Pushed into STEM: Investigating the Racialization and Cultural Influences on East Asian Americans' Decisions to Major in STEM

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ABSTRACT

Asians are portrayed as model minorities, with science, technology, engineering, and mathematics (STEM) education proficiency and a natural aptitude for STEM occupations. While the Model Minority Myth portrays Asian Americans as naturally suited for technical and academic success, it ignores the diversity of their goals and can dehumanize individuals by channeling them into narrowly defined career paths. This study aimed to highlight the social justice implications of these dynamics, examining how societal stereotypes and cultural norms can limit personal agency, overshadow individual talents, and ultimately contribute to systemic inequalities by racializing Asians in STEM.

This study used social cognitive career theory and Model Minority Myth as its framework and employed a qualitative approach through semi-structured interviews to investigate East Asian Americans' career choices, focusing on how the intersection of cultural values with social and racial expectations shapes their career choices in STEM fields. This study argues that East Asian Americans' decisions to pursue STEM careers were influenced by a complex interplay of cultural values, familial expectations, and racialized perceptions. Although the Model Minority Myth is widely regarded as an external societal stereotype, this study discovered that it is actively reinforced within East Asian American communities themselves through family pressures, peer comparison, and communal definitions of success, which complicates individuals' career choices and identity formation. The findings from this study contribute to a broader understanding of the social and cultural pressures faced by Asian

Americans, shedding light on the social justice mission embedded in fostering career diversity and freedom from racialized expectations. The study also advances social cognitive career theory by including the Model Minority Myth as a critical contextual variable, increasing the framework's ability to account for racialized stereotypes, cultural obligations, and the internalization of societal expectations, all of which have a unique impact on the career development of East Asian Americans.

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GENERAL AUDIENCE ABSTRACT

This study explores how cultural expectations and racial stereotypes influence the career decisions of East Asian American students, especially in science, technology, engineering, and mathematics (STEM) fields. Although Asian Americans are often seen as successful in school and overrepresented in STEM, this research shows that their paths are not always based on personal passion or free choice.

Through interviews with East Asian American college students, this study found that many felt pressure to follow certain career paths in STEM because of expectations from family, community, and society. These expectations were shaped by the Model Minority Myth (MMM), a stereotype that assumes all Asian Americans are naturally gifted in academics, especially math and science, and are destined for high-status careers. While this may sound positive, the stereotype often limits how Asian Americans see themselves and what kinds of futures feel possible or acceptable.

Using a framework called social cognitive career theory, the study looked at how students' beliefs about their abilities, goals, interests, and their environment all worked together to shape their choices. The research shows that stereotypes and cultural values are not just background influences; they can shape how students think, what they want, and what they believe is expected of them.

By centering the voices of East Asian American students, this research humanizes experiences that are often flattened by the MMM. It challenges the idea that success in STEM

always reflects personal choice and exposes the emotional, cultural, and social costs of racialized expectations. In doing so, it offers a more complete understanding of East Asian American experiences and invites conversations about identity, opportunity, and belonging.

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Before entering the field of education, I spent my entire undergraduate and graduate studies in engineering. I thank myself for having the courage to make that switch, and for never giving up when the path became challenging. When people ask me how hard it is to earn a PhD and tell me I must be very smart to do it, I always say: it doesn’t require being the smartest, it requires determination. This doctorate stands as a testament to that truth.

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Personal Reflection

Before entering the education field, I was certain that I wanted to be an engineer. I was born and raised in China, where I received both my bachelor's and master's degrees in engineering. Growing up, I always knew that I was going to work in science and engineering, regardless of whether I liked it or not. In fact, I did not find my passion in engineering and had the courage to switch to education when I moved to the United States. I enjoy working with students and find fulfillment in what I do.

I didn't think my experience was typical until I met an Asian American student, later referred to as Lily in this study, during my high school internship. She and I share many cultural and family expectations, and her concerns and confusion about her education and career path made me realize there are issues hidden behind the model minority figure Asians are presented with. She was interested in STEM because she was told to and had no other option. It struck me that the same thing, culture, has passed through time and space and affects people of East Asian descent all over the world. There are certain beliefs in our culture along with social beliefs toward Asians that influence who we are and, more importantly, what we are supposed to be. Furthermore, I am almost always the only Asian educator at teacher conventions and schools where I work, which means there is almost no one at school to talk to when Asian students seek help from someone with a similar background. I decided to learn more about the social and cultural factors that influence Asian Americans' education and career choices because their experiences have received little attention, and I hope that my findings will help Asian Americans have a better understanding about themselves and make better education and career decisions.

Table of Contents

ABSTRACT ii
GENERAL AUDIENCE ABSTRACT iv
Acknowledgements vi
Personal Reflection viii
Chapter 1: Introduction 1
Chapter 2: Literature Review 6
The Model Minority Myth 7
Asians in America Before the 1960s: Yellow Peril 8
Origin of the Model Minority Discourse: 1960s–1970s 11
New Read of the Model Minority Discourse: 1980s–1990s 14
Model Minority in the 21st Century: Education Implications 16
East Asian Culture and Family Expectations 21
Confucian Values and Family Hierarchy 21
Confucian Education Expectations 23
SCCT and Asian Studies 26
Self-Efficacy 27
Outcome Expectations 27
Personal Interests 28
Contextual factors 28
Conclusion 29
Chapter 3: Methodology 31
Research Design 32
Interpretation of the SCCT Domains 33
Model Minority Myth Framework 36
Participant Selection 39
Data Collection 42
Data Analysis 44
Reflexivity and Trustworthiness 47
Conclusion 49
Chapter 4: Findings for Social Cognitive Career Theory Framework 50

Theme 1: Interest in STEM: Purpose, Passion, and Practical Alignment (SCCT Domain of Personal Interest) 50
Purpose-Driven Interest 51
Enjoyment and Natural Fit 51
Interest from Exposure 52
Suppressed Interests 53
Theme 2: Anchored by Expectations: Family, Culture, and School as Career Architects (SCCT Domain of Contextual Variables) 54
Parental Influence 55
Education as Obligation, Not Choice 57
Collectivism and Communal Influence 59
School and Teacher Influence 61
Theme 3: Performing Competence: Self-Belief Follows Success (SCCT Domain of Self-Efficacy) 62
Theme 4: Stability Over Passion: Calculated Choices in Uncertain Futures (SCCT Domain of Outcome Expectation) 63
Pragmatic Career Logic 64
Prestige and Social Status 66
Work-life Balance as a Tension Point 66
Chapter 5: Findings for Model Minority Myth Framework 69
Theme 5: Shaping Choices Through Stereotyped Competence (MMM Domain of Perceived Academic Excellence) 71
Theme 6: Success, Sacrifice, and Schooling as Moral Mandates (MMM Domain of Cultural Explanation) 72
Theme 7: STEM as the Default for Asian American Success (MMM Domain of Homogenous Group) 75
Theme 8: Becoming Successful Before Becoming Yourself (MMM Domain of Pressure to Conform) 76
Chapter 6 Discussion of Findings 80
SCCT: Mapping the Individual Within the Social 80
Personal Interests 81
Self-Efficacy 82
Outcome Expectations 83
Contextual Variables 84
Interplay of Domains: The Racialized Career Funnel 85
MMM as a Cultural Context: A Racialized Career Script 88

Perceived Academic Excellence 89
Cultural Explanations 90
Homogenous Group 92
Pressure to Conform 95
MMM as a Contextual Variable in SCCT 96
Limitations 99
Implications for Future Research 100
Conclusion 103
References 106
Appendix: IRB Approval 114

Chapter 1: Introduction

Asian Americans, especially those of East Asian descent, have long been seen as the "model minority," which portrays them as academically successful, particularly in STEM fields. The National Science Foundation (2023) reports that although Asians made up a smaller percentage of the US population, they held 39% of jobs in science and engineering in 2020 and earned 14% of science and engineering degrees. Statistical overrepresentation of Asian Americans in STEM is frequently interpreted as evidence of an inherent aptitude for technical disciplines, contributing to a racialized public discourse that frames academic achievement as a product of biological or cultural superiority (Kim, 2021).

However, this narrative frequently simplifies the complex paths that lead East Asian Americans into STEM careers. Many of their education and career choices are influenced by intersectional factors such as family expectations, cultural norms, immigrant experiences, and societal pressures, rather than being driven by free will. Confucian values such as filial piety and education attainment as a moral duty continue to influence parenting practices in Asian American families of East and Southeast Asian descent (Shih et al., 2019). As a result, academic performance, particularly in prestigious STEM fields, is frequently framed as a moral obligation or familial duty rather than an individual pursuit (Lee & Zhou, 2015).

These pressures are exacerbated by racialized expectations in American society. The Model Minority Myth, while appearing to be positive, imposes unrealistic standards and obscures disparities among Asian subgroups (Nguyen, 2021). It also results in the internalization of racialized expectations that students feel obligated to meet, often at the expense of their personal interests, which Lee and Zhou (2015) refer to as "stereotype promise." They argue that the outcome is a rigid cultural funneling into STEM, which is praised as safe and respectable.

However, this is accompanied by anxiety, identity conflict, and a decrease in autonomy in career decision-making.

Although statistics can be used to assess "success," they do not reveal how East Asian Americans navigate the intersection of self-efficacy, racialization, and cultural loyalty in their career decisions. Social cognitive career theory (SCCT) provides a theoretical framework for understanding complexity by emphasizing self-efficacy, outcome expectations, and personal goals (Lent et al., 1994). However, for East Asian Americans, SCCT has rarely been applied in ways that emphasize cultural and racial contexts.

East Asian Americans have received minimal attention for the ways in which cultural values and racial stereotypes restrict their career opportunities, despite their high representation in STEM fields. Most of studies either group them together as "Asian American" or assume that their involvement in STEM shows an innate interest and ability. This viewpoint ignores the cultural mandates and sociopolitical forces that steer East Asian Americans toward "acceptable" careers, which are typically in STEM fields (Museus and Kiang, 2009). The persistence of the Model Minority Myth (MMM), which homogenizes diverse groups while imposing an external narrative of expected success, also contributes to the issue. According to Cheryan and Bodenhausen (2000), East Asian American students frequently encounter a conflict between their personal interests and the pressure of social or familial expectations. There is a lack of qualitative research that examines the ways in which East Asian Americans interpret cultural values, define success, perceive these pressures, and how contextual information influences their STEM identity.

The East Asian Americans to be studied in this work are Americans of Chinese, Japanese, and Korean descent. I have decided to include Vietnamese Americans under the rubric of "East

Asians" because of their shared experiences with the MMM. Vietnamese Americans, many of whom arrived in the United States as refugees following the Vietnam War, have also been grouped together under the MMM (Ngo & Lee, 2007). Despite facing significant socioeconomic barriers when compared to other East Asian groups, they are frequently portrayed as uniformly successful, which obscures disparities within the community and reinforces narrow expectations for academic and career success. Research shows that their aggregate education outcomes, STEM participation rates, and encounters with MMM often align more closely with East Asian groups than with other Southeast Asian subgroups (Ngo & Lee, 2007; Museus & Kiang, 2009). Furthermore, Vietnamese Americans share Confucian cultural traditions with Chinese, Japanese, and Korean Americans, which shape educational and career orientations (Nguyen et. al., 2025). Including Vietnamese Americans in this definition acknowledges both the racialized expectations they face in American society and the influence of family and cultural values on their career development.

The purpose of this study is to present a more contextualized understanding of how East Asian Americans' education and career choices in STEM are influenced by intersecting forces of racial, cultural, and social expectations. This research aims to investigate the sociocultural factors that influence East Asian Americans' education and career choices in STEM fields. It seeks to understand how factors such as the MMM, Confucian values, and parental expectations influence individuals' career development, particularly in STEM. This study focuses on the lived experiences of East Asian American students to highlight the complexities that underpin seemingly "successful" trajectories.

To guide this investigation, the following research questions were posed: *What factors influence the racialization of East Asian Americans in STEM?* Two sub-questions were created to

investigate the main question: *What motivates East Asian Americans to pursue STEM education and careers?* and *What role does the Model Minority Myth play in East Asian American students' career decisions?* These questions aim to shed light on the sociocultural pressures that shape STEM pathways as negotiations between personal agency and sociocultural expectations, rather than as simple choices.

This study employed a dual theoretical framework based on SCCT and the researcher's original framework based on the MMM. Lent, Brown, and Hackett (1994) developed SCCT, which emphasizes the role of self-efficacy beliefs, outcome expectations, and personal goals in influencing education and career decisions. SCCT is useful for investigating the psychological mechanisms that underpin career decision-making, but it lacks depth in addressing the sociocultural contexts of racialized populations (Byars-Winston & Rogers, 2019). To fill this gap, I included a second framework based on the MMM that was created specifically for this study.

The MMM framework explains how the stereotype of East Asian American academic superiority functions as both a cultural script and a racialized constraint in STEM. It provides a framework to examine how internalized expectations, public perceptions, and systemic assumptions funnel East Asian Americans toward specific fields of STEM. The MMM framework in this study was used both as a cultural critique but as an analytical tool to capture participants' negotiations with identity, obligation, and resistance. When combined with SCCT, this hybrid framework enabled a thorough understanding of both the psychological drivers and the racialized narratives that shape STEM career paths among East Asian Americans.

This study is significant in both theoretical and practical dimensions. Theoretically, it helps to broaden SCCT by situating it within the racialized experiences of East Asian Americans.

Most SCCT applications do not sufficiently account for the sociocultural constraints and identity negotiations that occur among racial minority groups in the United States (Byars-Winston & Rogers, 2019). This study provides an innovative approach by integrating an original analytical framework based on the MMM that fuses internal personal constructs with external cultural and racialized narratives. This dual-framework model both strengthens SCCT's relevance to minority populations and lays the groundwork for future intersectional research.

In a practical sense, the findings of this study can help education professionals, career counselors, and policymakers better understand the career paths of East Asian American students. Frequently viewed as a "successful" racial group, their needs, constraints, and internal conflicts are overlooked. This recognition of the pressures of cultural obligation and racial expectation enables a more culturally responsive guidance, while also challenging current assumptions in education institutions. Furthermore, this study amplifies East Asian American voices by documenting their lived experiences and broadening the conversation about education equity and identity development in STEM.

This study is organized into six chapters. The first chapter establishes the context for the study, which includes its objectives, research questions, theoretical framework, and definition of terms. Chapter 2 is a thorough examination of the literature on SCCT, the model minority stereotype, East Asian cultural values, and the racialization of Asians in STEM. Chapter 3 describes the qualitative methodology, which includes research design, sampling strategies, data collection, and analysis procedures. Chapters 4 and 5 present the findings from the participant interviews. Finally, Chapter 6 discusses the findings, limitations, and implications for future research.

Chapter 2: Literature Review

Understanding the career decisions of East Asian Americans in STEM requires an interdisciplinary approach that integrates sociological and cultural perspectives. Although Asian Americans are frequently portrayed as "successful" in STEM fields, this narrative is not simple or universally shared. The Model Minority Myth (MMM), which suggests that Asians are naturally adept in technical fields and more likely to succeed than other racial minorities, has become a dominant lens through which their academic and professional lives are interpreted (Wu, 2013; Zhou & Lee, 2017; Ching, 2022). This stereotype limits Asian Americans by ignoring their personal interests and the complicated social and cultural dynamics (Lee, 2015; Lee & Zhou, 2014). The literature also indicates that the perceived excellence in STEM frequently results in emotional and social costs, such as the pressure to conform, the lack of visibility outside of STEM, and a narrow definition of success (Shah, 2019; Wolfgram et al., 2024).

The career choices of East Asian American families are significantly influenced by cultural values, particularly those that are rooted in Confucian traditions, such as filial piety, collectivism, and academic diligence (Li, 2004; Santos & Harrell, 2017). Parents frequently encourage their children to pursue stable and high-status fields like engineering, computer science, or medicine, not only out of cultural pride, but as a strategic response to a racially stratified society (Min & Jang, 2014; Leong & Hardin, 2002). STEM careers represent not only economic security, but also the path of least resistance in a landscape rife with systemic discrimination (Li, 2004; Warikoo, 2022). The emphasis on family obligations and community expectations can make deviating from this path difficult, especially when combined with

concerns about social stigma or failing to meet intergenerational expectations (Yook, 2013; Hui & Lent, 2018).

While the MMM frames STEM achievement as inevitable, it conceals the lack of personal agency often experienced by students navigating such choices. According to Chao et al. (2013) and Sue et al. (2009), students may internalize societal and familial expectations, resulting in career paths that may not align with their intrinsic interests or personal goals. In this context, the social cognitive career theory (SCCT) provides a useful framework for understanding how self-efficacy, outcome expectations, and personal interest interact to shape career behavior (Lent et al., 1994; Li et al., 2021). However, for Asian Americans, cultural and contextual factors such as racialized stereotypes, cultural norms, and immigrant background serve as important in shaping decision-making (Fouad et al., 2008; Tang et al., 1999). By extending SCCT to include these cultural and contextual variables, researchers can investigate how racialization, stereotype threat, and parental influence function not only as external constraints but also as internalized beliefs that influence East Asian Americans' choices in STEM.

This chapter reviews existing literature in four major areas that serve as the foundation for this study: the origins and implications of the Model Minority Myth, cultural and familial influences on East Asian Americans' career decisions, the role of social support, and the application of social cognitive career theory. Together, these areas shed light on the intersecting forces that influence East Asian Americans' education and career paths in STEM.

The Model Minority Myth

Asians have been migrating to and living in the United States for over two centuries, yet Asian Americans remain a distinct group as "others" whose situation is influenced by

international relations. From Yellow Peril to Model Minority, Asians are stereotyped for political reasons. The Model Minority Myth portrays Asians as hardworking, uncomplaining, having a good socioeconomic status, and being good at math and science. According to the Model Minority Myth, Asians are a minority group that do not need help, resulting in inequity in many fields, including education. According to Lee (2021), Asian Americans are frequently perceived as forever foreigners in public perceptions of America; as a response, Asians in America identify themselves as Asian Americans as opposed to Americans because they associate America with White (Zhou & Sao, 2005). The model minority discourse of Asians was coined for regulating racial orders in the 1960s. Emerging during the Civil Rights era, when African American communities were actively challenging systemic racism, this discourse portrayed Asian Americans as hardworking, law-abiding, and academically successful immigrants who had ostensibly overcome adversity without protest. The Model Minority Myth, which gained popularity through media outlets and political rhetoric, was used as a tool of racial triangulation, elevating Asians as a "success story" while implicitly criticizing other marginalized groups for their lack of progress. As a result, the discourse reinforced a racial hierarchy that maintained White dominance, limited solidarity across communities of color, and obscured ongoing structural barriers faced by Asian Americans themselves (Wu, 2013; Lee, 2021). As different waves of Asian immigration arrived in the United States in the 1980s, the model minority discourse developed into a new version of emphasizing education success (Chang, 2003; Lee, 2021). According to Rong and Preissle (2008), Asian students are more likely to be overlooked in education because of the Model Minority Myth (Li, 2004).

Asians in America Before the 1960s: Yellow Peril

The first Asian immigrants to the United States can be traced back to the early nineteenth century when trading vessels transported goods between the Philippines and America. In the mid-nineteenth century, the first wave of Asian immigration occurred when unskilled low-wage Chinese laborers came to California to seek gold and then stayed for economic opportunities. The majority of them are men who came alone, leaving their families in China (Lee, 2021).

The first Chinese woman named Afong Moy arrived in the United States in 1834, brought by US-China traders. She was put on display to demonstrate how exotic, different, and inferior the Chinese were, thereby reaffirming Western superiority (Lee, 2021). In the mid-late nineteenth century, Chinese women before marriage had no right outside the will of their parents, no right outside the will of their husband after marriage and being unmarried at a certain age was unimaginable (Gibson, 1877). Thus, women were not considered to be human but rather objects that can be traded. Human trafficking was prevalent among Chinese Americans. Many Chinese women were sold into prostitution, with politicians receiving a portion of the proceeds (Gibson, 1877).

In the late nineteenth and early twentieth centuries, industrialization and capitalism expanded in the United States, creating a large demand for labor. Meanwhile, the Chinese revolution and World War II made the Chinese look for opportunities outside of their country (Lee, 2021). However, few Chinese women immigrated during this period. Because of cultural pressures and expectations at home, as well as legal and economic issues abroad, the number of Chinese women who immigrated to the United States was small. Under China's traditional patriarchal system, women were not encouraged to travel abroad (Lee, 2021). They were kept at home to fulfill their absent husbands' filial duties. Chinese women face additional challenges under US immigration law. They could not apply for or hold immigration status on their own;

they had to rely on their husbands or fathers. Even if they had male dependents who were willing to move them, the cost was not affordable for the working class (Lee, 2021). From the 1910s to the 1950s, the number of Chinese female students in the United States was far lower than the number of male students. They were sponsored by American Christian missionaries or their wealthy families and studied education, sociology, and home economics among other disciplines (Ling, 1997).

With Asian immigrants, violence and discrimination were persistent. The presence of Chinese immigrants put the concept of America to the test; who can and cannot be Americans? The widely held belief among Chinese immigrants in the nineteenth century was that they were inferior, thereby ensuring white superiority. Male Chinese were accused of unfair economic competition, whereas female Chinese were accused of "moral and racial pollution" (Lee, 2021). Although the industrialists were very pleased to hire Chinese workers, the low cost of them aroused discontent among the white working class. They demanded the government cease the immigration of Chinese workers during the economic depression, for this reason, the Yellow Peril was first coined in the 1870s to describe Chinese workers (Wu, 2013). With the mainstream attitudes towards the Chinese, the Chinese exclusion laws were enacted in the late nineteenth century, and by the early twentieth century, the restriction on Chinese migration was complete (Lee, 2021).

During the Chinese exclusion period (1882–1943), Japanese immigrants arrived in the United States, giving the term yellow peril new meanings. Like Chinese immigrants, they came to the United States for economic gain, and the majority of them were male laborers hoping to return home with money (Lee, 2021). However, Japanese immigrants, including women (brides), were able to easily enter the United States due to their homeland's rising international stature and

government-issued passport. They took over jobs that the Chinese had previously held. They turned to agriculture after obtaining permanent residency, establishing their own community, and following Japanese culture (Lee, 2021). Despite discrimination, their immigrant leaders urged Japanese immigrants to assimilate into mainstream American society (Lee, 2021). Over half of American-born Japanese children went to public schools in the morning and Japanese schools in the afternoon in the early twentieth century (1930-1940), just like Chinese children. They were caught between two worlds, causing identity conflict (Lee, 2021). Some parents sent their children to Japan for education in order to maintain transnational bonds as Japan grew into a powerful empire (Lee, 2021). During World War II, the discourse of the yellow peril was commonly accepted as a political definition in the United States. Because of the international position and influence of their homeland, Japanese immigration was labeled as the new Yellow Peril for the public's perceptions of Japan as a military threat. These tensions escalated during World War II, when Japan became a direct enemy of the United States, deepening anti-Japanese sentiment and reinforcing calls for exclusion. In the early twentieth century, the exclusion act of Japanese immigrants was discussed and taken cautiously for their homeland consideration, and around 1920, the immigration act targeted the Japanese (Lee, 2021). This situation persisted until the 1960s when the exclusion laws were finally overturned.

Origin of the Model Minority Discourse: 1960s–1970s

World War II changed the dynamic of Asians in America. While Japanese Americans were persecuted and imprisoned during WWII, Chinese, Koreans, South Asians, and Filipinos were treated as "Good Asians" because their homelands were allies of the United States: exclusion laws were repealed in the 1960s due to the need for the United States' war effort (Lee, 2021). The 1965 Immigration Act resulted in new waves of Asian migration, and the

environment became friendlier, particularly after Supreme Court decisions declared racially restrictive housing covenants and school segregation illegal (Wu, 2013).

Compared to the label of "not-whiteness" which considers Asians in America as unassimilated others, a new label of "not-blackness" emerged as a weapon against African American freedom movements in the mid-1960s, as politicians tried to reshape the country's racial order (Wu, 2013). As examples of colored mobility, the "not-blackness" grouped Japanese and Chinese together. The not-black label emphasized the success stories of Chinese and Japanese Americans while purposefully ignoring their struggles. This label was the forerunner to the model minority (Wu, 2013).

The model minority discourse served two purposes: for domestic racial order and international profile. The term "model minority" first appeared in the popular press in 1966, and it praised Japanese Americans for not being a "problem minority" which referred to black Americans (Wu, 2013). In the meantime, successful Asian Americans were promoted as a "model minority" which proved America's democracy as a response to the Soviet Union's accusation that the United States was a racially discriminatory country (Lee, 2021). The success of Chinese Americans was also widely publicized in the same year. Despite the poor living conditions and difficulties faced by Chinese Americans, the media advocated the model minority for Chinese Americans in direct contrast to African Americans. According to Wu (2013), an article (U.S. News & World Report, 1966) wrote in 1966:

> At a time when it is being proposed that hundreds of billions be spent to uplift Negroes and other minorities, the nation's 300,000 Chinese-Americans are moving ahead on their own—with no help from anyone else. (Wu, 2013, p.208)

The number of Asian students including females increased at this time. During the 1960s and 1970s, most Chinese female students from Taiwan came from the families of Nationalist government officials. The Taiwanese government helped them study abroad. Female students in the 1980s and 1990s, on the other hand, were mostly from business families and were financially supported by their parents. They encountered difficulties while studying in America, particularly due to language and cultural differences. Many of them stayed in the United States after graduation because they felt welcomed (Ling,1997). International exchange programs between the United States and the People's Republic of China between 1966 and 1976 as part of Mao Zedong's Cultural Revolution, a sociopolitical movement aimed at preserving communist ideology by eliminating capitalist and traditional elements from Chinese society. During this time, universities were closed or reorganized, intellectuals were persecuted, and education exchange with the outside world was limited, largely isolating China from global academic and cultural interactions. In the 1980s, during the PRC's period of "reform and opening," studying abroad once again flourished as many mainland Chinese students (and their families) believed that a degree earned in America meant a better start in a career or promotion (Ling,1997). Many of the students self-funded their education as an investment in their future. About 20% of those Chinese mainland students were female, which was proportional to the gender rate in Chinese mainland higher education. Ling believes that in China, female students are underrepresented in higher education, particularly in science, due to traditional values and gender discrimination in secondary education and college admission (Ling,1997).

The "good Asian" and "bad Asian" stereotypes of Asian Americans in the 1960s are based on their homeland's political positions and their assimilation status into American society (Lee, 2021). The good Asians, or model minority discourse overgeneralizes Asian Americans'

experiences, attacks African Americans for failing to meet the myth's expectations, and denies racial discrimination against Asian Americans and turns them into a racial threat (Wu, 2002). The term "model minority" took on new meaning as the structure of Asian immigration changed in the late twentieth century.

New Read of the Model Minority Discourse: 1980s–1990s

Korean immigration to the United States increased dramatically following the passage of the Immigration and Nationality Act of 1965, which provided opportunities for highly educated professionals and their families. Many early arrivals were students, doctors, and engineers with employment or education visas (Min, 2011). In the 1970s and 1980s, a larger wave of middle-class Koreans arrived, with many turning to small business ownership as a means of achieving economic stability in urban areas (Zhou and Kim, 2006). These migration patterns distinguished Korean Americans as entrepreneurial and well-educated, characteristics that were consistent with mainstream expectations of "model minority" success. Also in the 1980s, many people with professional skills in Hong Kong and Taiwan fled to America, fearing that their lands would be returned to the PRC (Chang, 2003, pp.324-327). The new Chinese worked in high-paying jobs and lived in white neighborhoods. They invested heavily in education, and their children typically attended private schools and prestigious colleges. During the 1980s, Chinese policies governing study abroad and spouse visits were relaxed, resulting in more Chinese women studying in the United States (Ling,1997). At the time, 90 percent of female students came from professional families, such as doctors and professors, giving them more resources and opportunities to pursue higher education. After the Tiananmen Square Incident, many of them took advantage of the United States' immigration policy and stayed. They, like Taiwanese

students, entered professional fields and assimilated into the American middle class (Ling,1997).

There was a significant increase in Vietnamese immigration to the United States following the Vietnam War, particularly following the fall of Saigon in 1975. Professionals, military officials, and individuals affiliated with the former South Vietnamese government comprised the initial significant wave of refugees. They were resettled through federal programs that were frequently sponsored by religious or community groups (Zhou & Bankston, 1998). The second, more substantial wave of immigration in the late 1970s and 1980s was characterized by the arrival of the "boat people," a significant number of whom were from rural or working-class backgrounds and encountered supplementary socioeconomic obstacles (Rumbaut, 2000). Because they were refugees, the migration histories of Vietnamese Americans are distinct from those of other East Asian groups, whose immigration to the United States was often motivated by education or employment opportunities.

The late twentieth and early twenty-first century model minority discourse is an updated version of its origin. While the 1960 version emphasized the liberal nature of America, the 1980 edition included Asian values such as family and education (Lee, 2021). The media began to use the term model minorities to describe the education success of ABCs (American-born Chinese; Chang, 2003). As the media and academia flourished at the time, they branded Asian Americans as "America's Super Minority." For example, the Fortune magazine ran an article titled "*America's Super Minority*" (November 24, 1986) which described Asian Americans as "smarter and better educated and make more money than everyone else." This model minority emphasizes Asian-Confucian culture, particularly reverence for the family (Wu, 2013). Despite the fact that the term was coined for historical reasons of domestic racial order and positive international

profile, it was used to describe the education success of Asian Americans, particularly Chinese Americans.

The Model Minority Myth has had a particularly strong influence on public perceptions of Korean Americans. The community's visible entrepreneurial presence and rising education attainment were frequently highlighted in media narratives that praised their "hard work" and "self-sufficiency," reinforcing the stereotype of Asians as uniformly successful (Lee, 2015).

Despite their distinct refugee histories, Vietnamese Americans frequently fall into the Model Minority Myth. The Model Minority Myth's application to Vietnamese Americans is particularly problematic because it obscures the significant socioeconomic struggles that many families encountered during resettlement, such as poverty, language barriers, interrupted schooling, and intergenerational adjustment challenges (Zhou & Bankston, 1998). At the same time, selective narratives of successful Vietnamese American students have been used in schools and the media to reinforce the larger stereotype of Asian success (Lee, 2015).

Chinese Americans' college occupation, particularly STEM majors, sparked discontent among white peers and institutions, resulting in anti-Chinese activities and discrimination in education fields (Chang, 2003). Asian Americans had to outperform their white peers in order to be admitted to universities, and discrimination even extended to high school (Chang, 2003). Observing the model minority discourse and education inequity, scholars began to conduct research on the effects of the model minority on Asian students as well as parental expectations of Asian parents in the 21st century.

Model Minority in the 21st Century: Education Implications

Asians are portrayed as hardworking, uncomplaining, having a good socioeconomic status, and being good at math and science in the Model Minority Myth—an image that

solidified and evolved during the 1980s and 1990s as the model minority discourse gained national prominence (Wu, 2013). However, the myth is partially true. Asian Americans have higher median annual personal earnings in the twenty-first century, but they also have a higher poverty rate than average Americans. While the myth portrays Asian Americans as well-educated, the reality is that they are less likely to have a high school diploma than white Americans and African Americans when the myth shifted its focus on education (Lee, 2021). The inequity extends to the workplace. Asian Americans earn less money than white Americans on average for each additional degree and occupy fewer management positions (Wu, 2002).

The Model Minority Myth is often associated with the forever foreigner stereotype; both are common among Asian immigrant children (Zhou & Bankston, 2017). The "forever foreigner" is a stereotype and lived experience in which Asian Americans are perceived and treated by others as perpetual outsiders. It reflects how physical appearance, accent, or ethnicity cause some individuals to be excluded from full acceptance as "American," even when they consider themselves as such (Zhou & Xiong, 2005). The Model Minority Myth frequently reinforces Asian Americans' forever foreigner perception, which can lead to attitudinal discrimination or, at the very least, being identified as non-American. The public perception of Asians being model minority singles Asians out: they are Americans, but they are different from the "regular" Americans; they are the "others" of Americans. Few Asian Americans identified as "Americans" in Zhou and Xiong's (2005) study because they frequently associate "American" with "white." As a result, rejecting the identity of American or preferring Asian American or national identities is a passive reaction rather than a voluntary choice (Zhou & Xiong, 2005). For example, "where are you from?" is probably the most frequently asked question of Asian Americans, and the compliment that follows is often "your English is so good!" No matter what

Asian Americans identify themselves, they are always perceived as foreigners in America as opposed to Americans. The choice of being Asian American rather than American is socially imposed rather than voluntary.

In the education field, the Model Minority Myth singles out Asian Americans. Positive representations of Asian Americans are so well known by the public that they can be identified even when racial references are removed (Wu, 2003). For example, if you have to picture a fourteen-year-old going to MIT, an Asian face is likely to come to mind. The model minority discourse is convincing because it appears to be the result of social science research using Census data. According to Rong and Preissle (2008), Asian children were statistically more likely than U.S. children overall to enroll in private schools (12.2% vs. 10.8%), and Asian immigrant children were also more likely to enroll in private schools than all U.S. immigrant children. Asian children drop out at a much lower rate than the national average. In almost every state in the United States, Asian children have the most schooling, the highest grade point averages, the lowest dropout rates, and an overrepresentation in gifted programs. East Asian students perform well in school because they anticipate upward mobility and compare their circumstances favorably with their peers back home (Rong & Preissle, 2008).

However, this perception of upward mobility, when filtered through rigid expectations tied to racialized success, often produces psychological strain. The Model Minority Myth, which portrays Asian Americans as a high-achieving and successful group, can have negative effects on individuals and families. For example, the myth can create unrealistic expectations and pressure to conform to cultural stereotypes, which can lead to stress, anxiety, and other mental health issues (Shih et al., 2019).

According to Zhou and Bankston (2017), Asian American students are experiencing "stereotype promise". Jennifer Lee coined the term *stereotype promise* in 2012 to describe the expectation of being viewed through the lens of a positive stereotype, which motivates one to act in a way that supports the positive stereotype and thus improves performance (Zhou & Bankston, 2017). While stereotype threat refers to conforming to a negative stereotype (Steele & Aronson, 1995), stereotype promise refers to conforming to a positive stereotype. The relationship between stereotype promise and performance may be mediated by anxiety and overcompensating with excess effort, and results in the opposite outcome (Zhou & Bankston, 2017).

Under the pressure of being the model minority, Asian American youth frequently feel a strong familial obligation to succeed in school, while parents, especially first and second-generation immigration parents, exhibit immigrant optimism in expecting their children to do so (Zhou & Bankston, 2017). However, when combined with the expectations and pressures, the Model Minority Myth can create unrealistic success expectations. Asian American children who have high parental expectations have high expectations for themselves. According to Zhou and Sao (2005), children of Asian immigrants had extremely high self-expectations for education achievement in 1992 and 1995, but only a small percentage of them were able to meet those expectations by their mid-20s. Mun and Hertzog (2019) examines the influence of parental and self-expectations on the academic and social experiences of Asian American women who entered college early. The findings suggest that parental expectations played a significant role in motivating the participants to enter college early and pursue academic success. However, some participants also described feeling pressure to meet their parents' expectations, which sometimes led to stress and anxiety. Self-expectations were also found to influence the participants' experiences. Many participants described setting high academic and personal goals for

themselves, which sometimes led to feelings of pressure and self-doubt. According to Li (2004), most Chinese American children inherited their parents' education expectations and beliefs. Peer pressure on expectations can also be triggered by observing how other Chinese American children and their parents behave. Surrounded by Asian peers whose parents have high expectations of their children, some Chinese American children blame their parents for not having high expectations for them (Li, 2004). The normalization of high expectations causes Asian American students to experience dual anxiety: anxiety about having high expectations and anxiety about not having them.

The Model Minority Myth also interferes with students' academic performance. According to Cheryan and Bodenhausen (2000), when Asian American women were primed with the Model Minority Myth before taking a math test, they performed worse than those who were not primed with the stereotype. This suggests that the pressure to conform to positive stereotypes can create anxiety and interfere with performance. They also found that when participants were primed with the Model Minority Myth and then received negative feedback on a test, they were more likely to blame themselves for their failure than those who were not primed with the stereotype. This suggests that the pressure to conform to positive stereotypes can lead to negative self-evaluations and feelings of inadequacy.

The Model Minority Myth also overgeneralizes Asians in America, resulting in education inequity. Asian education issues have received little attention from policymakers in the United States because Asian youth are assumed to be doing well in comparison to other minority groups. However, data from the 1990 and 2000 censuses reveal wide disparities among Asian youth in areas such as disability status, school enrollment, high school completion, and dropout rates.

Asian immigrant youth are also hampered to varying degrees by a lack of English proficiency as well as other personal and familial characteristics (Rong & Preissle, 2008).

The overgeneralization of the Model Minority Myth implies that people can be organized into racial groups, that people are homogeneous within racial groups, and that the differences between racial groups are highlighted rather than the similarities. Wu (2002) claims that there is no evidence that Asian American children outperform children of other races because of their race. Individual effort leads to improved performance, which anyone can achieve regardless of race. In addition, Warikoo (2022) also found that attending selective colleges is part of the cultural repertoire shared by groups with high socioeconomic status, regardless of race, for students from professional and highly educated families.

East Asian Culture and Family Expectations

The expectations of East Asian parents are both cultural and social. As discussed in the previous section, Asians are under the impression of being model minorities and exceed in STEM fields. Culturally, many East Asians expect their family to operate in a patriarchal system. The patriarchal system under the influence of Confucian values prescribes roles of men and women, parents and children (Santos & Harrell, 2017). Under the influence of these values, parents believe that education is the only way to success and a good life, and children have to follow parents' guidance in choosing career paths and way of life.

Confucian Values and Family Hierarchy

Chinese, Korean, Japanese, and Vietnamese societies are frequently linked by their shared Confucian heritage, which has historically shaped family structures, education values, and social hierarchies. Confucianism originated in China and emphasized filial piety, respect for authority, social harmony, and the pursuit of moral development through education. These

principles were transmitted across East Asia over centuries through political, cultural, and education exchanges, eventually becoming embedded in Korea, Japan, and Vietnam's social institutions (Tu, 1996). While each country's implementation of Confucian ideals differed, the shared emphasis on hierarchical relationships, collective responsibility, and the moral importance of learning established a broad cultural foundation throughout the region (De Bary, 1991).

During the Joseon Dynasty (1392–1897), Confucianism became the dominant ideology in Korea, influencing social order and family life. Japan, while blending Confucian principles with Shinto and Buddhist traditions, incorporated Confucian ideals into its education and bureaucratic systems, especially during the Tokugawa period (1603–1868). Confucianism was first introduced to Vietnam under Chinese rule beginning in 111 BCE, and it became especially influential after independence in the 10th century through the civil service examination system, reaching its peak during the Lê dynasty in the 15th century when it dominated education, governance, and social life (Woodside, 1988).

Confucianism values decorum and order (li), filial piety (hsiao, and humaneness (ren) (Yu, 1966, p.73). Li is referring to propriety and social order within the government, as well as proper interactions between the emperor and the public. In government, filial piety was manifested by citizens' compliance with governmental decrees and a historical respect for the imperial system. Within the family, filial piety instills a sense of reverence for and submission to the family patriarch. Ren emphasizes the significance of a collectivist mindset, of considering the needs of others before one's own. Confucianism also promotes a patriarchal attitude in differing degrees in contemporary Asian nations.

However, when discussing the filial piety tenet of Confucianism-based East and Southeast Asian cultures and their influence on families, it is critical to note that the mentality

gap between parents' traditional cultural expectations and their children, who are more receptive to the influence of American culture and their peers, adds another layer of difficulty for Asian students. While the American media to which they are exposed portrays a totally different view of family members' actions, levels of equality, and rights, the parents continue to operate under their traditional Asian attitude of expecting respect and obedience from their offspring, as Confucian values dictate (Yook, 2013).

Given these tenets, students from East and Southeast Asian cultures with a strong Confucianist influence will tend to be respectful, appropriate, respectful of social order and hierarchy, respectful of the old, and diligent in their efforts to accomplish good through study and relationships. Asian parents will likely expect their children to earn straight As in school in order to bring honor to the family and keep the family's face.

Confucian Education Expectations

One of the core beliefs of Confucianism is the importance of filial piety, which refers to the respect and obedience that children should have for their parents and elders. In the context of education, this means that students are expected to show respect for their teachers and to follow their instructions without question. This belief is reflected in the traditional Confucian education system, which emphasized rote memorization and obedience to authority.

Confucianism also places a strong emphasis on the value of hard work and diligence. Confucius believed that individuals could achieve success and happiness through dedicated effort and perseverance. This belief is reflected in the emphasis on academic achievement and the pursuit of excellence in many East Asian countries as well as Asian immigrants in the United States, including the high value placed on education attainment and academic success.

Under the influence of Confucian values, many East Asian immigrant families believe that education is the only way to success and a good life. Many parents hold the Confucian thoughts of guan (parental discipline) and hsiao (filial piety) that parents should guide their children and children should obey their parents (Li, 2004). With these beliefs combined, East Asian parents expect their children to follow their guidance and success in school to secure a good job which leads to success. Thus, it is important for Asian immigrant parents to "manage" their children.

In the U.S., *child-as-capital-investment* is a term used to describe Asian American parents in the twentieth century. Children are valued in this mode based on whether they are filial, and thus whether the "investment" made by parents is profitable (Ninh, 2011). Daughters are, by definition, a lost investment once they are born. To pay off the debt, they must add more value to the family than sons, such as taking on more family responsibilities and excelling in education and career. In the twenty-first century, the investment has a new form of time management. Studying math, as the STEM foundation discipline, has been regarded as a good investment because it promises jobs such as engineers and doctors (Ninh, 2011).

While this study does not focus on gender, it is important to note that Confucianist thought, which is central to many East Asian cultural frameworks, assigns traditional roles within the family hierarchy that can influence career expectations. These roles frequently define gender-based expectations for behavior and life paths, with women portrayed as subservient, altruistic, and family-oriented, and men as assertive, independent, and professionally ambitious (Yook, 2013). Such ideologies may have an indirect impact on education and career decisions by reinforcing norms about which goals are prioritized and what constitutes appropriate success. For example, the traditional Chinese saying, "lack of talent in a woman is a virtue," reflects a long-

standing devaluation of female intellectual development. Although gendered expectations are not explicitly discussed, they are part of a larger constellation of cultural and familial influences that shape East Asian American youth's education choices. Hanson and Gilbert (2012) discovered that Asian American students were frequently influenced by their parents to pursue science education as a path to stability and success. While both male and female students reported familial pressure to succeed, female students described additional stress caused by balancing academic goals with implicit family responsibilities and societal expectations. These findings imply that gendered cultural norms, even when not explicitly addressed, may interact with broader cultural values to subtly shape people's academic paths and perceived career opportunities.

The choice of STEM in education is also racial. Asian parents are concerned about the dual pressures of the Model Minority Myth and the social and racial environment's marginalization. On the one hand, internalization of the Model Minority Myth may cause parents to conform to the stereotype, resulting in their children to experience counterproductive anxiety. On the other hand, the induced response to perceived social and racial disadvantages may lead Asian parents to encourage their children to pursue science and high-tech related careers, as well as other careers with high earning potential, in order to maximize their children's chances of success in the future (Rong & Preissle). The choice of a specific career for minority immigrants is also influenced by racial order. According to Li (2004), parents believe that in a racially stratified society, many channels for minority immigrants are limited or blocked. Fearing racism, the parents advise their children to pursue a career in science and technology, where there are presumably fewer intangible racial barriers because employment and evaluation are primarily based on technical skills. Warikoo (2022) stated that their experiences with discrimination in

school and the workplace are one of the reasons Asian Americans choose STEM fields because they believe there is less bias and more subjectivity.

This intersection of cultural expectations and racialized strategic choices demonstrates how East Asian American families reinforce traditional academic values while also responding proactively to perceived structural limitations in American society. Rather than simply reflecting cultural tradition, encouragement to pursue STEM is a complex and calculated decision influenced by both internalized family ideology and external racial stratification.

SCCT and Asian Studies

Social cognitive career theory (SCCT) is a theoretical framework developed by psychologist Robert H. Lent and his colleagues in the 1990s. It is a prominent theory in the field of career development and vocational psychology, aiming to explain how individuals make career-related decisions and choices. It emphasizes the importance of self-belief, goal setting, and the expectation of positive outcomes in shaping career decisions and actions (Lent et al., 1994). SCCT has been widely used in career counseling and research to understand and support individuals in their career development journey. SCCT can be applied to understand the career choice and development of East Asian Americans. However, it's essential to recognize that contextual factors can influence how SCCT manifests in the career decision-making process for East Asian Americans (Fouad et al., 2008). For example, Li et. al. (2021) conducted a qualitative study of STEM career development among Asian population of Taiwanese focusing how cultural, familial, and education contexts uniquely shaped students' career decision-making processes. By explicitly treating contextual supports and barriers as a domain of SCCT, they highlighted the necessity of adapting the framework to account for the cultural and structural influences that shape Asian students' career development.

Self-Efficacy

Self-efficacy, a central concept in SCCT, plays a significant role in shaping career choices for Asian Americans (Tang et al., 1999; Li et. al., 2021). Self-efficacy refers to an individual's belief in their capability to execute behaviors necessary to produce specific performance attainments. In the context of career decisions, self-efficacy influences the types of careers individuals consider, the goals they set for themselves, and their persistence in the face of challenges. For Asian Americans, while the Model Minority Myth may bolster some aspects of self-efficacy by setting high expectations, it can also pigeonhole Asian Americans into specific career paths often in STEM and create pressure to be successful (Cheryan & Bodenhausen, 2000). This may limit the development of self-efficacy in other areas that align better with personal interests and passions. Recognizing and cultivating self-efficacy in a broader range of abilities and interests is crucial for helping Asian Americans in pursuing diverse careers that are not restricted to STEM. In applying SCCT to understand East Asian Americans' career choices, it's important to consider the complex interplay of self-efficacy with cultural, familial, and social influences.

Outcome Expectations

Another aspect of SCCT is outcome expectations. Outcome expectations are the anticipated consequences of specific career choices. SCCT posits that individuals are influenced by the expected outcomes of their career decisions. If someone believes that pursuing a certain career will lead to positive outcomes, they are more likely to choose that career (Lent et al., 1994). Due to the Model Minority Myth, Asian Americans may expect greater societal approval, financial security, and family pride from STEM careers. This can lead to a cycle of aligning career choices with those fields to meet perceived expectations. Conversely, the Model Minority

Myth can create fear of negative outcomes if Asian Americans pursue less "prestigious" or more unconventional careers that fall out of the realm of STEM (Wolfgram et al., 2024).

Personal Interests

SCCT emphasizes the importance of individual interests in career choice. People are more likely to select careers that align with their personal interests and values (Lent, et al., 1994). Interests can be influenced by various factors, including past experiences and exposure to role models. As an important aspect of SCCT, interests may guide the exploration of education and career options, increase persistence and effort, and shape goals. However, there is a debate concerning the influence of interest in Asian American population. According to Hui and Lent (2018), interest is the most reliable predictor of choice consideration of Asians. On the contrary, Tang et al. (1999) suggest that family involvement is much likely to influence Asian Americans' career choices rather than interest. The Model Minority Myth can also pressure East Asian Americans to prioritize careers that align with societal and familial expectations over personal interests. This might suppress the development of genuine interests that deviate from the stereotype, limiting career exploration and satisfaction. In this research, I examined how East Asian Americans' interests are developed and pursued within the context of cultural and familial expectations. This involved understanding the balance between personal interests and the potential desire or pressure to conform to the Model Minority Myth and parental expectations, on the development of interests in STEM.

Contextual factors

Contextual factors must be considered when applying SCCT to Asian studies. The literature is often understated about Asian culture and takes it for granted when taking cultural specificities into consideration. While family expectations, such as filial piety, are sometimes

acknowledged, they're often treated as surface-level factors without exploring their depth. For instance, filial piety can influence decisions around career paths by leading Asian American individuals to internalize both family and societal expectations, pushing them toward achievement-oriented careers to meet dual standards, yet its role is seldom dissected in terms of its impact on personal autonomy, mental health, and career satisfaction (Hui & Lent, 2018). The Model Minority Myth amplifies these expectations which can lead to feelings of guilt or shame if individuals wish to pursue career paths out of STEM or if they do not meet the stereotype's expectations (Cheryan & Bodenhausen, 2000). These influences are complex and deeply rooted in cultural narratives but are often reduced to stereotypes in the literature.

While SCCT is a useful framework for understanding how interests, self-efficacy, and outcome expectations influence career development, scholars have noted that its treatment of contextual variables such as race, culture, and stereotypes is often underdeveloped. At the same time, research on the Model Minority Myth demonstrates how racialized narratives shape expectations for Asian Americans in education and career paths, particularly STEM. However, the relationship between SCCT and MMM has not been explicitly explored in the existing literature. This gap raises important questions: How do cultural stereotypes, such as the MMM, act as contextual influences within the SCCT framework? How might racialized discourses influence the development of self-efficacy, outcome expectations, and interests? These interconnections are currently unexplored, indicating an opportunity for research to bridge theoretical frameworks with Asian American students' lived experiences.

Conclusion

The literature reviewed in this chapter emphasizes the complexities of education decisions and career development among Asian Americans, which are influenced by multiple

factors such as racial stereotypes, cultural values, and familial expectations. While the Model Minority Myth continues to shape public narratives about Asian American academic success, its psychological and sociocultural implications are understudied, particularly in relation to specific East Asian subgroups in terms of their education and career choices. Although SCCT is a useful framework for understanding individual and contextual factors in career development, it does not explicitly include racialized and culturally specific experiences. This gap is especially salient for East Asian Americans, whose choices may be influenced by culturally transmitted ideologies and racialized perceptions. Current research has not provided a comprehensive understanding of how these factors interact to influence STEM career paths. This study seeks to close that gap by employing an adapted SCCT framework that includes cultural and racial contextual variables relevant to East Asian Americans.

Chapter 3: Methodology

According to Li et al. (2021), Asian students' choice to pursue or avoid STEM careers could be understood as the interaction among personal interest, contextual variables, self-efficacy, and outcome expectations in applying SCCT. According to Nguyen (2021), when using SCCT on Asian Americans' career decisions, the influence of Model Minority Myth is significant in considering how it affects self-efficacy and outcome expectations. The general perceptions of Americans towards Asians, including those held by teachers and peers, shape Asian Americans' self-perception and reinforce the Model Minority Myth (Zhou & Lee, 2017; Ching, 2022). Additionally, the internalization of model minority expectations including the conformity to the stereotype plays a critical role in the career development of Asian Americans (Fouad et al., 2008).

The overarching research question of this study is *What factors influence the racialization of East Asian Americans in STEM?* Two sub-questions were created to investigate the main question: (1) *What motivates East Asian Americans to pursue STEM education and careers?* (2) *What role does the Model Minority Myth play in East Asian American students' career decisions?* To answer sub-question 1, this study investigated three major components of SCCT: self-efficacy, outcome expectations, and personal interests, while also including a fourth component of contextual variables. To address the limitations of SCCT in capturing the racialized experiences unique to East Asian Americans, and to answer sub-question 2, this study also introduced a supplemental framework based on the Model Minority Myth (MMM). The MMM framework, created specifically for this study, allows for a more contextually responsive investigation of how racialized expectations, cultural ideologies, and societal narratives influence East Asian Americans' STEM career decisions.

This chapter outlines the qualitative methods used to investigate these dimensions. It describes the research design, participant selection criteria, recruitment strategies, data collection and analysis procedures, ethical considerations, and the researcher's role. This methodological approach aims to center participants' lived experiences while taking into account the complex cultural and racial contexts that shape their education and occupational trajectories.

Research Design

This study employed a qualitative research design to investigate the education and career decision-making processes of East Asian Americans in STEM fields. A qualitative approach was chosen to capture participants' lived experiences, cultural perspectives, and internal reflections. The constructivist paradigm, which recognizes knowledge as co-constructed through participants' interpretations of their realities, guided this inquiry.

Data were collected through individual, semi-structured interviews. The interview questions of this study focus on participants' experiences and perspectives on STEM education and careers as East Asian Americans. Initially, to examine personal, contextual, expected outcomes and self-efficacy factors that influenced East Asian Americans' decisions to major in STEM careers, the interview questions were developed according to the four domains–personal interest, contextual variables, outcome expectations, and self-efficacy–of SCCT (Li et al., 2021).

To remove potential biases and ensure clarity regarding the purpose of the questions, each question was presented to a peer group for feedback to determine how it might be interpreted by an interviewee. They identified potential bias, assumptions, and ambiguous language in the questions, provided insights into the topic's relevance, and introduced new perspectives that I had overlooked. Adjustments were made to the interview questions based on

feedback from the peer-review to improve the clarity and alignment of the interview questions with my research objectives.

Interpretation of the SCCT Domains

In developing the interview questions for this study, four domains of SCCT (personal interests, contextual variables, self-efficacy, and outcome expectations) suggested by Li et al. (2021) were carefully interpreted to align with the career decision-making experiences of East Asian Americans in STEM fields. Each domain served as a lens through which relevant factors influencing career choices were explored. *Personal interests* were examined to understand how intrinsic characteristics shape career trajectories. *Contextual variables*, including family expectations and societal stereotypes, were considered to capture external influences that may facilitate or constrain career options. The domain of *self-efficacy* was addressed to explore participants' confidence in their STEM abilities and career goals, while *outcome expectations* focused on their anticipated success and perceived challenges in STEM careers. Together, these domains provide a comprehensive structure for developing interview questions that would yield insights into the unique factors shaping Asian American career pathways in STEM.

The interview questions in the *personal interests* domain inquired about the participants' interest development and the experiences they have encountered. Participants were asked to describe incidents that have influenced their interests in order to further investigate and analyze the factors that contribute to their career decisions.

Contextual variables refer to social, cultural, and environmental factors that may influence career decisions. For East Asian Americans, these variables often include family expectations, cultural values, societal stereotypes, and experiences of discrimination (Fouad et al., 2008; Li et al., 2021). This domain asks participants about their parents' occupations, family

expectations for their education and career, and their perceptions of Asian and American culture in terms of influences on career path. Cultural specificities such as filial piety were examined by asking about the participants' family involvement in their career choices. Additionally, the question: *What influence did your teachers and/or peers have on your career decisions?* can investigate how societal expectations of model minorities influence their career choices.

The *self-efficacy* domain emphasizes participants' beliefs about their ability to succeed in STEM careers. I asked about the participants' perceptions of themselves and their education or career, investigating whether and how they internalize their competence in meeting the demands of majoring in STEM fields. The question *how do you feel about your ability to succeed in STEM courses, and what factors influenced your achievement?* examines how participants internalize socio-cultural expectations and may conform to the Model Minority Myth.

The *outcome expectations* domain investigates participants' expectations for the careers they choose. I asked about the participants' career plans and why they chose to do them. Besides the overarching question of *what made you choose your major (college)/ job (working)*, their perceptions towards the future were examined by the question *what were your hopes for the future in your career decisions?* I also asked the participants how certain perceived benefits influence their career decisions.

The interview questions from each domain are related, sometimes overlap, and were asked following the participants' thought processes. To avoid leading participants to give answers that conform to the researcher's assumptions, the questions are open-ended to allow the participants to freely share their perspectives (see Table 1).

Table 1

Interview Questions Informed by SCCT

SCCT General Domain	Personal Interest	Contextual variables	Self-efficacy	Outcome expectations
Demographic information		Family, teacher, culture…	education experiences, social influence…	High paying, working environment
		What made you choose your major?		
• Gender identification • Ethnicity • Immigrant status • Current education or career status	• What were your career interests in your earlier years and what do you think influenced your interests? • What are your current career interests, and what influenced your current interests? • How did your career interests change over the years, and what do you think influenced those changes?	• What do your parents do? • What were your families' expectations regarding your career decisions, and how were they involved? • Where do you think these expectations came from? • What influence did your teachers and/or peers have on your career decisions? • What other factors do you think may have contributed to your career decisions?	• How do you feel about your ability to succeed in STEM courses, and what factors influenced your achievement?	• What do you plan to do after graduation, and why? • What were your hopes for the future in your career decisions, and how did your hopes for the future influence your career decisions? • What did you perceive as some of the benefits in your career decisions?

Follow up questions such as *why do you think that?* were asked when the participants' responses to the pre-determined questions required probing deeper, or when unexpected topics surfaced.

Model Minority Myth Framework

The influences of the Model Minority Myth (MMM) on the education and career decisions of East Asian Americans were examined by identifying traits in key aspects of the stereotype. According to Chao et al. (2013), Cheryan and Bodenhausen (2000), Ching (2022), Ching (2022), Lee (2015), Lee and Zhou (2014), Lee (2021), McGee et al. (2017), Museus and Kiang (2009), Nguyen (2014), Shah (2019), Sue et al. (2009), Wu (2013), and Zhou and Lee (2017), the MMM manifests in various ways, including an emphasis on academically superior in STEM, diligence, compliance, high expectations, and other related attributes. I grouped the traits of MMM that influence East Asian Americans' education and career decisions in STEM into four key domains: *perceived academic excellence, cultural explanations, homogenous group,* and *pressure to conform* (see Table 2). The development of the four key domains of MMM involved a systematic process of analyzing and synthesizing existing literature to identify recurring traits and themes. Initially, a comprehensive review of scholarly sources revealed traits commonly associated with MMM. These traits were then critically examined to understand their broader implications and grouped based on their conceptual overlaps and systemic significance. For instance, diligence and compliance were categorized under *cultural explanations*, as they reflect societal and institutional expectations of a cultural and racial character of hard work and conformity. The pressure to conform category includes the high expectations of the myth placed on East Asian Americans and the internalization of the stereotype. This internalization often

creates a sense of obligation to meet these expectations and a pervasive fear of failure, which frequently results in the pigeonholing of Asians into STEM majors and careers.

Table 2

Traits of Model Minority Myth

Domains	Traits	Scholars
Perceived academic excellence	• Academically superior in STEM • Narrowed view of success • Lack of creativity or leadership skills	Chao, M. M. et al. (2013) Cheryan, S. and Bodenhausen, G.V. (2000) Ching, T. H. W. (2022) Lee, E. (2021) Lee, S. J. (2015) Lee, J and Zhou, M. (2014) Wu, E. (2013)
Cultural explanations	• Diligence and compliance • Success due to "Asian values" • STEM abilities are inherited	Chao, M. M. et al. (2013) Ching, T. H. W. (2022) Shah, N. (2019) Zhou, M. and Lee, J. (2017)
Homogenous group	• Low-achieving Asians are invisible • High-achieving Asians are normal • No disparities within Asians • Asians do not need assistance	McGee, E. O et al. (2017) Museus S. D. and Kiang, P. N. (2009) Nguyen, V. T. (2014) Wu, E. (2013) Zhou, M. and Lee, J. (2017)
Pressure to conform	• High expectations • Obligation to meet the expectations • Pigeonholing into STEM careers • Fear of failure	Ching, T. H. W. (2022) McGee, E. O et al. (2017) Sue, D. W. et al. (2009)

Perceived academic excellence positions East Asian Americans as academically superior, especially in STEM, often portraying them as "naturally gifted" in these areas (Lee, 2021; Wu, 2013). The high achievement aspect of the myth reinforces a narrowed view of success centered on excelling in STEM fields (Chao et al., 2013; Lee, 2015; Ching, 2022). Lee and Zhou (2014) argue that this framing reduces individuals to mere symbols of productivity, valuing them only

for their intellectual contributions while ignoring their broader aspirations or personal challenges. The myth further diminishes their humanity by treating them as robotic or mechanical, capable of excelling only in technical disciplines but lacking creativity or leadership skills (Cheryan & Bodenhausen, 2000).

Cultural explanations, which attribute success to supposed "Asian values" such as strong work ethic, familial pressure, and an emphasis on education, exacerbate this racialization by framing academic and professional achievements as a natural outcome of cultural values rather than systemic advantages or personal effort (Shah, 2019). Many educators and policymakers believe that all Asian American students (including those of South Asian descent?) are naturally gifted in STEM, and thus attribute their academic success to innate abilities rather than hard work and dedication (Zhou & Lee, 2017). This narrative reinforces a belief that Asians are inherently predisposed to excel in STEM, disregarding systemic barriers they may face, such as discrimination in hiring or a lack of leadership representation (Ching, 2022).

The myth also treats East Asian Americans as a *homogenous group*, flattening the rich diversity among ethnicities, socioeconomic statuses, and individual experiences. It can erase intra-group diversity and render low-achieving Asians invisible while normalizing high achievement as the standard (Museus & Kiang, 2013; McGee et al., 2017). This homogenization obscures disparities within the Asian American community, particularly among Asians who do not conform to this myth (Nguyen, 2021). The overgeneralization of the stereotype ignores the diversity of Asian Americans' experiences and circumstances, resulting in racial inequity in the education field. This assumption can lead to the misconception that Asian American students do not require assistance or accommodations to succeed academically, giving rise to the myth of meritocracy (Zhou & Lee, 2017).

Finally, the myth can impose a *pressure to conform*, where individuals feel obligated to meet the high expectations of excellence associated with their racial identity (Ching, 2022). Many individuals internalize the pressure to meet the narrow definition of success, fostering a pervasive fear of failure, and the pigeonholing of individuals into STEM careers disregards personal interests and broader talents (Sue et al., 2009; McGee et al., 2017). By simplifying success into rigid cultural and behavioral metrics, the myth marginalizes nuanced experiences and reinforces inequitable standards.

Together, these four domains perpetuate an incomplete, harmful narrative that idealizes and constrains East Asian Americans, thereby reinforcing systemic oppression and ignoring individual differences within the group. The MMM framework, which consists of these four domains, was used in this study to investigate how sociocultural factors influence East Asian Americans' education and career choices in STEM.

Participant Selection

Participants of this research were current or former Virginia Tech students recruited through a variety of methods. Flyers were distributed physically on campus, electronically via the Graduate School Listserv, and in the Asian/Pacific Islander/Desi American (APIDA) + center Newsletter. As a part of the APIDA + center, the Asian American Student Union has numerous sub-student affiliations such as the Chinese American Society, Korean American Student Association, and Society of Asian American Scientists and Engineers. Students who participated in this study were offered a $20 gift card of their choice as an expression of appreciation for their time. Students who expressed an interest in participating were required to complete a Google form that requested demographic information for screening. Students who responded to the Google form were screened using the following criteria:

1. Undergraduate and graduate students majoring in STEM;
2. Asian Americans of Chinese, Japanese, Korean, or Vietnamese descent;
3. Resided and pursued education in the United States before enrolling in college.

The participant had to meet all three criteria to participate in the research. I also encouraged all the recipients to notify their peers and friends who might be eligible for this study. 13 students responded to the google form and 11 of them were selected as participants for this study (see Table 3). Although one participant only completed the initial interview, their data were included in the study because the first interview provided significant data relevant to the research questions. Their perspective added to the diversity of experiences represented and provided valuable context, even without a follow-up.

Table 3

Participants Demographic Information

Participant	Ethnicity	Gender	Major	Immigration Status	Parent Ethnicity and Occupation
Todd	Korean American	Male	Grad in CS	1.5 generation. Moved to U.S. for high school	Father: Korean American, Engineer; Mother: Korean American, Music teacher
Shinichi	Korean Japanese American	Male	Grad in Math	Father 1.5 generation, mother Japanese American for generations	Father: Korean American, College professor; Mother: Japanese American, Lawyer
Alessa	Chinese American	Female	Grad in ECE	Father 1.5 generation, mother generations	Father: Chinese American, engineer, same major; Mother: Chinese American, stays at home
Ashley	Japanese American	Female	Undergrad in Environmental Science	3rd generation or above	Father: white, engineer; Mother: Japanese American, stays at home
Michael	Chinese American	Male	Grad in Civil Engineering	1.5 generation, moved to U.S. in middle school	Father: Chinese American, owned a construction company; Mother: Chinese American, stays at home
Liem Nguyen	Vietnamese American	Male	Undergrad in ME	2nd generation	Father: Vietnamese, project manager; Mother: Vietnamese, doctor
James	Taiwanese	Male	Undergrad in Biomedical Engineering	2nd generation	Father: Taiwanese, engineer; Mother: Taiwanese, finance
Emily	Japanese American	Female	Grad in Biological Engineering	3rd generation or above	Father: Japanese American, Math professor; Mother: white, stays at home
Sophie	Korean American	Female	Undergrad Neuroscience	2nd generation	Father: Korean, construction; Mother: Korean, post office
Lily	Vietnamese American	Female	Grad in Environmental Science	2nd generation	Father: Vietnamese, engineer; Mother: Vietnamese, owns a nail salon
Ryan	Vietnamese American	Male	Undergrad Biochemistry	2nd generation	Father: Vietnamese, engineer; Mother: pharmacist

Note. This table illustrate participants' ethnicity, major, immigration status, as well as their parents' occupation and ethnicity. 1.5 generation is used to describe people who were born outside of American and immigrated to American with their parents as dependents.

According to Creswell (2013), qualitative studies that focus on specific demographic or experiential groups often require fewer participants, typically between 5 to 25, as the emphasis is on depth of understanding rather than breadth. Morse (2000) suggests sample size of 20 to 30 for grounded theory and fewer participants of 6 to 10 for phenomenological research. This study adopted sequential interviews that involve multiple engagements with each participant, allowing for in-depth exploration of their experiences and perspectives. Because of this, fewer participants are often needed (Guest, Bunce, & Johnson, 2006). Hermanowicz (2013) suggests that for longitudinal or sequential interviews, a smaller sample size (e.g., 10–15 participants) can be sufficient for gaining in-depth insights. By engaging 11 participants in sequential interviews, this study ensured that the data collected was manageable, facilitating a rigorous, in-depth analysis of themes related to career choices without excessive redundancy or resource constraints.

Data Collection…I didn't really look beyond here, so I am not including it in my comments

Data were collected through individual, semi-structured interviews. All 11 of the qualified participants were interviewed individually. The interviews were audio recorded and transcribed. Individual interviews allow in-depth, personal insights into participants' experiences without the influence of group dynamics (Creswell, 2013). For this study, individual interviews can yield richer, more nuanced data. It allows participants to discuss personal pressures such as family expectations and identity struggles in STEM in more depth, and allow the researcher to probe deeply into each participant's experiences, thoughts, and feelings. Semi-structured interviews, which combine the flexibility of open-ended questions with the structure of a guided interview format, were used in this study. Interview questions were pre-designed to prompt detailed responses, encouraging participants to explain their thoughts in their own words, rather than giving short or fixed answers (Marshall et al., 2021). In this study, semi-structured

interviews could allow participants to discuss their experiences with cultural expectations, personal aspirations, and the impact of racial stereotypes on their decision-making, providing richer, more personal insights that a structured survey might miss.

In this study on East Asian Americans' career choices, sequential interviews were employed to provide a deeper understanding of participants' decision-making processes over time. The initial 60–90 minutes interview explores their education and career experiences, cultural influences, and perceptions of MMM. According to Kvale (2007), qualitative interviews typically require 1 to 2 hours to allow participants to share in-depth responses while avoiding fatigue. This timeframe ensured that all 12 questions, including follow-up probes, can be explored comprehensively, facilitating a nuanced understanding of the factors influencing East Asian Americans' career choices in STEM. Similarly, Turner (2010) emphasizes that interviews lasting 45 to 90 minutes are ideal for semi-structured designs, as this duration balances the depth of inquiry with participants' engagement and time constraints. By adhering to this recommended range, the study aimed to capture rich, meaningful data while respecting participants' availability and comfort.

Following the initial interview, a follow-up interview lasting 30 minutes was conducted. This follow-up allows for clarification of preliminary findings, further exploration of emerging themes, and the opportunity to capture participants' reflections after the initial discussion. Sequential interviews are particularly effective for understanding complex, evolving processes, as they allow researchers to identify patterns or shifts in participants' perspectives (Lewis, 2007). Additionally, this approach provides a means of validating findings by revisiting topics and confirming interpretations with participants, which enhances the reliability and depth of the data (Hermanowicz, 2013). In this study, ten out of eleven participants took part in the follow-up

interview. By engaging participants in multiple conversations, this study captured a richer, more nuanced understanding of how intersecting cultural, racial, and social expectations shape East Asian Americans' career decisions.

Data Analysis

Components of Constant Comparative Method (CCM) were used to analyze the data. Developed by sociologists Barney Glaser and Anselm Strauss in the 1960s, CCM is used for analyzing qualitative data, such as interview transcripts, observation notes, or other forms of textual data. This method involves a systematic and iterative process of comparing elements within and across data sources to identify patterns, themes, and categories (Corbin & Strauss, 2008). Mun and Hertzog (2019) examined Asian Americans' experiences using CCM components including open coding, constant data and code comparison, and theme formation. Asian American's career decisions are influenced by a number of social, cultural, and institutional factors, including stereotypes such as the Model Minority Myth. Components of CCM were used in this study because it allows researchers to delve deeply into these complexities by continually refining categories as new insights emerge.

The data analysis was performed following this process. Firstly, I performed open coding on each interview transcript. I began by breaking down the data into smaller units such as phrases, sentences, and paragraphs, and assign descriptive labels or codes to these units. The goal of open coding is to open up the data to all possible interpretations and meanings, allowing the researcher to discover concepts that emerge directly from the data, rather than imposing pre-existing categories (Corbin & Strauss, 2008). This initial coding is exploratory and captures the essence of the data. At the end of this phase, a list of initial codes and their frequency were developed. Ely (1991) emphasizes the interpretive and recursive nature of coding, in which

researchers move back and forth between data and emerging ideas. She defines qualitative analysis as a continuous process of making meaning rather than a linear procedure.

Secondly, I continuously compared codes from the list to identify similarities, differences, and patterns. Similar codes were refined and grouped into categories that represent higher-level concepts that capture commonalities across codes. This process is called axial coding by Corbin and Strauss (2008). The codes and categories developed in this stage were inevitably related to the pre-determined SCCT's domains (personal interests, contextual variables, outcome expectations, and self-efficacy) since the interview questions are developed based on those domains. However, aiming to explore new factors and elements, the codes and categories were compared and connected across the domains. This comparison focused on exploring similarities, differences, and potential relationships between my findings and SCCT along with existing literature.

Finally, the themes emerged from categories, with new findings from existing SCCT highlighted. The findings include new factors that are not included in the domains, as well as the discussion of factors that are included in the domains based on the analysis of the data in this study. According to Ely (1991), theme development in qualitative research is less about discovering absolute truths and more about constructing meaning through constant reflection and interpretation, which influenced the study' s shift from inductive to deductive approaches.

Following this analysis, to identify the role that the Model Minority Myth played in Asian American students' career choices, deductive coding was applied to the transcripts. Deductive coding is a systematic process in qualitative research that uses predefined codes or themes based on theoretical frameworks or existing literature to analyze data (Crabtree & Miller, 1999). This approach begins with the identification of a framework, such as the Model Minority

Myth (MMM), which provides a structure for categorizing data. Using MMM as a coding framework, I developed a set of predefined codes and categories corresponding to key domains, such as perceived academic excellence, cultural explanations, the homogenization of Asian identities, and pressures to conform (see table 2).

Table 4

Deductive Code Book for MMM

Categories	Codes
PAE–Perceived Academic Excellence	• Academically superior in STEM • Narrowed view of success • Lack of creativity or leadership skills
CE–Cultural Explanations	• Diligence and compliance • Success due to "Asian values" • STEM abilities are inherited
HG–Homogenous Group	• Low-achieving Asians are invisible • High-achieving Asians are normal • No disparities within Asians • Asians do not need assistance
PTC–Pressure to Conform	• High expectations • Obligation to meet the expectations • Pigeonholing into STEM careers • Fear of failure

During the analysis, these codes were applied to the interview transcripts to identify segments of data that align with the framework using the code book (see table 4). For instance, phrases reflecting diligence and compliance were coded under "perceived academic excellence," while discussions of family obligations fell under "cultural explanations." This deductive approach ensured the analysis remains focused on the specific research objectives and allowed for a structured exploration of how participants' experiences align or diverge from the MMM framework. By systematically applying and refining codes during the coding process, researchers can validate the relevance of the framework while uncovering nuanced insights that may extend or challenge the existing theoretical understanding (Ryan & Bernard, 2003).

Reflexivity and Trustworthiness

Trustworthiness involves demonstrating the credibility, transferability, dependability, and confirmability of a study. These criteria help establish the rigor and validity of qualitative research (Lincoln & Guba, 1985). In this study, I aimed to investigate factors influencing East Asian Americans to make career and education choices in STEM. To ensure the trustworthiness of my findings, I employed various strategies to establish credibility, transferability, dependability, and confirmability.

Credibility refers to the confidence that can be placed in the truth of the research findings. Member checking and peer debriefing were used to establish credibility. Member checking entails engaging participants in the process of reviewing and validating the accuracy of the data and interpretations. In this study, I engaged in member checking by presenting initial findings to the participants in the follow up interviews to verify the accuracy and relevance of the interpretations. Peer debriefing involves engaging in discussions with peers or mentors to obtain an external viewpoint on the research process and findings. During the coding, thematic analysis, and writing up of the findings, I organized frequent peer debriefing sessions with peers and advisors to analyze and evaluate the findings, thereby increasing the study' s credibility.

Transferability is the degree to which the findings of a study can apply to other contexts or groups. For this study, it was addressed by providing a thick description of the research context and participant backgrounds. This allows readers to evaluate the relevance of the findings to similar situations. Dependability was achieved by consistently maintaining an audit trail throughout the study, documenting every step of the data collection and analysis process.

Confirmability is the degree to which the findings of a study are shaped by the participants rather than the researcher's biases or assumptions. As a researcher of East Asian

descent, with a background in both engineering and education, I approached this study with a particular interest in Asians' education and career choices in STEM. I realized that the intersection of my cultural background and gender identity as an Asian woman, combined with my prior interactions with Asians in STEM fields, may influence my interpretation of the participants' experiences. I may have confirmation bias, which is the tendency to favor information that supports one's preconceptions while disregarding contrary evidence. According to Creswell (2013), to avoid confirmation bias, researchers should seek contradictory evidence, use systematic methods, involve peer feedback, and remain reflexive about their own biases throughout the research process (Creswell, 2013). The interview questions for this study were peer-reviewed, and multiple peer debriefings were conducted during the data analysis process to reduce potential bias and assumptions. For example, the question *what were your career interests in your early years, and how do you believe they influenced your interests?* was originally *How do you identify your interests? (When? What? Who?).* By reframing this question in a way that corresponds to the discussions during the peer debriefings, I was able to ensure that the questions asking specifically about interests are related to careers rather than random interests. *Do you think you put others' needs ahead of your own when doing things?* was excluded because it had the potential to mislead participants about my assumptions.

According to Weaver-Hightower (2019), researchers establish confirmability by practicing reflexivity. Reflexivity is a critical self-examination process that researchers engage in to acknowledge and reflect upon their own influence on the research process and outcomes (Weaver-Hightower, 2019). It entails recognizing and analyzing one' s role, perspective, and possible biases as a researcher. In this study, the reflexivity and trustworthiness processes helped to reduce confirmation bias by recognizing it, developing a structured data collection and

analysis process, and performing member checking and peer debriefing. In analyzing the data, I employed a constant comparative method, consistently reflecting on my interpretations. To ensure the accuracy of my coding and interpretations, I engaged in peer debriefing and member checking. The qualitative study' s dependability, transparency, and credibility are all improved by reflexivity.

This study is grounded in constructivist epistemology, which assumes that knowledge is co-constructed by both researchers and participants. This perspective influences my approach to data collection, highlighting the significance of participants' subjective perceptions. I chose to do semi-structured interviews based on this epistemology, asking open-ended questions, and allowing participants to share their experiences in their own words. I am aware of the power dynamics that exist between me, as a researcher, and the participants involved in my study. I took steps to minimize these by creating a comfortable and open environment for the participants. However, I acknowledge that my role as an interviewer may still influence their responses.

Conclusion

This chapter outlines the qualitative methodological framework that was implemented to investigate the education and career decision-making processes of East Asian Americans in STEM fields. The study' s objective is to examine the impact of cultural values, racialized perceptions, and contextual factors on STEM-related pathways. To achieve this goal, the research design is based on Social cognitive career theory and supplemented by a conceptual framework derived from the Model Minority Myth. The methodology established a robust foundation for the analysis and interpretation of participant narratives in the subsequent chapters.

Chapter 4: Findings for Social Cognitive Career Theory Framework

This chapter addresses the first sub-question of the study: *What motivates East Asian Americans to pursue STEM education and careers?* Using the social cognitive career theory (SCCT) as an analytical lens, this chapter explores how participants' interests, outcome expectations, self-efficacy, and contextual influences shaped their career pathways. All of the participants in this study were majoring in STEM fields, making their narratives particularly valuable for examining the socio-cultural mechanisms that influence such career decisions. In doing so, this chapter contributes to answering the study's overarching research question: *What factors influence the racialization of East Asian Americans in STEM?*

The SCCT framework provides a useful structure for understanding how career-related decisions are shaped by more than just personal preferences; they are informed by a complex interplay of cultural, familial, and social expectations. This chapter is organized into four sections, each aligned with a core SCCT domain: *Personal Interests, Contextual Variables, Self-Efficacy, and Outcome Expectations*. Within each domain, thematic findings are presented to illuminate how participants' choices to pursue STEM were guided by both internal motivations and externally imposed structures.

Theme 1: Interest in STEM: Purpose, Passion, and Practical Alignment (SCCT Domain of Personal Interest)

Many participants expressed genuine interest in science and engineering. This interest manifested in different forms, some derived meaning from helping others such as through medical work, others enjoyed problem-solving and technical creativity, while a few developed interests simply because STEM was the most visible option available to them. Meanwhile, some

non-STEM interests were suppressed to make room for STEM, which is considered to be more “realistic” in terms of career choices.

Purpose-Driven Interest

Several participants, particularly those pursuing health professions such as medicine, nursing, or biomedical engineering, described their career path as being deeply rooted in a desire to help others. Their STEM pathways were chosen not simply for stability or status, but for the opportunity to improve lives, serve communities, or “give back” in meaningful ways. This was especially evident among participants who referenced underserved communities or family health experiences. Sophie grew up in a church-based environment and volunteered in shelters frequently. She chose to major in nursing so that she could help people. “It’ s just my passion of wanting to help others directly through the medical field. That’ s kind of pushing me.” Similarly, Ryan stated his motivation of choosing medical fields:

> I think that you’ re also able to have a pretty positive impact on your community, you’ re able to serve the community and help them and improve their health. … I think that with my jobs, I always want to be positively impacting the people instead of taking advantage of them, or doing it only for the money.

This type of intrinsic motivation reflects a purpose-driven approach to STEM, in which the field is not only logical or prestigious, but also socially important. STEM-derived meaning resonated with these students’ personal ethics, cultural values of helping others, and sense of responsibility.

Enjoyment and Natural Fit

Another group of participants stated that their decision was primarily motivated by their enjoyment of STEM subjects. These participants explained that science and math “made sense”

to them, or that they were naturally drawn to problem-solving, structure, or creativity in technical fields. This motivation was frequently associated with positive feedback loops of early success, interest, and curiosity, rather than pressure. Michael expressed his interest in STEM:

> I thrive in an engineering field, and somebody else could be vice versa. So to me, doing numbers is just what seems right to me.

Ashley credited her love of science to hands-on involvement:

> I think it was mostly developed through extracurricular because I was in a robotics club and a science club, and I really enjoyed it, and that made me realize that I could do that as my career, like sciencey stuff.

James described early engagement with engineering through childhood play: "I've always wanted to be an engineer, because probably since middle school, because I was always hands on. I enjoy doing hands on stuff. So building Legos, building a model kits, especially as Gundam or airplanes."

These participants showed interest-based career motivation. It emphasizes the importance of recognizing that not all Asian American STEM trajectories are imposed or externally shaped. STEM is simply a field that some people find energizing, successful, and authentically interesting.

Interest from Exposure

While some participants expressed genuine interest in STEM, a subset of them admitted that it was the only academic or career path they had ever been exposed to or encouraged to pursue. This limited exposure limited their perceived choices, even though they found themselves "liking" what was offered. "I look back and say, oh, I never tried that. What if the other thing is fun? What if I never know?" said Michael.

Similarly, Ryan wished he could be exposed to more careers:

> So maybe if my parents showed me more possibilities, or opened up like, oh, you could be this with biochemistry, or this major gets you to do this, or if you want to do pharmacy, or anything like that, just exposing me to different career paths at a younger age, I think, would have been interesting because even those majors are... they' re different. But you can still make stable careers out of them. So I think I wish I had more options when I was younger, and maybe or I was aware of more options.

These reflections reveal how limited exposure shaped students' sense of possibility, subtly channeling their interest toward pre-approved paths without full exploration of alternatives.

Suppressed Interests

Multiple participants expressed that they had previously been interested in non-STEM fields such as English, art, or history, but chose STEM because they believed other options were less viable. They believed STEM fields were more stable in terms of salary and employability than non-STEM careers, and it was important for them to have that stability in life. Sophie enjoys pottery, Alessa enjoys drawing, Liem is interested in psychology, Lily excels in English and history, and Emily enjoys art. None of them chose their interests as a career. "I like it, but I'm not gonna make money" answered Emily.

These suppressed interests rarely vanished. Rather, they step back as hobbies because they are impractical as careers. Lily shared how her creative interests were always present but treated as secondary:

> I was naturally more gifted in reading and writing and history. I particularly like English. I was a lot stronger at it than math and science. I had to study to do well in those subjects, but English just came more naturally to me. So I do think in a sense my creative abilities are better than that in STEM. My hobbies do lean more towards writing, reading and art, and other things like that, more in the creative pathway. But I'd always seen it more as a hobby.

Alessa shared how she's only allowed to choose STEM fields, and her interest became a hobby:

> Throughout my childhood, and even now I still like drawing as a hobby. So at some point in middle school, I was seriously considering it for a career, and so I think I asked my parents. And they were like, no, and I think the thing that stood out to me was that they didn't say anything about making money per se, even though I understand that's their bottom line these days. Looking back, it was that they said, oh, it would be a waste of talent or something. … I think it was the conversation in middle school that really was like, I'm not allowed to do anything not STEM.

These stories show how STEM interest was cultivated while other interests were redirected. Participants often held the belief that "real" careers had to be in STEM, and any other interests, however fulfilling, were relegated to hobbies.

Theme 2: Anchored by Expectations: Family, Culture, and School as Career Architects (SCCT Domain of Contextual Variables)

Throughout the interviews, participants emphasized that their education and career decisions were influenced not only by personal interests, but also by a variety of external factors

such as parents, culture, teachers, and academic environments. These contextual forces acted as both a source of support and a subtle architect of the paths participants perceived they were expected to take. Rather than being presented with open-ended exploration, many described their careers as "already laid out" as a result of the combined influence of family values, cultural norms, and STEM-focused schooling environments.

Parental Influence

Participants consistently described their parents as being heavily involved in shaping their academic journeys, both explicitly and implicitly. Some participants reported that their parents actively chose extracurricular activities or education environments to steer them toward STEM. For example, they were enrolled in magnet schools with STEM curricula, registered for summer robotics camps, and encouraged to take Advanced Placement (AP) science and math courses as early as middle school. Shinichi's parents even relocated the family so that he and his sister could attend an education setting that they believed would be more beneficial to them. In this way, their academic portfolios were designed to signal readiness for a STEM career, often before they had developed their own career goals.

> Alessa: I did do a lot of math camps during summer. And I did do some Lego robotics or something during the school year as extracurricular. So they [parents] had always sort of push me and my brother towards STEM direction. I guess the unconscious decision was being aware, I think.
>
> Liem: So in high school. So, first of all, both of my parents are engineers. In high school, I always push towards stem fields. For example, they always told me to take APs or advanced classes in math and science. So any of the math, or any of the science, for example, I took a lot of physics in high school. I took a lot of

> computer science. I took a lot of math, the highest math levels in high school, and because of that I always kind of … I never questioned that I would ever go into some kind of STEM field since high school.

Some participants chose a specific STEM pathway to follow in their parents' footsteps. The majority of participants have engineer parents, and some of them study in the same fields as their parents. Michael's father owned a construction company. "I've always wanted to do something similar, and my brother works in the same field," Michael explained. He thought it would be beneficial for him to follow his father's career path and carry on the legacy, so he didn't have to start from scratch:

> I think it's a smart thing to do, because he has the experience. He's been in the field for 20 plus years, and if he already invested all the time in here, why would I go do something else and start from ground you know, I don't know. As the older I get the more clear it makes sense to me to follow what he does.

Parental influence took the form of indirect messaging as well. Parents who work in STEM fields frequently emphasized the importance of such careers during casual conversation or by example. Participants recalled hearing their parents speak positively about the financial benefits, respect, and job stability that come with engineering, medicine, or computer science. Some influences took the form of suggestions and expectations. Todd shared his parents' expectations on his career:

> Because they [parents] keep talking about it. My dad, how my dad talks about what's popular in computer science. And my mom tells me what she wants me to become… Like, "I think you'll be a good fit for science, computer science major,

> I think you'll be a good fit for science high school. You should do well in science and math."

Alessa's experience illustrates the force of early intervention. When she didn't initially qualify for the "gifted and talented" track in elementary school, her parents pushed her to retake the placement exam:

> I think I barely made the cut off of getting into normal. Then my parents were like, 'No, she gets to go to gifted talents.' And so I took the test again and I passed.

This moment set her on a different academic path, one that shaped her perception of herself and her capabilities. The message was clear: she belonged in advanced academic spaces, and her parents would ensure she remained there. Over time, these values became internalized. The choice of STEM is often made after reviewing the accumulation of choices largely made by their parents that led them there.

Education as Obligation, Not Choice

The moral weight of parental sacrifice was a recurring emotional theme throughout the interviews. Several participants viewed their education pursuits as acts of filial duty. For these students, education was framed not as a personal journey of exploration or self-fulfillment, but as a family obligation, requiring sacrifice and opportunity. The sense of "having to" rather than "wanting to" was a common theme in participants' reflections on their academic paths. Lily expressed this sentiment most clearly:

> It was more like school was always an obligation, not a choice. And when you go to college, it's not about passion. It's about stability.

She explained how her parents catered her education to fields like medicine and engineering because they were perceived as providers of stability. The obligation, however, was not just to attend college, but to excel:

> With more privilege that I have from what they were able to give me… our standard is higher in the sense that we have to go to a four-year institution, and we have to have a degree, and we have to do it easily, because we had no other hardships.

Her statement reveals a powerful intersection of gratitude, pressure, and inherited expectation: because her parents struggled, her path was not only expected, but also had to be walked competently and without complaint. This obligation extended into advanced education and career choices at the cost of sacrificing other career opportunities:

> My parents just with their grit, and you know the sacrifices they've made for my brother and I to be able to … just our only responsibility is to go to school. I do see the value in that. And I'm really appreciative of that. And I think that's why I care so much about my family, and why I made the choices that I've made this far, and also aligning it with what they want me to do so. In a sense, I guess that's my sacrifice for not exploring anything else.

Similarly, Shinichi fulfilled parental expectations at the expense of his own interests. His father is a college professor, and he expected him to earn a PhD, but that is not the goal Shinichi wants to pursue:

> I am just doing the dissertation for him. I don't want to do this, all of this stuff. I'd rather not be doing it… the whole grad school, the whole academia thing, right? But he wants me to do it. So I'm doing it.

Shinichi's words captured a stark inner conflict: fulfilling a parent's vision at the expense of one's own autonomy.

Other participants described this expectation in a more subtle but equally significant manner. "I guess they're like, you have the chance to, you should." Ashley shared. Implied in that statement is the moral weight of opportunity: if one's parents have worked hard to provide it, one must not squander it.

Similarly, Ryan described the education journey as something owed to his parents, a repayment for their support and investment:

> I went to a private school… they were paying for it, and they were always telling me, you know, do well… We're proud of you. So I always felt like it was my obligation to return results to them, you know. Do well.

Throughout these narratives, the concept of education as a duty rather than a choice was clear. For these students, academic performance was about more than just building a future; it was about keeping a promise, honoring sacrifice, and avoiding disappointments.

Collectivism and Communal Influence

Participants grew up in environments where performance was not just personal, but communal. Academic success was frequently viewed as a reflection of family competence, whereas failure could bring shame not only to the individual but to the entire household. Many people described how their parents compared them to peers or relatives, resulting in a constant comparison of worth. Todd described how constant comparison shaped expectations within his family and community:

> I think it's a Korean culture where you compare with others to be better than others. Everything your kids have to do better. You have to make more income. The car has to be better, the house has to be better.

Ryan echoed this sentiment, explaining:

> I think definitely in my family, my extended family, my mom especially. She's always comparing us to our cousins, and our cousins are very successful, medical school, dental school, engineers, all of that stuff. I guess she was always pushing us to be as good as them, and you know, also following in their footsteps. I guess they always push that kind of agenda so that we could also succeed, and also be as successful as our cousins.

This environment fostered a need to perform academically in ways that were socially acceptable and culturally valued. Success was viewed not only as an individual accomplishment, but also as a source of pride and validation for the entire family. Some participants saw themselves as members of a family unit, whose decisions should reflect the overall well-being. Ryan reflected on how his success was not solely his own, but something shared with his family:

> I think it's a little bit of both. I do think that they [success] belong to my family as well. I think that my families, or my parents, kind of live a little bit through me as well. They see themselves in me, so I think that it's shared by me and my family.

The notion that parents live through their children also creates the need for children to perform so that their parents can keep face. Michael described how parental pride can become entangled with achievement:

> And then as a parent, I guess it's kind of an ego thing right? Because if you see that you're like, oh, I'm so proud of my kids for going to this school and making into that school.

Under these conditions, STEM pathways that are associated with prestige and measurable success became a culturally reinforced norm. Todd explained the choice of STEM as a way to maintain an acceptable lifestyle within the community:

> There is a really big advantage, also. It's not just my parents. This is community in general that talks up. We Koreans care a lot, for a sad reason, we care about appearance, how much money we make. And a STEM major is definitely high paying compared to other majors right? And they don't want their kids to get a low paying job.

School and Teacher Influence

Many participants found that being exposed to STEM-focused academic environments normalized their interest in STEM fields. Students attended competitive high schools with strong math and science programs, and participation in engineering clubs or robotics was common. This "STEM as default" environment made it appear less like a deliberate decision and more like an expected path. James recalled his high school culture:

> My high school is very competitive in robotics and math courses... kind of also probably influenced how everybody thought of wanting to achieve in the future…. Especially playing with the sports team, I want to say 70% of these students had decided they also wanted to become an engineer.

Teachers also played a pivotal role in nudging students toward specific fields. For Sophie, a compassionate chemistry teacher solidified her pursuit of a medical field:

> If it wasn't for her, I probably would not be here right now… probably still studying a STEM, but just not a medical STEM.

Similarly, Shinichi credited his math interest to media and teacher figures:

> There is this YouTube channel called Numberphile… made mathematics seem like an attractive major… also because I was going to a Japanese immersion program, my first teachers were all Japanese women, so it's almost like I had tiger moms growing up.

Exposure to STEM-rich environments blurred the line between authentic interest and structural expectation. In these environments, STEM was not simply an interest; it was embedded into the daily rhythm of school life and social belonging.

Theme 3: Performing Competence: Self-Belief Follows Success (SCCT Domain of Self-Efficacy)

Several participants said that they chose STEM because they had consistently performed well in science and math prior to college. Even if they weren't particularly interested in the content, high achievement reinforced a sense of competence, making STEM appear like a natural fit and the most logical option. Furthermore, some of them described their competence as something they proved to others, rather than something they felt internally. This made self-efficacy more of a fragile construct that relied on continued success rather than internalized mastery. Liem, a mechanical engineering student, put this tension into words:

> I felt like STEM was something that I was a little bit better at. It's not something I ever resonated with, but it's just something that I could do. I don't feel in general STEM like math and physics, I don't. I don't feel a calling for it, and I don't love

> it, but I think I am good enough at it to make a career out of it. So that's kind of what I kept moving towards.

This quote exemplifies a recurring pattern: participants often followed paths they were objectively successful in, despite a lack of emotional connection.

Many had learned from a young age that doing well in math or science led to praise, recognition, and a sense of certainty about the future. Over time, this performance validation shaped how they saw themselves. James shared how academic achievement became central to his identity and ongoing motivation:

> I feel very confident, since I'm still able to keep track of what I need to accomplish by the end of the day at least, and also get ahead of assignments. … Because especially coming from being in high school, being all A student, I always, I still want to keep that track in college, even though it's not happening on the report card. But my goal is to try to get at least A in every course.

Rather than interest driving persistence, for students like James and Liem, it was past achievement that reinforced future decisions. They felt they could succeed, therefore they should.

Theme 4: Stability Over Passion: Calculated Choices in Uncertain Futures (SCCT Domain of Outcome Expectation)

A key element in SCCT is outcome expectations, the beliefs one hold about the consequences of certain actions. Many Asian American participants in this study stated that they chose STEM fields not because they were deeply passionate about them, but because they promised financial stability, job security, and social mobility. Throughout the interviews, this pragmatic career logic consistently outweighed personal interest, particularly among participants who had experienced or witnessed economic hardship for themselves or their families.

Pragmatic Career Logic

All 11 of the participants used language that framed STEM careers as rational and risk averse. STEM was viewed as a means of achieving a stable adult life with consistent income, employability, and long-term security.

> Todd: I'm going to computer science, and then there's a big financial incentive to do it. Well, then, it becomes my career.
>
> Sophie: I know for myself at least, whenever I think of STEM, I think of stability, being able to make a decent salary.
>
> Emily: I feel like STEM careers are always good, you're usually gonna find a job there.
>
> James: I think that engineering is always out there. Everybody needs engineers throughout this world to continue developing new things. And with that in mind, there's always job on the market for engineers … Really, there's a lot of jobs out there that you could apply for.

This perspective reflects a pragmatic career logic in which the perceived utility of a major outweighs personal interest. It was especially prevalent among participants whose families had faced immigration difficulties or financial insecurity. They see financial independence as a means of survival, not personal indulgence. Lily's parents came to the United States in search of better opportunities, but they faced difficulties because her mother was a refugee. She chose STEM majors in college because it provides a lifestyle that she feels secure with. Lily shared how her parents' experiences shaped her mindset:

> It's funny, because my parents' saying is like, you're never going to enjoy any job you work. But you have to work to be able to live. So it's important that you study

> hard, and you're good at what you do. So you can live that life. So I guess think in a sense, when you go to a four-year college, you choose a major that is safe to provide you stability in the future.

Sophie has a similar thought on financial stability. For her, choosing STEM and making a decent living is not just for her own life, but to support her family as well:

> Because my parents are both pretty poor in Korea. So America was kind of a fresh start. Even though I know they tried their best to hide it, I can definitely see how my family struggled to be stable and financially well compared to other families. So I think, since they just sacrifice so much, I just want to be able to have a career where I am able to take care of myself and my family, while also be able to take care of them, especially in cases of emergencies. So I think being stable is just a really important thing for me in the future and now.

In the meantime, she has poor job perceptions on non-STEM careers, which reinforced her choice of majoring in STEM fields:

> I know that just art itself. I know that it's hard to have a stable career, because I have a couple of friends that are going to art school right now at the moment, and they always tell me about how art is not the only thing they're focusing on. They have to be good with all the technology and just other stuff like that, because art is not a stable career for them.

Across narratives, financial pragmatism was not just a value; it was a lens through which participants evaluated the legitimacy and risk of possible futures. For many participants, choosing STEM was framed less as personal fulfillment and more as a rational investment in stability, family support, and survival.

Prestige and Social Status

Alongside practicality, many participants discussed the status and respect associated with STEM professions, especially medicine, engineering, and technology. The reputational value of these jobs often reinforced their decision to choose a STEM path. STEM fields were perceived not only as stable, but also as socially impressive. Majoring in biochemistry, Ryan aims to be a doctor and one reason he chose to do that is for its prestigious status:

> The benefits of choosing my career path. You get to work in a kind of a prestigious occupation, you know. People see doctors, and you know, you're the pinnacle of healthcare. So I think that that's really cool.

Shinichi expressed his needs to have "either high paying or high-status jobs" because of family environment:

> Our branch of the family is kind of the more job focused one, maybe more elitist compared to some of the other people, especially my Korean side. Everyone talks about going to college, talks about going to law school, talks about work being a researcher, and so on.

In order to obtain a high paying or high-status job, Shinichi majors in math and was hoping to get a Ph.D. although he has no aspirations in it. "Because if I was [in less prestigious careers, it would] just like being a bum at home," he put it in this way.

Work-life Balance as a Tension Point

Work-life balance emerged as an important but complex value for many participants. While most stated that achieving a healthy balance between work and personal life was one of their long-term goals, they also acknowledged that such a balance may be difficult to achieve in

their chosen STEM fields. This contradiction reveals an internal conflict between their well-being goals and the demanding nature of the careers they feel obligated to pursue. Participants frequently expressed their concern about the high expectations associated with specific STEM fields, particularly medicine, engineering, and academia. They described being torn between establishing a secure, respectable career and leaving time for family, health, and leisure. When asked about their concerns about their future careers, many of them mentioned the lack of work-life balance:

> Emily: I think a big concern I do have is work-life balance. Because if you're into academia, there could be flexibility. But if you run your PI, if you run your own lab, you're working all the time.
>
> Ryan: My biggest concerns include being overworked, and as a result becoming a little jaded or becoming a little desensitized to the work and becoming burned out. I think that's a very big problem in the medical field, and other ones that I guess would be work-life balance. Depending on what kind of doctor I become, work-life balance can sometimes be tricky, and that might take me away from other things.

For some, the concern was especially serious when combined with gendered cultural expectations such as being both a high achiever and a future caregiver. Others hoped to "figure it out later," postponing confronting the tension until after reaching academic or professional milestones.

Even so, the desire for balance was genuine. Participants did not reject career ambition, but rather expressed a desire to negotiate between professional success and personal fulfillment.

This chapter examined how Asian American students' decisions to pursue STEM were shaped by core domains of SCCT, a combination of personal interests, contextual variables, self-efficacy, and outcome expectations. Participants' stories reveal that, while some found genuine interest or joy in STEM, many others were motivated by practical considerations, familial influence, and a sense of obligation. Their self-efficacy was often validated by external performance markers, while contextual supports and constraints including parents, teachers, school and community environments guided the formation of their goals. These findings directly respond to sub research question 1: *What motivates East Asian Americans to pursue STEM education and careers?* The findings show that Asian American students' reasons for studying STEM are complex and deeply rooted in both cultural values and social structures. This chapter underscores how career decisions emerge not solely from individual agency but within networks of expectations and perceived responsibilities. These insights provide a crucial foundation for understanding how racialization occurs through career development, and they set the stage for the next chapter's deeper exploration of how racialized narratives like the Model Minority Myth may have influenced these patterns.

Chapter 5: Findings for Model Minority Myth Framework

This chapter explores the role of the Model Minority Myth (MMM) in shaping Asian American students' education and career paths, addressing research sub-question 2: *What role does the Model Minority Myth play in East Asian American students' career decisions?* as consistently high achievers, particularly in STEM fields. While frequently framed as a "positive" stereotype, this myth reduces Asian American students to cogs in an education machine, defined by performance rather than personhood. It removes nuance and individuality, reducing a diverse community to a single image of academic excellence and social conformity.

Participants frequently described how this stereotype shaped both how others perceived them and how they came to see themselves. James shared that he was often sought out not for friendship or collaboration, but to provide answers:

> A lot of students will always talk to me just to get answers to homework solutions, those type of stuff… It's like a mixed emotions. It can be happy knowing that they come to you, which makes me feel like, oh, I'm somebody that people could rely on. But at the same time, it doesn't feel too good, since I'm the person who they always want to come after just to get answers, free answers, without…I don't know how I say it, but just didn't really feel awarding. Really.

Similarly, Michael expressed frustration at being seen through a singular academic lens:

> Because I have a life outside of being a student… I enjoy playing basketball, running, lifting… but when people only look at your occupation and go, 'Oh, so you must be smart, or making a lot of money,' people make a lot of assumptions… when that's really one aspect of your life.

These experiences demonstrate how the MMM not only enforces external expectations, but also subtly shapes how Asian American students perceive success, identity, and worth. Over time, the MMM has established a powerful standard to which students unconsciously conform. It becomes a racialized script that presents a narrow definition of success, limiting career possibilities and directing choices toward "acceptable" options such as STEM.

While this study uses social cognitive career theory (SCCT) to frame participants' motivations (see Chapter 4), the MMM can be understood as a contextual variable within SCCT that shapes personal interest, self-efficacy, and outcome expectations. The absence of perceived choice, which is frequently reflected in participants' narratives, demonstrates how external cultural and racial expectations can shape education and career paths, even when people believe they are making independent decisions. It is worth noting that some participant quotes appear in both this chapter and the previous SCCT findings chapter. This intentional reuse reflects the dual analytic lens used in this study. The same experiences are cited, but they are interpreted differently using the SCCT and MMM frameworks. This approach provides a more nuanced understanding of how structural and cultural forces influence Asian American students' career choices and racialized STEM experiences. For this reason, the findings were divided into two chapters to better organize and present the complete picture of East Asian American experiences.

In this chapter, findings are organized into four domains of the MMM: *Perceived Academic Excellence, Cultural Explanation, Homogenized Group*, and *Pressure to Conform*. Each domain captures a different aspect of the myth's influence, revealing how it functions not only as a social label, but also as a powerful racialization system that shapes both structural opportunities and interpersonal dynamics. This chapter uses these domains to show how the

MMM directly contributes to the racialization of East Asian Americans in STEM fields, not just from the outside but also from within.

Theme 5: Shaping Choices Through Stereotyped Competence (MMM Domain of Perceived Academic Excellence)

A prominent finding across participant narratives was the impact of societal and peer perceptions that Asian Americans are inherently good at academic subjects, particularly math and science. This stereotype influenced not only how others perceived participants, but also how participants chose their own academic and career paths.

Multiple participants shared that their peers often assumed they would succeed in STEM fields simply because they were Asian. Emily reflected on these racialized assumptions:

> Peers were always like, "Oh, you're good at math because you're Asian." There's a certain expectation, I think societally, to do that.

This perception extended into school environments, where teachers held similar assumptions. Michael recalled a teacher preemptively suggesting he might find a class too easy before it had even begun:

> My teacher came up to me and she said, "If this class is too easy for you, let me know." She said that. So I was like, well, I haven't even started the class yet.

Several participants described how the externally imposed image for academic excellence influenced their major choices. Liem reflected on his career path in mechanical engineering, noting that while he wasn't particularly passionate about the field, he believed he was "good enough at it to make a career out of it." Similarly, James explained that his confidence originated from past success and structure, rather than a deep interest:

> I feel very confident… because especially coming from being in high school… being an all-A student. I still want to keep that track in college… try to get at least an A in every course.

Others described how academic strength in STEM created a sense of inevitability about pursuing those fields. Ryan noted that being good at math and science shaped his decision to aim for medical school: "I think I was just naturally better at the sciences. It made sense to go that direction."

These stories indicate that participants frequently equated past performance with future fit, which could reinforce the stereotype given that they were pressured into majoring in STEM or taking STEM courses without understanding where the influence came from. In many cases, participants' performance-based self-image discouraged them from pursuing non-STEM interests because they felt most capable in the subjects in which they were always expected to excel. Emily put it this way: "My version of success was always the grades in school. Like, if you're doing well in school, you'll be successful."

These experiences demonstrate how the stereotype of academic excellence influenced not only others' perceptions of Asian American students, but also how they came to view themselves and the opportunities available to them.

Theme 6: Success, Sacrifice, and Schooling as Moral Mandates (MMM Domain of Cultural Explanation)

Participants consistently described the cultural frameworks that influenced their perceptions of success and career choices, which often rested on East Asian values such as education, hard work, and family obligation. These cultural explanations did more than just

accompany their choices; they provided the logic and moral structure that made those decisions feel both necessary and justified.

For many, education was never viewed as a personal option, but rather as a non-negotiable responsibility. Lily described it clearly:

> It was more like school was always an obligation, not a choice. And when you go to college, it's not about passion. It's about stability. And you know, typically the medical field or engineering field is something that can provide that.

She added that her family's history of sacrifice raised the stakes of achievement:

> Obviously with more privilege that I have from what my parents were able to give me, that our standard is higher… we have to go to a four-year institution, and we have to have a degree, and we have to do it easily, because we had no other hardships.

This idea of inherited responsibility was echoed by other participants whose parents immigrated to the U.S. for better opportunities. Sophie expressed a sense of duty shaped by her parents' sacrifices and hopes for stability:

> Because they just sacrifice so much, I just want to be able to have a career where I am able to take care of myself and my family… especially in cases of emergencies.

In this context, participants explained that their families often said they "just want them to be happy," but that happiness was structured by specific expectations: attending college, choosing a high-status and stable career, achieving financial independence, and eventually supporting their own families. As Lily put it: "My parents want me to be happy, but that happiness includes going to college, having a family, and being financially stable." Ryan shared

a similar insight: "They want me to be happy, but that's like… get good grades, go to a good school, be a doctor. That's their version of happy."

Underlying these expectations was a widely shared cultural belief that education is the only path to success. For many participants, it appeared the influence of Confucian values such as filial piety and intergenerational duty emerged as central to these beliefs. Liem reflected on how these values shaped his career path:

> I think the Asian culture of respecting your family, and respecting your parents, and trying to conform with your family, right? Because it's all about your family, and you're always providing for the family, helping the family. So I felt like all of these decisions were affected by, I have to do what my parents want from me, just because, I guess that's how it is. And I want to be able to provide for them like they provide for my grandparents, in the same way. For example, they take care of them, and they live with them, and my parents send them money every month. So in the same way that my parents provide for my grandparents, I think I was expected to provide for them, and I think because of that, I had to pick a career that's more stable, and I had to save money for them to be able to provide what they gave me when I was younger.

This emphasis on education as moral duty and success as family fulfillment resulted in a powerful set of cultural scripts that participants internalized from a young age. In many cases, these beliefs not only pushed students toward STEM, but also rejected alternative paths that did not meet the same level of legitimacy and remuneration. As shown in theme 1, even when personal interests existed outside of STEM, they were frequently set aside or pursued only as

hobbies, overshadowed by the cultural imperative to follow a "smart," respectable, and secure path.

Theme 7: STEM as the Default for Asian American Success (MMM Domain of Homogenous Group)

Throughout the interviews, participants reflected on an implicit but powerful narrative: all Asian Americans are expected to take the same path. The image of the high achieving, academically driven Asian student was more than a stereotype; it was often viewed as a default identity, rarely questioned and widely accepted within their communities. This homogenization resulted in a narrow cultural definition of success: STEM major, prestigious university, financially stable career, and a family. Lily articulated this feeling of inevitability:

> When you go to college, it's not about passion. It's about stability. And you know, typically the medical field or engineering field is something that can provide that. So that's why my parents kind of catered my education to that. So that's why I went into school thinking I was going to go to dental school.

Some participants didn't feel like they made a choice. They simply continued a script that had already been written. Ashley described how her school environment and peer culture reinforced this expectation:

> There were a lot of students who were Asian at my school, and I think everybody kind of assumed that we were all going to do the same thing, be a doctor or engineer. That was just the route people expected.

This feeling was often magnified in STEM-focused schools and communities with high Asian American populations, where the paths of those around them seemed to affirm the same path. Todd described the Korean community's focus on material and career-based comparison:

> We Koreans care a lot… for a sad reason, we care about appearance, how much money we make. And STEM major is definitely high paying compared to other majors… They don't want their kids to get a low paying job.

This life script was not only career-based but also framed the entire life course: education, job, marriage, and family, as a checklist to be completed in order. Several participants used terms like "predetermined," "expected," or "default" to describe their path into STEM. Emily reflected on how this mindset shaped her sense of direction:

> It just seemed like there was one route. You do well in school, you pick a major that makes sense, and you just go. I didn't really question it.

Participants who diverged from this path often faced internal tension or external pushback. Lily noted that while she had always been stronger in English and history, she still chose STEM because it was seen as more "realistic." Ultimately, the Model Minority Myth's portrayal of Asian Americans as a homogeneous group of academic high-achievers narrowed participants' perceived options. It established STEM not just as a common choice, but as the only acceptable one. By flattening diverse interests, backgrounds, and aspirations into a single path, this stereotype erased the individuality of participants and defined success in a singular way.

Theme 8: Becoming Successful Before Becoming Yourself (MMM Domain of Pressure to Conform)

Throughout the interviews, participants described an unspoken but constant pressure to conform to cultural, familial, and social expectations. For many, these expectations mirrored the MMM's portrayal of the ideal Asian American student: academically gifted, STEM-focused, hardworking, and emotionally reserved. These pressures, whether expressed directly by parents or absorbed through community norms, influenced participants' decisions in significant ways.

Participants often internalized an assumed life path. As showed in previous sections, Lily thought her education was "always an obligation other than choice, and college is about stability over passion." She described how her desire to look like a strong candidate overshadowed her actual interest in the field, which she realized after significant investment:

> I wanted to go to a good dental school, so I wanted to just create any avenue for me to look like a good candidate. But when I started doing my service hours at the dental office, and I hated it. I didn't like it at all, but that was kind of too late into college.

Lily later explained that her initial goal of becoming a dentist came from her education catered by her parents long before college. This idea of a predetermined path was echoed by others. Ashley reflected: "I guess they're like, you have the chance to, you should." Shinichi was more direct:

> I'm just doing the dissertation for him [father]. I don't want to do this, whole grad school, the whole academia thing, right? But he wants me to do it. So I'm doing it.

Conformity was also seen in the pressure to choose "acceptable" majors, particularly in STEM. Other paths, such as art or humanities, were deemed not viable by participants, not due to a lack of personal interest, but because they did not align with what was expected or acceptable. Sophie acknowledged this belief:

> I know that just art itself… it's hard to have a stable career…. They have to be good with all the technology and just other stuff like that, because art is not a stable career for them.

Even school and extracurricular activities reflected conformity to an unspoken standard. Alessa recalled how her parents helped place her in the gifted program, not based on performance, but expectation:

> I think I barely made the cutoff… and so my parents were like, no, she gets to go to gifted/talented. And so I took the test again and I passed.

Participants conformed not only to academic expectations but to life milestones: graduate, get a good job, support your parents, and start a family. Many discussed feeling obligated to return their family's sacrifices with visible achievement. Ryan shared: "I always felt like it was my obligation to return results to them… do well."

Rather than exploring alternatives or reflecting deeply on what they desired, many participants stayed with the path that had always been assumed for them. The pressure to conform was not always expressed, but it was strongly felt. It limited the range of options and discouraged risk or divergence. Todd illustrated how cultural values around status and income shaped what was considered acceptable:

> We Koreans care a lot… about appearance, how much money we make. And STEM major is definitely high paying… they don't want their kids to get a low paying job.

For many, the pressure to conform went beyond simply obeying parents or fitting into the Asian American stereotype. It was about carrying out an inherited role, sometimes without conscious awareness of the pressure itself. As Alessa expressed: "It's less that the stereotype pushed us into STEM. But that we were living the stereotype." Emily shared a similar experience, describing how deviation from expected academic excellence was perceived as a personal flaw: "I think there's an expectation to be good at it. And if you weren't, then it's like,

Okay, what's wrong with you?" In doing so, participants often suppressed doubts, interests, or aspirations that did not align with the collective path, shaping their careers through compliance rather than curiosity. Ryan echoed this sentiment, reflecting on how the stereotype shaped his inner monologue and sense of obligation:

> I was telling myself, you know, I have to be smart. I have to do well on this test. I have to do well on these assignments. You know I have to. I have to uphold that stereotype… you don't want to be that less smart Asian kid.

These narratives show how participants followed a path shaped more by expectations than personal exploration. Throughout the interviews, the pressure to conform operated quietly but persistently, guiding major life decisions in ways that frequently went unquestioned.

Chapter 6 Discussion of Findings

This study examined how motivation, culture, and racialized expectations shape Asian American students' STEM pathways. The research question *What factors influence the racialization of East Asian Americans in STEM?* was answered using the social cognitive career theory (SCCT) and the Model Minority Myth (MMM) framework. Focused on two sub-questions: *What motivates East Asian Americans to pursue STEM education and careers?* and *How does the Model Minority Myth influence East Asian American students' career decisions?* The dual framework offers distinct but interconnected insights: SCCT focuses on individual cognitive and social processes that influence career development, whereas MMM employs a racialized cultural lens to reveal how societal stereotypes, family norms, and collective identity shape East Asian Americans' experiences. This chapter discusses each domain in the SCCT and MMM frameworks, as well as the relationships between the two frameworks. Together, they provide insight into understanding of how race and culture influence both the motivations and constraints that drive career decisions.

SCCT: Mapping the Individual Within the Social

Social cognitive career theory (SCCT) provides a framework for understanding how people form academic and career interests, make decisions, and persist in their education and professional paths. SCCT proposes that personal interests, self-efficacy, and outcome expectations interact dynamically to shape one's career path (Lent, Brown, & Hackett, 1994). When applied to Asian American STEM students' experiences, SCCT allows us to examine not only their decision-making processes, but also the external and internal forces that act as contextual variables to contribute to racialized career patterns. This section discusses each SCCT

domain that emerged from the data and shows how these constructs work together to explain why East Asian Americans pursue STEM education and careers.

Personal Interests

Interest is a key driver of SCCT, often preceding self-efficacy and outcome expectations when determining career goals (Lent et al., 2002). Several participants expressed passion for STEM, citing curiosity, satisfaction from problem solving, and a desire to make a difference. Ryan, for example, spoke about how an inspiring chemistry teacher piqued his interest in healthcare. This supports Lent and Brown's (2006) claim that positive affective experiences can keep people interested. For some, STEM interest arose organically as a result of early exposure or inspiring teachers, such as Sophie's high school chemistry teacher, who piqued her interest in medicine. Others, such as Shinichi, discovered their interest in math through informal platforms such as YouTube's Numberphile, demonstrating how digital environments are now used as alternative sites for cultivating academic curiosity.

Early exposure to STEM, whether through school structures or parental choices, frequently influenced personal interests. For example, some participants attended STEM magnet schools or were assigned to accelerated math tracks, which eventually established STEM as the "obvious" path. More strikingly, 7 out of 11 participants reported being discouraged from pursuing non-STEM interests, particularly in the arts or humanities, as a result of cultural or familial messages that such careers were not viable. Emily stated, "I like it, but I'm not gonna make money," demonstrating how perceived impracticality outweighed intrinsic motivation. These stories reveal a more subtle type of constraint, in which students feel funneled rather than forced, often without realizing it. Their "interest" in STEM is genuine, but it is shaped by environmental norms, education structures, and cultural expectations. This nuanced

understanding of personal interest complicates simplistic narratives of "following one's passion." Asian American students frequently have a genuine passion for STEM, but it is rarely unmediated. It coexists with suppressed alternatives, filtered through a collective lens of obligation and aspiration. As SCCT posits, career interests are formed at the intersection of person and context, and this study shows how that context is racialized and cultural, redefining the very idea of what it means to choose freely.

Self-Efficacy

Self-efficacy beliefs are confidence in one's ability to succeed in a particular field. It is central to SCCT (Lent et al., 1994). Many participants' STEM self-efficacy was based on past performance, such as high grades or teacher praise. This supports Bandura's (1997) claim that mastery experiences are the most potent source of self-efficacy.

Several participants reported feeling "naturally good" at math or science, while others attributed their success to hard work and support structures like tutoring. This performance-based self-efficacy influenced individuals' perceptions of STEM as a natural fit. In some cases, it became circular: doing well boosted confidence, which in turn boosted future performance, regardless of true interest. This nuance highlights what Lin et. al. (2022) defined disconnected self-efficacy as confidence in ability that is unrelated to passion or long-term satisfaction. Many of the study's participants believe in themselves because they pursued STEM education not out of curiosity or joy, but because of a history of high grades, teacher praise, and peer comparisons. This performance-driven confidence, while effective in maintaining STEM persistence, frequently masks ambivalence or even disinterest in the subject. For some, this meant bearing the weight of others' expectations, such as James, who felt used by peers who only came to him for

homework help. This demonstrates the emotional cost of performance-based self-efficacy: being judged solely on one's competence rather than as a whole person.

Self-efficacy then becomes less about confidence in one's abilities and more about fear of deviating from expectations. Many participants felt an internal pressure to remain "the smart one," "the STEM kid," or "the reliable student," and their confidence was inextricably linked to their identity as high achievers. As a result, while they frequently referred to themselves as competent, their confidence was something to be maintained rather than celebrated. This type of performance-based self-efficacy influenced their education and career choices by reinforcing the belief that success in STEM fields was the best way to demonstrate their competence and worth. Even when participants harbored interest in non-STEM disciplines, the perceived risk of not excelling, or of not living up to others' expectations deterred them from exploring alternate paths. STEM became a safe space not only because of its social value, but also because it allowed participants to fulfill the role they believed they were expected to play. Thus, their self-efficacy operated less as an intrinsic motivator and more as a mechanism for conformity, guiding them toward decisions that preserved their academic identity rather than challenged it.

Outcome Expectations

A strong theme shared by all participants was the belief that STEM careers provide stable, secure, and prestigious outcomes. Outcome expectations, defined as the expected consequences of taking a specific path, are a critical SCCT construct that frequently guides decision-making beyond interest or ability (Lent et al., 2000). Many Asian American students in this study chose STEM to ensure a stable adult life rather than because they enjoyed their jobs. Many of the participants in this study described their decision to pursue STEM as strategic and pragmatic, rather than motivated by passion. STEM was frequently referred to as the "logical,"

"safe," or "realistic" option due to its perceived financial stability, job security, and societal status. Across multiple interviews, participants described a career planning style that prioritized predictability over personal fulfillment.

This "pragmatic career logic" was driven by financial security, social recognition, and a desire to support family members, particularly immigrant parents who had made significant sacrifices. As echoed in Cheryan and Bodenhausen (2000), many participants saw financial independence as a form of repayment or moral responsibility. Sophie talked about sacrifices and giving back: "Since they [my parents] sacrificed so much, I just want to be able to have a career where I am able to take care of myself and my family." Even students who were passionate about non-STEM fields frequently chose STEM because they saw it as the only "realistic" path to advancement.

Contextual Variables

SCCT emphasizes contextual affordances and barriers that enable or inhibit career development. In this study, familial expectations were perhaps the most potent influence, with participants describing direct and indirect pressures from parents to pursue STEM. Some parents enrolled their children in specialized schools, selected their extracurricular activities, and even handpicked their majors. Others were influenced in subtler ways, such as sharing personal stories of struggle or expressing a preference for high-status positions. These narratives are consistent with Lee and Zhou's (2015) concept of "ethnic capital," in which immigrant families use values and networks to guide their children to success.

Cultural messages rooted in Asian collectivism and what appears to be Confucian values also emerged as significant contextual variables. Education was framed as a duty rather than a choice, and success was frequently defined in terms of the family. As Ryan said:

> I think that I do think about what my parents think of me a lot, and I do think that it has affected where my career path has gone because I do want to make them proud. I do want them to feel as though all the resources that they put into me have been worth it.

This quote aligns with the significant impact of Confucian values, particularly filial piety (hsiao), on participants' decision-making. Filial piety focuses on obedience, respect, and the moral obligation to repay one's parents for their sacrifices. It is a deeply held value in many East Asian cultural traditions (Li, 2004). Ryan's desire to make his parents proud and ensure their investment "has been worth it" reflects more than personal gratitude; it is consistent with a culturally ingrained duty to honor the family through accomplishment. Within this framework, education and career choices become more than just individual pursuits; they are acts of family devotion. This internalized sense of responsibility frequently led participants to "respectable" and secure career paths such as STEM, which symbolically return their parents' sacrifices with social and economic capital, thereby fulfilling a moral debt encoded by cultural expectations.

Furthermore, school environments like STEM-focused high schools, AP course tracks, and teacher encouragement served as ecological reinforcers, making STEM appear both expected and unavoidable. In summary, participants' decisions were embedded in multilayered systems of influence, with personal agency shaped by structural and cultural forces.

Interplay of Domains: The Racialized Career Funnel

These SCCT domains do not operate independently. Instead, they interact in a way that creates a racialized career funnel based on both social expectations of Asian American success and cultural norms that have been passed down through generations. This funnel guides students toward STEM through early exposure (contextual), high achievement (self-efficacy), and

pragmatic outcomes (expectations), often limiting their options for other interests or well-being. As Wang (2015) observed, even SCCT must be interpreted through a racialized lens to capture the unique cultural and societal pressures facing students of color.

Contextual variables are embedded and influence the main domains of SCCT. These contextual forces not only directed students toward STEM but also helped shape their personal interests. STEM exposure was frequently pre-structured through school choice, enrichment programs, and family logic, giving the field a sense of both organic and inherited appeal. For example, many participants described gradually learning to "enjoy" STEM subjects, but their opportunities to explore non-STEM alternatives were frequently limited or undervalued. In this way, interest was fostered in a constrained environment, influenced as much by available options as by intrinsic motivation.

Contextual factors also influenced participants' self-efficacy. Supportive parents, tutoring, academic streaming, and environments where STEM excellence was the norm boosted participants' confidence in their abilities. This is consistent with findings in SCCT literature, which show that proximal supports increase confidence by shaping both learning experiences and performance expectations (Lent et al., 2000). Even those who were ambivalent about STEM often saw themselves as capable of it, a belief fostered by years of structured reinforcement and social acceptance.

Similarly, the contextual narratives that participants absorbed had a strong influence on their outcome expectations. STEM was consistently portrayed as a stable, respected, and financially rewarding career path, in contrast to other fields deemed risky or indulgent. These expectations were not only internalized, but also justified as pragmatic truths: choosing STEM

was associated with security, family honor, and upward mobility. Thus, even when interest or passion wavered, the anticipated outcomes of a STEM career acted as a powerful motivator.

Despite the various pressures and contextual constraints that influenced their education and career paths, the majority of participants expressed profound gratitude to their parents. Many people acknowledged the sacrifices they made to be able to attend good schools, have access to resources, and pursue higher education. Their reflections show a complex emotional landscape in which duty, affection, and ambivalence coexist.

Several participants admitted to wondering what their lives would have been like if they had pursued other careers, but such thoughts were usually followed by acceptance or rationalization of their current paths. Alessa stated, "I trusted my parents enough that they had the best interest [for me]," and went on to say, "I don't regret doing STEM." Liem also stated that, while he never had a strong passion for engineering, he saw it as a way to fulfill his family responsibilities. These statements capture a complex emotional balance of suppressed interests in other fields against a recognition of the value and security that STEM can provide both personally and familially.

These reflections demonstrate that, while participants may have internalized cultural scripts or faced external pressures, they also discovered meaning, agency, and emotional coherence in reconciling their choices with family values. As a result, their choices cannot be fully understood through the lens of constraint alone. Rather, they depict a negotiated space between self and family, autonomy and responsibility. It is shaped by cultural expectations while also being sustained by gratitude and a sense of purpose.

This duality reinforces what SCCT theorists have observed about career decisions, which are not only rational calculations but also relational and affective processes, particularly in

collectivist cultural settings. It also broadens our understanding of "motivation," demonstrating that what sustains STEM persistence is often a complex blend of obligation, appreciation, and pragmatism rather than pure passion or interest. Contextual variables thus function not only as background forces but also as active agents shaping the terrain of interests, beliefs, and expectations that guide career decisions.

This framework provides answers to the first research question: *What motivates East Asian Americans to pursue STEM?* by demonstrating that motivation is more than just internal or meritocratic; it is also supported by performance validation, cultural responsibility, economic rationale, and environmental design. These findings also pave the way for understanding how the Model Minority Myth compounds these influences by introducing stereotype-driven expectations into the SCCT equation.

MMM as a Cultural Context: A Racialized Career Script

While SCCT includes context, it does not fully explain how racialized cultural myths influence contextual factors. My MMM framework bridges this gap. As a racialized narrative that portrays East Asian Americans as high-achieving, mathematically gifted, and socioeconomically successful, the MMM serves as both an external expectation and an internalized norm. The MMM serves as a racialized framework that profoundly shapes East Asian Americans' education and career paths, particularly in STEM fields. By reducing diverse experiences to narrow stereotypes of high academic performance, cultural obedience, and technical competence, the MMM idealizes and constrains East Asian American identities. This discussion examines how four domains: perceived academic excellence, cultural explanations, group homogeneity, and pressure to conform interact with participants' lived experiences and contribute to their racialization in STEM.

Perceived Academic Excellence

One of the most powerful ways the MMM influences Asian American students' career choices is through the widespread belief that they are naturally gifted in academics, particularly in math, science, and technology. The MMM, presented as a "positive" stereotype, creates a rigid narrative in which Asian American students are not only expected to excel, but are also perceived to be biologically or culturally inclined to academic success. While this perception may appear to be advantageous, it actually serves as a racialized constraint on education and career choices. Many participants reported feeling as if their academic success was not an individual trait or a result of personal interest, but rather a racial expectation they were required to meet. Emily said, "Oh, you're good at math because you're Asian," recalling common remarks that attributed her performance to her ethnicity. These experiences support Museus and Kiang's (2009) observation that Asian American students are frequently evaluated based on presumed racial characteristics rather than actual abilities or interests. This limits their perceived freedom to pursue alternative career paths that differ from the expected norm. Ryan reflected on how these expectations became internalized:

> I was telling myself, you know, I have to be smart. I have to do well on this test. I have to do well on these assignments. You know I have to. I have to uphold that stereotype… you don't want to be that less smart Asian kid.

This quote demonstrates how the MMM influences how East Asian American students perceive themselves, as well as how others perceive them. Academic excellence becomes a moral and cultural obligation, an identity that they feel compelled to uphold.

This internalization frequently caused participants to self-select into STEM fields, regardless of their initial interests. For some, it meant putting aside personal interests in favor of

"practical" fields where success would validate their racial identity and family honor. The stereotype thus plays a role in directing career paths by narrowing the range of "acceptable" academic identities, a pattern echoed in literature by Lee (2009) and Cheryan et al. (2008), who found that Asian American students often gravitate toward STEM fields because they are culturally and socially framed as the natural destination for them.

Thus, perceived academic excellence is more than just a pleasant or flattering stereotype. It is a determining factor in the racialization of East Asian Americans in STEM. It limits their perceived options, directs them toward prestigious academic fields, and portrays any deviation from that path as failure or disappointment.

Cultural Explanations

The cultural explanation domain demonstrates how the MMM functions not only through societal expectations, but also through embedded cultural logics that frame education and success as moral imperatives. The participants' stories reflect what Lee and Zhou (2015) refer to as success frames, which are culturally embedded models of achievement that are frequently narrowly defined, strictly enforced, and morally charged. STEM careers are not only encouraged in this framework; they are viewed as ethical obligations, the culmination of intergenerational sacrifice and a demonstration of familial loyalty.

In particular, the Confucian value of filial piety seems to have played an important role in how participants justified their choices. Rather than viewing education as a personal endeavor, many people saw it as a form of repayment to their families, a non-negotiable responsibility ingrained in their cultural heritage. Liem expressed a sense of intergenerational reciprocity, viewing academic and professional success as a moral obligation to parents. He stated: "Because it's all about your family, and you're always providing for the family… I think I was expected to

provide for them like they provide for my grandparents." This is consistent with the ethnic capital discussed in the SCCT Contextual Variables domain, which states that immigrant families cultivate a set of values, beliefs, and expectations in order to ensure upward mobility and family honor.

This cultural script was further reinforced by parental narratives of sacrifice. Lily described how her parents' hardship raised the standard of success she was expected to meet: "Obviously with more privilege that I have from what my parents were able to give me, that our standard is higher… we have to go to a 4-year institution, and we have to have a degree, and we have to do it easily, because we had no other hardships." As Tang (2022) argues, filial piety in diasporic Asian American families often intersects with immigrant struggle, turning academic achievement into a symbolic and material gesture of appreciation and restoration.

This emphasis on family-based legitimacy made alternative paths in non-STEM fields appear less acceptable. According to Cheryan et al. (2013), Asian Americans are overrepresented in STEM fields not only because of their interest or aptitude, but also because they are culturally framed as practical, prestigious, and respectable. The stories in this study support that perception. Sophie, for example, explained that she chose STEM to ensure her own stability as well as her ability to support her parents, who faced financial difficulties during their immigrant journey.

Even seemingly supportive parental statements like "I just want you to be happy" were frequently framed around specific outcomes like college, career, and financial security. Lily stated: "My parents want me to be happy, but that happiness includes going to college, having a family, and being financially stable." Ryan echoed this sentiment: "They want me to be happy, but that's like… get good grades, go to a good school, be a doctor. That's their version of happy." These stories reflect Museus et al. (2011)'s claim that Asian American college students often

navigate culturally constructed definitions of success that are inseparable from family expectations and responsibilities. In this sense, the MMM does not merely present East Asian Americans as exceptional achievers; it reifies a cultural script where hard work and success in socially sanctioned domains (such as STEM) are seen as the only acceptable way to honor one's family. Participants' stories affirm that many of them did not experience education as a choice, but as an inheritance: an obligation that had to be fulfilled not just for survival, but for dignity and respectability within both their families and ethnic communities.

In sum, the cultural explanation domain demonstrates how the MMM operates not only through explicit expectations from schools or society, but also through cultural ideologies that define worth and success. In doing so, it reinforces a limited set of "morally approved" futures, which frequently include STEM careers, making deviation appear not only risky but also disloyal.

Homogenous Group

One of the most pervasive and insidious ways in which the MMM shapes career paths is by reducing the diversity of Asian American identities to a single, monolithic category. Participants in this study consistently reported being grouped with other Asian students, both academically and socially, with little regard for their individual goals, personalities, or challenges. This "homogenizing" process reflects what Museus and Kiang (2009) refer to as the erasure of intragroup diversity, which is a defining feature of racialization via the MMM.

This flattening of difference had a direct impact on how participants imagined and implemented their education decisions. Surrounded by similarly motivated Asian peers and immersed in highly competitive environments such as STEM-focused schools and AP tracks, many described STEM as "just what everyone did." These peer groups frequently acted as echo

chambers for dominant success narratives, making deviation feel both risky and socially isolating. This is consistent with the findings of Wu et al. (2010), who discovered that peer group dynamics among high-achieving Asian students can reinforce narrow career scripts, not through explicit coercion, but rather through subtle, pervasive normalization.

The homogenization went beyond peer influence and was reinforced by educators and institutions. Participants reported that teachers assumed they were naturally gifted in math or science or pushed them into advanced STEM courses without first assessing their interests or ability. As Michael's experience demonstrates, these assumptions were frequently made without conversation, denying students the opportunity to express their individual interests. This supports Lee's (2009) claim that the MMM functions as an institutionalized racial project that assigns capability and motivation based on phenotype and name rather than student voice or self-determination.

Importantly, this sense of being interchangeable or indistinguishable from other Asian students undermines personal agency. Participants felt pressure not only to perform, but to perform in ways that aligned with what others expected of "someone like them." Emily's childhood experience of being placed on a school diversity poster without understanding the implications demonstrates how early these scripts are imposed and how deeply they shape identity. According to Teranishi (2002), the danger of homogenization is that it simplifies complexity, limiting individual decision-making to a narrow racial logic.

While the MMM is frequently framed as an external racial stereotype imposed by American society, the findings of this study show that it is internalized and reinforced within the Asian American community. Participants described growing up in environments where they were constantly compared, not only to classmates, but also to family members, cousins, and even the

children of friends. This collectivist orientation, which was often a source of cohesion and support, became a mechanism of internal surveillance, with STEM achievement serving as the default life script.

Ryan described how his mother frequently compared him and his siblings to their cousins who worked in medicine, dentistry, or engineering, emphasizing that those were the standards to meet. Todd explained that in his Korean community, high-status careers such as STEM were viewed as necessary to maintain a respectable income and social standing. He described how both children and parents felt pressured to succeed, citing a culture in which "your kids have to do better," not only for their own sake but also to reflect positively on the family. Michael also reflected on this dynamic, describing his parents' pride in his academic success as almost ego-driven: an accomplishment that validated their parenting and social standing. Lee and Zhou's (2015) concept of ethnic capital, as discussed in the SCCT framework of Contextual Variables, is especially useful in this context. Families and communities instill values, resources, and expectations that encourage education achievement, particularly in high-reward fields such as STEM. However, as this study demonstrates, these mechanisms can limit exploration. The participants said their life paths were influenced not only by opportunities, but also by the social consequences of deviating from the norm. As a member of a homogeneous group, choosing a non-STEM path would be perceived as a communal loss or failure.

Participants were ultimately racialized not only by society as a whole, but also within their own communities. They were drawn into a collective script that emphasized academic success in STEM as the primary path to status and respect through comparison, pride, and achievement. This intra-community reinforcement of the MMM reveals a more insidious

racialization mechanism: one that operates through prescription rather than exclusion, shaping not who East Asian Americans are restricted from becoming, but who they are expected to be.

Pressure to Conform

The Model Minority Myth (MMM) operates not only through societal expectation but through the internalization of those expectations, forming what Yoon et al. (2013) describe as "invisible scripts" that structure Asian American students' beliefs about what they should pursue and who they should be. Participants in this study did not always report receiving explicit pressure to pursue STEM careers from their families or institutions. Instead, many people spoke of a more subtle and insidious force: the pressure to conform to a standard that had become so commonplace that it was no longer recognized as pressure at all. As Alessa stated: "It's less that the stereotype pushed us into STEM. But that we were living the stereotype."

This finding aligns with previous research demonstrating how the MMM serves as a cultural template (Cheryan & Bodenhausen, 2000), shaping the landscape of "appropriate" choices without requiring overt coercion. As mentioned in previous sections, participants frequently dismissed non-STEM interests as impractical or irresponsible. Conforming was not always about meeting the demands of others, but about avoiding the anxiety and guilt associated with failing to meet an internalized ideal. This echoes the conclusions of Wu et al. (2010), who found that many Asian American students adopt the myth not as a label they resist, but as a script they feel compelled to perform.

In many ways, this domain of pressure to conform overlaps with other elements of the MMM such as perceived academic excellence and homogenous group but its unique feature lies in the quiet, internalized compulsion to meet a racialized standard. Ryan's comment that "you don't want to be the one who's not smart enough" captures this vividly. The conformity is not

necessarily mandated by family or teachers; it's sustained by the fear of deviating from the stereotype and thereby losing social legitimacy. In this way, the MMM enforces alignment with STEM not only as a career field, but as a symbol of compliance and worth.

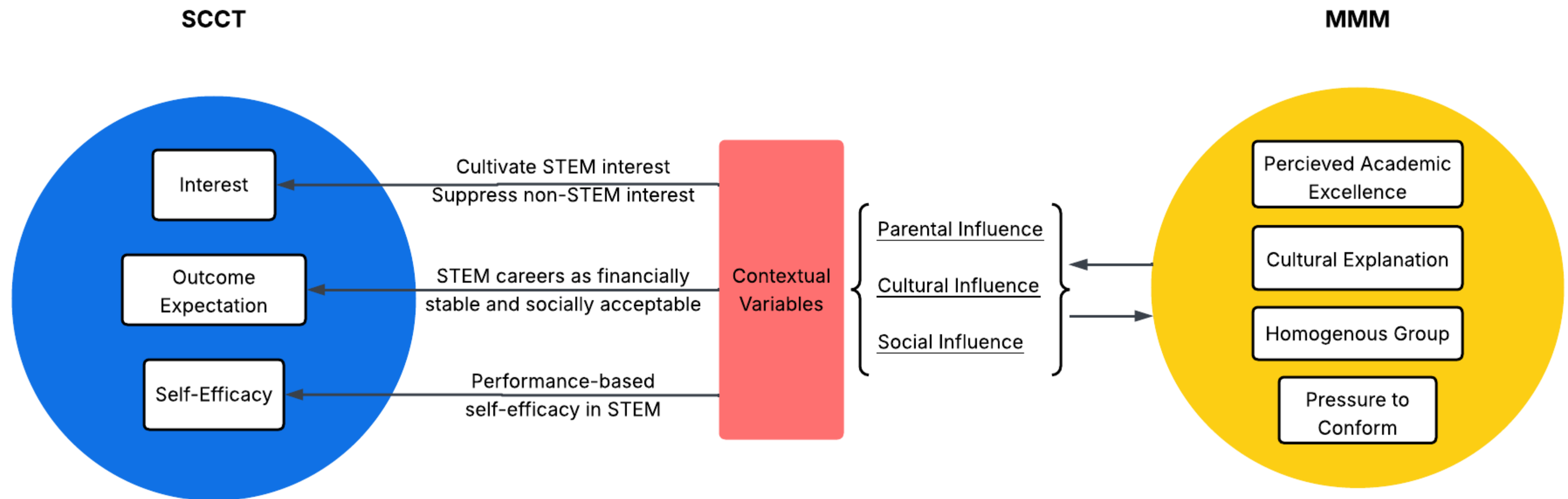
Furthermore, the participants' environments often lacked counter-narratives that validated alternative paths. The scarcity of visible Asian American role models outside STEM (Lee, 2009; Museus, 2009) meant that many participants did not even consider that they had a choice. This absence of choice becomes an indicator of conformity: when the path toward STEM is seen not as a decision but as a default, deviation becomes not only difficult but almost inconceivable. Ultimately, this pressure to conform can be understood as a mechanism of racialization. It does not merely steer students into particular careers, it disciplines them into particular forms of personhood. In doing so, it aligns closely with SCCT's notion of contextual variables, but with a racialized twist: the MMM serves as a racial context that shapes self-efficacy, outcome expectations, and interest by making alternatives invisible or illegitimate.

MMM as a Contextual Variable in SCCT

Contextual factors play an important role in shaping individual aspirations, perceived capabilities, and outcome expectations within the SCCT framework. In this study, the MMM was identified as a significant contextual variable that influenced participants' personal interests, self-efficacy beliefs, and career-related expectations (see Figure 1). Although SCCT traditionally emphasizes environmental affordances and barriers such as family, school, and cultural context (Lent et al., 1994), the findings here underscore that racialized social narratives like the MMM must also be understood as environmental structures that guide, and at times limit, East Asian American students' career development trajectories.

Figure 1

Combined Framework of SCCT and MMM



Note. This diagram demonstrates the relationship between the SCCT and MMM frameworks. Contextual variables have an impact on SCCT's three main domains: Interest, Outcome Expectations, and Self-Efficacy. The MMM functions as a contextual variable, and the contextual variables also construct MMM narratives.

The internalization of the MMM influenced how participants perceived their interests. As previously discussed, some students expressed an interest in non-STEM fields such as history, writing, or the arts, but felt compelled to suppress these interests in favor of more "practical" and socially validated STEM careers. In the Contextual Variables and Homogenous Group domains, I discussed how ethnic capital (Lee & Zhou, 2015) reinforces these beliefs, particularly in immigrant families who associate STEM success with economic mobility. Even when students expressed genuine interest in STEM, their enthusiasm was frequently filtered through the social framework of what was considered acceptable or "smart enough."

The MMM also shaped self-efficacy, as students felt pressure not simply to be good, but to be the best. Participants described feeling that falling short of academic excellence would reflect not just on themselves but on their families and communities. For several participants, confidence did not precede performance but followed it: they learned to believe they were "STEM people" because they had already been treated that way, as discussed in the Perceived Academic Excellence domain. These findings support Cheryan et al. (2015), who note that stereotypes of innate STEM ability in Asian Americans perpetuate narrow ideas of who belongs in scientific spaces and how success is defined.

Finally, the MMM functions as a powerful contextual variable within the SCCT framework by establishing a limited and rigid set of acceptable futures for Asian American students. Rather than fostering open-ended exploration, the myth acts as a social script that defines what success should look like, primarily in the form of high-achieving, stable, and prestigious STEM careers. These predetermined pathways are not merely externally imposed by teachers, institutions, or media; they are internalized through familial and cultural expectations and reinforced within ethnic communities. STEM careers, as discussed in the Cultural

Explanation and Homogenous Group domains, were viewed as the default for success, stability, and prestige, as well as an obligation to the family to demonstrate as a token in the community. In this way, MMM shapes outcome expectations around economic utility rather than personal fulfillment. As a contextual force, it reshapes the career development process not by eliminating choice entirely, but by making certain choices appear riskier, illegitimate, or even selfish in the eyes of society and one's own community.

To summarize, the MMM is a culturally embedded and socially sanctioned structure that directs Asian American students toward specific interests, inflates expectations of competence, and limits how success is imagined. Rather than being a stereotype, the MMM is a formative and pervasive contextual influence that shapes how East Asian American students navigate education and career choices, often without realizing the constraints it imposes. As a result, MMM is deeply embedded within the contextual layers of SCCT, rather than being external to it. It demonstrates how race-based ideologies shape the very environments that SCCT seeks to explain, adding an important cultural dimension to career decision-making process for East Asian Americans.

Limitations

This study has several limitations as qualitative research. First, while the sample size of 11 participants allowed for in-depth exploration of individual experiences, it limited the findings' applicability to a subset East Asian American population. Because Asian American communities are diverse in terms of ethnic backgrounds, generational statuses, and socioeconomic experiences, the perspectives gathered may not fully represent all Asian Americans' STEM choices.

Second, because this study only included participants who had already decided on STEM majors, the results may be skewed toward those who had found some level of alignment or acceptance along the way. Voices of those who may have left STEM, defied cultural expectations, or pursued alternative careers were excluded, limiting the ability to fully investigate counter-narratives and resistance to both SCCT influences and the Model Minority Myth.

Third, because the study relied on self-reported data from interviews, participants' responses could be influenced by recall bias or a desire to present socially desirable answers, especially on sensitive topics such as familial expectations and cultural pressures. Furthermore, despite my best efforts to practice reflexivity, my positionality as a researcher and identity as an Asian woman, including any biases or preconceptions, may influence data interpretation.

Finally, as a qualitative study, this research focused on depth rather than breadth. The rich narratives provide nuanced understanding, but they cannot make statistical generalizations. Readers should interpret these findings as contextualized and exploratory, shedding light on key themes that could be investigated further in larger, more representative studies.

Implications for Future Research

This study suggests several directions for future research on the racialization of Asian Americans in STEM fields. One important step is to broaden the participant base to include people who have left STEM, rejected it, or actively resisted familial or cultural pressures. Their counter-narratives may provide useful insights into agency, resistance, and the costs of nonconformity.

Many participants of this study acknowledged their parents' influence in shaping their education and career choices. Future research could focus on how immigrant parents interpret,

internalize, and transmit racialized expectations, particularly those associated with the Model Minority Myth. Although participants frequently described their parents as encouraging or pressuring them to pursue "safe" and prestigious STEM careers, it is unclear how aware parents are of the racial scripts they may be following. It would be particularly beneficial to investigate how these expectations are formed, what cultural or societal images parents are responding to, and how pride and pressure become intertwined. Examining the mechanisms by which parents adopt and reproduce these norms, often without realizing it, could provide valuable insight into the intergenerational transmission of racialized career expectations.

Emotional silence in the home environment emerged as a subtle but important theme in participants' stories. Several students expressed difficulty or discomfort discussing mental health, emotional distress, or personal issues with their parents. While this pattern was not the primary focus of the current study, it raises important questions about how emotional expression based on cultural norms intersects with career development, identity formation, and well-being. Future research could look into how emotional silence or communication norms in Asian American households affect student resilience, help-seeking behavior, and stress management in demanding STEM environments.

Furthermore, gendered expectations emerged during the interviews, particularly among female participants who expressed concern about balancing future careers with familial responsibilities. These participants described feeling an implicit obligation to "do both": excel professionally while maintaining traditional caregiving roles. This suggests the existence of a gendered double bind in which East Asian American women may be judged not only on their academic and professional achievements, but also on their perceived success in meeting cultural

or familial expectations. Further research could look into how these dual pressures influence Asian American women in STEM's career choices, mental health, and work-life balance.

Finally, more research is needed to link SCCT to critical race frameworks like racial formation theory and racial microaggressions. While this dissertation demonstrates that the MMM acts as a contextual variable in influencing interest, efficacy, and expectations, future research could more explicitly theorize how racialization interacts with developmental psychology and cultural capital.

Lily's Story Revisited

I started this study with Lily's story and revisit it here as a case that embodies many key themes identified throughout this research. I first met Lily when she was in high school. She wasn't sure what it meant to study STEM in college, especially since she was an Asian American who was trying to fit in with cultural norms and had limited knowledge of the field. In college, she realized she disliked her major, but it was too late to change. After graduation, she worked as an environmental analyst before applying to graduate school in public health, a field that matched her interests in social impact while still drawing on her STEM background. As I wrote, she postponed those plans due to family health concerns and her younger sibling's experiences with anti-Asian racism.

Lily's experience illustrates the racialized interactions among the core domains of social cognitive career theory (SCCT), including contextual influences, self-efficacy, outcome expectations, and interests. Her early exposure to STEM as a desirable and respectable path was shaped not only by environmental factors, but also by the Model Minority Myth (MMM), a pervasive, racialized narrative that exerted powerful contextual influence. This narrative made it

seem like STEM was the default path for high-achieving East Asian American students, linking academic success to personal and family value.

This context influenced Lily's perception of herself (self-efficacy), what she thought would lead to stability and legitimacy (outcome expectations), and, ultimately, how her interests were developed or suppressed. Although she recognized her strengths and passions in areas such as reading, writing, and social impact, these interests were considered as impractical or irrelevant. The MMM created an environment where some interests were validated while others were quietly discouraged, thereby limiting the range of what felt possible or acceptable.

Even her move to public health shows how complicated the negotiation was. It was an effort to honor her interests while maintaining the legitimacy of her previous decisions. Her path, like that of many of the study's participants, demonstrates how racialized contextual influences can limit interest development and shape career decisions as conformity and survival strategies rather than expressions of authentic desire.

By viewing the MMM as a contextual influence within SCCT, Lily's story demonstrates how racialized expectations guide how people develop interests, assess competence, and pursue futures that may or may not reflect their true selves.

Conclusion

The purpose of this study was to examine the racialization of East Asian Americans in STEM through the overarching research question *What factors influence the racialization of East Asian Americans in STEM?* Two sub-research questions: *What motivates East Asian Americans to pursue STEM education and careers?* and *What role does the Model Minority Myth play in East Asian American students' career decisions?* were developed to investigate the overarching question. By applying both social cognitive career theory (SCCT) and the lens of the Model

Minority Myth (MMM), this research examined how personal interests, cultural expectations, structural contexts, and racialized stereotypes interact to shape the education and professional pathways of East Asian American students.

The findings of this study show that, while many participants expressed genuine interest in STEM, that interest was frequently filtered through the lenses of exposure, practicality, and perceived stability. STEM was presented not only as a logical or enjoyable path, but also as the only viable or acceptable option. The SCCT domains of personal interest, self-efficacy, and outcome expectations were shaped by powerful contextual variables such as family, culture, and schooling, which emphasized success as a moral responsibility rather than an individual goal.

While SCCT explains how students make decisions based on their interest, self-efficacy, and expected outcomes, MMM explains why some decisions are expected and others are discouraged. The MMM served as a parallel and reinforcing force, resulting in a narrow script of high achievement, particularly in STEM fields. The myth was not only propagated externally by schools, peers, and American society, but also internally by East Asian American families and communities, which emphasized academic prestige as a marker of familial pride and social legitimacy, making STEM education and career an obligation rather than a choice. This study makes a significant theoretical contribution incorporating the MMM into the SCCT framework. It demonstrates how racialized stereotypes act as contextual variables that actively shape individual career beliefs and decisions, rather than just background noise. This reworking of SCCT calls on career theorists to place racialization, cultural obligation, and stereotype internalization at the center of sociocognitive frameworks.

Empirically, this study contributes to the understudied experiences of East Asian Americans, a group that is overrepresented in STEM fields but underrepresented in qualitative

career research. This study challenges the assumption that high academic achievement equates with well-being or agency by breaking down Asian American narratives and focusing on the lived experiences of East Asian students. It demonstrates how STEM pathways are frequently shaped by intergenerational pressures, cultural narratives, and social expectations rather than unmediated personal interest. This study helps to put a human face on the MMM, a stereotype that dehumanizes Asian Americans by flattening difference, erasing complexity, and portraying them as academic machines rather than whole individuals. These counter-narratives reveal the emotional, cultural, and psychological dimensions that are frequently hidden behind "success." This contribution calls into question the assumption that East Asian American students are all thriving, and it encourages future research to focus on intragroup diversity and sociocultural complexity.

On a broader level, this study advances social justice by questioning how Asian Americans are racialized through "positive" stereotypes. The MMM, while seemingly flattering, limits what Asian Americans can want, feel, and become. This research calls for a reimagining of education and societal frameworks that affirm complexity, promote whole-person development, and acknowledge the structural costs of racial expectations.

This work began with a conversation with a student who was navigating these tensions. I hope this research will serve as both a mirror and a catalyst, validating the intricacies of East Asian American experiences and promoting more empathetic dialogues regarding identity, aspiration, and belonging.

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Appendix: IRB Approval

Division of Scholarly Integrity and Research Compliance
Institutional Review Board
North End Center, Suite 4120 (MC 0497)
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732
irb@vt.edu
http://www.research.vt.edu/sirc/hrpp

MEMORANDUM

DATE: January 10, 2025

TO: Lezly Taylor, Ye Zang, Brenda R Brand

FROM: Virginia Tech Institutional Review Board (FWA00000572)

PROTOCOL TITLE: Pushed into STEM: Investigating the Racialization and Cultural Influences on Asian Americans' Decisions to Major in STEM

IRB NUMBER: **24-905**

Effective January 10, 2025, the Virginia Tech Human Research Protection Program (HRPP) determined that this protocol meets the criteria for exemption from IRB review under 45 CFR 46.104 (d) category(ies) 2(ii).

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit an amendment to the HRPP for a determination.

This exempt determination does not apply to any collaborating institution(s). The Virginia Tech HRPP and IRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

https://secure.research.vt.edu/external/irb/responsibilities.htm

(Please review responsibilities before beginning your research.)

PROTOCOL INFORMATION:

Determined As: **Exempt, under 45 CFR 46.104(d) category(ies) 2(ii)**
Protocol Determination Date: **January 10, 2025**

ASSOCIATED FUNDING:

The table on the following page indicates whether grant proposals are related to this protocol.

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

IRB Number 24-905 page 2 of 2 Virginia Tech Institutional Review Board

Date*	OSP Number	Sponsor

* Date this proposal number was added.

If this protocol is to cover any other grant proposals, please contact the HRPP office (irb@vt.edu).