Can you talk about a time where the political moments or when a critical moment happened in society occurred that influenced your career decision?
- Did you engage in any work that affirmed your identities or values at your institution and did your identities impact your career choice?
- Can you share a story about how you learned what it means to be a staff member in higher education?
- As a person of color pursuing a doctorate in a STEM related field, what were your career desires and expectations?
 - o How did you experience support as a person of color during your graduate training?
- Can you share an experience as a person of color that motivated you to pursue a position as an administrative staff member?

- Can you share your transition to an administrative staff compared to your transition as a graduate student?
- Can you share a story about the expectations of being a staff member that you did not expect?
- Can you share a story about your experience as a staff member as a person of color that was fulfilling?
- Can you share an experience when your identities as person of color were affirmed, and you felt you belonged an administrative staff? Did that differ from when you were a graduate student?
- Is there a moment that you would be willing to share about your peers that affirmed your decision to pursue an administrative role?
- Is there anyone in your network that you think would be willing to participate in this study?
- Is there anything that I didn't ask that you wish I would have?

Appendix B

Colorado State University

Consent to Participate in Research

Examining the Lived Experiences of Higher Education Administrators with STEM Related Doctoral Degrees

Introduction and Purpose

My name is Bryan Thomas Jr, and I am a graduate student at Colorado State University. My faculty advisor is, Associate Professor Vincent Basile, Ph.D. in the School of Education. I invite you to participate in my research study on the stories and lived experiences of people of color who completed or are near completed a doctoral program in a STEM related field who chose to pursue a career as an administrative staff in higher education.

Procedures

If you agree to participate in my research, I will interview you at a time via the video conferencing platform, Zoom. The interviews will focus on the experiences that impacted your career decision to pursue a position as an administrative staff member. If you choose to participate, you will take part in one 45–75-minute interview with an optional member check-in which will take 10 minutes to complete. If you consent to participating and being recorded, I will record our conversation on zoom and take notes throughout the interview. The purpose of recording our conversations is to accurately account your experiences and will only be utilized for transcription purposes. If you don't want to be recorded, I will take handwritten notes. If for any reason you don't wish to answer a question, you can decline to answer, stop the interview, and/or withdraw from the process at any time. It is expected that we will only need one

interview, but follow-ups may be needed for added clarification and ensure accuracy of the data provided. If this occurs, I will contact you via the contact information you provided to follow up.

Benefits

There is no direct benefit to you from taking part in this study. It is hoped that the research will help institutions of higher education to create more inclusive environments for doctoral students of color's career choices with the efforts to enhance belonging for future students.

Risks/Discomforts

While there is minimal risk in participating in this study, the questions and interview could possibly recall experiences that can lead to discomfort or feelings of negativity. Some of the research questions may make you uncomfortable or upset. You are free to decline to answer any questions you do not wish to, or to stop the interview at any time.

As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk.

Confidentiality

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

To minimize the risks to confidentiality, we will save all files and transcripts on a device that is password protected and encrypted. In addition, the data will be coded in a password-protected and encrypted database on the coding platform, Dedoose. All interviews will be transcribed through the transcription service, Rev. Only myself and my advisor, Dr. Vincent Basile, will have access to the data collected.

We will transcribe the audio recordings as soon as possible after the interview, and then destroy the tapes once the audio is transcribed. When the research is completed, I will save the transcriptions and other study data for possible use in future research done by myself or others. I will retain these records for up to three years after the study is over. The same measures described above will be taken to protect confidentiality of this study data. We may be asked to share the research files with the sponsor or the CSU Institutional Review Board ethics committee for auditing purposes. Your identity/record of receiving compensation (NOT your data) may be made available to CSU officials for financial audits.

Compensation

To thank you for participating in this study, you will be emailed a \$25 gift card for participation.

Rights

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. Whether or not you choose to participate in the research and whether or not you choose to answer any questions or continue participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Questions

If you have any questions about this research, please feel free to contact me at (217) XXX-XXXX or bryan.thomas@colostate.edu. You may also contact Principal Investigator, Vincent Basile, at Vincent.basile@colostate.edu

If you have any questions about your rights or treatment as a research participant in this study, please contact the Colorado State University Institutional Review Board (IRB) at: 970-491-1553, or e-mail CSU_IRB@colostate.edu.

Appendix C

Participant Recruitment Email Invitation

Examining the Lived Experiences of Higher Education Administrators with STEM related

Doctoral Degrees

Colorado State University

Dear [Insert Name],

I'm conducting a research study on the lived experiences and stories of people of color who completed a doctoral program in a STEM related field and chose to pursue a career in higher education as an administrative staff member. Participation in this study will take approximately 45-75 minutes of your time in which you will complete in interviews via Zoom.

The criteria for to participate are as follows:

- 1) Identify as a person of color
 - 2) Have completed a doctoral program in a STEM related doctoral program and be currently or previously employed as an administrator in higher education
- Or
- 3) be current doctoral students that have reached the all but dissertation (ABD) level and have secured a position as an administrator in higher education post-graduation

You will receive a \$25 gift card for participating. If you are interested in participating, please email bryan.thomas@colostate.edu and I will send a follow up message to schedule the interview.

Please let me know if you have any follow up questions.

Bryan Thomas, Jr., Ph.D. Candidate, Colorado State University

Vincent, Basile, Ph.D., Associate Professor, Colorado State University

Appendix D

Participant Recruitment follow up email.

Examining the Lived Experiences of Higher Education Administrators with STEM Related

Doctoral Degrees

Colorado State University

Dear [Insert Name],

Thank you again for your willingness to participate in a research study on the lived experiences of people of color who earned a doctorate degree in a STEM related field and have secured an administrative position in higher education. You can choose an interview date and time by using [Qualtrics form for scheduling]. As a reminder, the interview will take place via zoom and will take approximately 45-75 minutes to complete.

Please let me know if you have any follow up questions.

Bryan Thomas, Jr., Ph.D. Candidate, Colorado State University

Vincent, Basile, Ph.D., Associate Professor, Colorado State University

Appendix E

Email notification sent for optional check-in.

Examining the Lived Experiences of Higher Education Administrators with STEM related doctoral degrees

Colorado State University

Dear [Insert Name],

Thank you again for completing your interview for this research study. This is an invitation to participate in an optional 10–15-minute check-in. You can choose a check-in date and time by using [Qualtrics form for scheduling]. You will receive your \$25 electronic gift card within one to three business days. The gift card amount will be sent to [email participant provided]. If you have any questions about your rights as a volunteer in this research, contact the CSU IRB at: CSU_IRB@colostate.edu; 970-491-1553.

Thank you again for your participation.

Bryan Thomas, Jr., Ph.D. Candidate, Colorado State University

Vincent, Basile, Ph.D., Associate Professor, Colorado State University