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A Call for a Critical Intersectional Lens for DEI and Anti-Racist Strategies to Include Asian Americans

Krystle Cobian, Jenn Fang, and OiYan Poon¹

Many often define racism as individual experiences of harm, as blatant racially targeted violence, or as intentional racial exclusions (Ewing, 2018). Less common is a recognition of racism as a systemic problem, regardless of intentions, that creates costs for everyone and requires systemic solutions that can benefit everyone (McGhee, 2021). Organizational efforts to advance diversity, equity, and inclusion (DEI) and anti-racist goals need to start with a framework for analysis and action that recognizes both systemic racism and its varied effects on communities and individuals. Too often, a framework of racial representation—or parity—is central, subsuming systemic analyses on both the macro and meso-organizational levels.

From a parity lens, DEI organizational leaders can exclude Asian Americans². They may implicitly frame all Asian Americans as highly successful based on narrow academic and economic outcome metrics and group averages; and therefore, immune to, or highly capable of “grit” to overcome, material harm from racism. Common framings of Asian Americans—as invisible or as white—reflect an underdeveloped conceptualization of systemic racism. To be sure, Asian Americans on average are well-represented among statistics of high educational attainment, on par with or higher than the white American average. However, liberation from systemic intersectional racism cannot be measured through a parity framework. Racism is not a singular problem, but a many-faceted and ever-evolving social phenomenon that targets and creates harm for different people and communities in myriad ways and in different magnitudes. Although representation matters, it is just one way to understand how systemic racism operates.

Parity is not the same as power and equity. For example, Asian American students have long represented a numerical plurality among University of California undergraduates. Nonetheless, they continue to express the lowest levels of “sense of belonging” and satisfaction in university-wide surveys (Nguyen et al., 2016; Samura, 2016). Representational approaches to framing race and STEM/M (Science, Technology, Engineering, Mathematics, and Medicine) can render Asian Americans and anti-Asian racism invisible, hindering the development of strategic solutions for advancing DEI in ways that include this diverse population.

Anti-racist work requires a critical intersectional lens to focus attention on how racialized power at micro-, meso-, and macro-structural levels relate to the reproduction of racial inequalities and disparities. These systems include organizational cultures and practice norms that perpetuate inequities in policies that shape perceptions and discourses, stereotypes and individual micro-level experiences, which relate to continuing policy debates and changes. See figure 1 in appendix for an illustration of this framework. Systems of practice (meso-levels of

¹ All authors contributed equally to this paper and are listed in alphabetical order by last name.

² We use the term Asian American “to refer to people of Asian ancestry in the United States, regardless of citizenship status, who self-identify or are identified as Asian” (Chen & Buell, 2018, p. 609).

organizations) are connected to macro social systems of power, which are related to STEM/M global politics and immigration policies, and subsequently Asian Americans and their experiences within U.S. society.

Throughout this paper, we illustrate the need for a critical intersectional frame on racial power to understand how racism systemically shapes Asian American experiences in STEM/M education and workforce, even when *some* Asian Americans, and Asian Americans overall, are well-represented in these spaces. In the next section, we offer a brief history of the connections between global politics, U.S. immigration policies, and how they are related to the racialization of Asian Americans and their experiences in STEM/M. We then synthesize research to identify the effects of common racial stereotypes about Asian Americans and how they relate to patterns of STEM/M career pathways and the glass ceiling related to current immigration policies. Finally, we conclude with recommendations for future research and DEI practices in STEM/M.

Asian Americans: STEM/M Politics and Immigration Policies

Asian Americans—including immigrants, refugees, asylees, migrant workers, transnational adoptees, undocumented and documented residents, mixed-race, the U.S. born, and many more—represent less than 7% of the U.S. population. They are among the fastest growing and the most ethnically, linguistically, and economically diverse racial demographic categories in the country (Budman & Ruiz, 2021). Until 1965, the U.S. maintained strict prohibitions and limitations on immigration from Asia until the Hart-Celler Immigration and Nationality Act (Lee, 2015). According to historians, the Black-led civil rights movement and Cold War tensions over the Space Race both contributed toward the sea change in immigration policy connected to national interests (Hsu, 2017; Wu, 2015). As a result, the U.S. experienced an unprecedented increase in the Asian American population. The 1965 immigration law ended longstanding racial barriers to Asian immigration³ and set preferences for family reunification, refugees, and professionals with specialized skills that serve national U.S. interests.

U.S. immigration laws have substantially shaped contemporary social contours and perceptions of Asian Americans. Since 1965, increased preference for highly skilled immigrants has facilitated emigration of specialized workers from some Asian countries, and consequently expanded the proportion of the professional class among Asian Americans. For instance, the signing of the 1990 Immigration Act created the H-1B skilled, temporary worker visa program. These policies created an influx of highly educated Asian immigrants, especially from India, China, and the Philippines to the U.S., to work tech, healthcare, and other STEM/M fields.⁴ Based on this history of immigration policies and Asian Americans, we use the term STEM/M in this paper to explicitly include medicine and healthcare fields.

The “over-representation,” as defined by a racial parity frame, of Asian Americans in STEM/M education and professions has not been a product of “Asian culture” (Lee & Zhou, 2015). Global and racial politics and power have played central roles in producing the conditions of Asian American participation in STEM/M professional fields and education pathways. Labeling Asian Americans as “over-represented” in STEM/M education and professional fields relies on an inadequate parity frame with little depth in understanding of race and racism as

³ Starting in the late 1800s, the U.S. enacted several laws limiting and banning immigration from Asia. These laws included the 1875 Page Act, 1882 Chinese Exclusion Act, and the 1924 Immigration Act, which created the “Asiatic Barred Zone” (Hing, 1993).

⁴ Based on this history of immigration policies and Asian Americans, we use the term STEM/M in this paper to explicitly include medicine and healthcare fields.

complex and multidimensional systems of power and oppression that have shaped immigration and Asian American participation in STEM/M.

Asian American Stereotypes and Implications in STEM/M Education and Careers

Immigration preferences have manufactured social perceptions and racial stereotypes of Asians and Asian Americans as STEM/M-oriented, high income, and educational high achievers in the U.S. (Lee & Zhou, 2015). Although there is a stark socioeconomic bimodality among Asian Americans, with many living in poverty and many among higher economic strata (Kochhar & Cilluffo, 2018), the highly educated and professional classes among this population dominate public perceptions of Asian Americans. Simultaneously, the long history of anti-Asian violence, political precarity, and civically marginalized status of recent H1-B temporary immigrant workers have contributed barriers to Asian American political engagement to advocate for their interests (Wong et al., 2011).

“Stereotype Lift”

Based on immigration history, there are racial perceptions and cultural stereotypes of Asian Americans as being diligent, highly technical, and eager-to-please (Williams, 2014)—qualities that are often viewed as favorable in STEM/M.⁵ McGee (2018) explored how this can lead to the phenomenon of “stereotype lift” wherein “positive” stereotypes of Asian American success can drive material improvements in test scores.⁶ Furthermore, Lee and Zhou (2015) have explored how the “success frame” can become a self-fulfilling prophecy for Asian Americans who may be redirected toward (and supported in) academic pursuits. By contrast, the “stereotype threat” experienced by Black students—particularly those in STEM/M (McGee, 2018)—can create a penalty in test performance when students are forced to confront anti-Black stereotypes of intellectual underachievement or lack of discipline.

Although “stereotype lift” appears at first glance to benefit Asian Americans in STEM/M, this phenomenon is a double-edged sword. High Asian American representation in STEM/M fields does not make them immune to racial stereotyping and harm (McGee, 2018; McGee et al., 2016). The expectation that Asian Americans must adhere to the racial stereotypes (and narrow metrics) of academic achievement and social/political submissiveness can produce devastating effects on the mental health of Asian American STEM/M and other students (McGee et al., 2017). Asian Americans commonly endure several forms of microaggressions, such as the assignment of intellectual performance to racial or biological factors, rather than rightfully viewing it as the product of effort, education, and/or expertise (Sue et al., 2007). For many Asian Americans in STEM/M, microaggressions were perpetrated by friends and colleagues, which can undermine their ability to form meaningful relationships with professional mentors and peers (Sue et al., 2007).

⁵Importantly, the high-achievement stereotypes do not apply equally to all Asian American ethnic groups. While East and South Asian Americans are mostly stereotyped as “model minorities”, some Southeast Asian Americans experience stereotypes of low-achievement and criminality. We therefore must acknowledge that universalization of the “high achievement” frame as broadly applicable to all Asian Americans runs the risk of overlooking the distinct experiences that are rendered invisible.

⁶ Racial perceptions about Asian American women in STEM/M differ from those “...regarding [B]lack women and Latinas in that, while there is generally an assumption of negative competence regarding blacks and Latinas, the stereotypes regarding Asian people are ‘ambivalent’ (i.e., they lump positive and negative qualities)” (McMahon, 2014, p. 212).

Stereotype: Foreignness, Suspicion, and Criminalization

Due to U.S. immigration policy history and its expansion of immigration through work visas formally classified as “temporary,” Asian Americans are also stereotyped as foreign, undermining their existence and belonging in the U.S. Moreover, this drives the perception of Asian Americans as innately foreign agents who should be regarded with suspicion for supposed disloyalty and untrustworthiness. In a 2022 survey, 33% of Americans say they believe Asian Americans are more loyal to their country of origin compared to the United States. This represented an increase from 20% who felt that way in 2021 (LAAUNCH & TAAF, 2022).

For Asian Americans in STEM/M—many of whom are at the forefront of research and may handle sensitive or proprietary information—these stereotypes can lead to heightened suspicion, racial profiling, and criminalization (Lai, 2021). In 1999, Taiwanese American nuclear scientist Dr. Wen Ho Lee was arrested and charged with espionage for the People’s Republic of China (not Taiwan⁷). These charges were eventually dropped—but not before Lee was forced to spend nine months in solitary confinement. Lee (2003) has since argued that the case against him was motivated at least in part by racial bias. Since Lee’s case, several other Asian American scientists have faced similar treatment—with many being terminated from their research jobs and criminally charged—particularly under the China Initiative launched in 2018 by the Trump Department of Justice and which continued until early 2022 under the Biden administration. Despite its stated focus on economic espionage and national security, the China Initiative broadly targeted Chinese American researchers, mostly charging them with breaches in research integrity—most often stemming from an alleged failure to properly disclose a personal or professional connection with China. Even so, only 25% of cases have resulted in convictions (Guo, Aloe, & Hao, 2021).

Stereotypes of Women

For Asian American women, racial stereotypes are also strongly gendered, and can drive a near-universal culture of workplace harassment in STEM/M (Williams et al., 2014) that includes both (relatively) subtle microaggressions as well as overt racial and sexual harassment (Castro & Collins, 2020). Asian American women are stereotyped as polar extremes—either the passive and submissive Lotus Blossom or the domineering and irrational Dragon Lady. Both exaggerated hypersexualized and hyperfeminine deviations from the (implicitly white) norm (Tajima, 1989).

For Asian American women scientists, this hyperfeminine stereotype can lead to expectations that they assume positions of subservience relative to their STEM/M colleagues. Many of those surveyed by Williams (2014) said they felt pressured to take on low-reward service or administrative tasks, and that they had to provide additional evidence of their scientific competence compared to white and/or male peers. Beyond this, hypersexual stereotypes contribute to Asian American women’s experiences of sexual harassment in the workplace (Johnson, Widnall, & Benya, 2018).

Racial Stress and Other Implications of Stereotypes and Microaggressions

All these stereotypes—or racial perceptions—of Asian Americans can produce racial stress and distress for Asian Americans who fail to or refuse to conform, or generally reckon with them, and especially the high achievement trope (Lee & Zhou, 2015). Surveyed Asian

⁷ It is especially ironic and illuminating that Dr. Lee – who is Taiwanese American – was accused of espionage for the People’s Republic of China, given the fraught history and current political relationship between China and Taiwan.

American STEM/M students felt that racial stereotypes had flattened their distinct backgrounds and expertise, redirecting them towards STEM/M studies because of the corollary assertion that they would not be successful in other fields such as the humanities or the arts (McGee et al., 2016; Poon, 2014). Even for Asian Americans who successfully pursue and earn a STEM/M degree, advancement through STEM/M training programs and early career can be challenged by both structural and interpersonal racism.

Beyond the psychological trauma of dealing with routine microaggressions, Asian Americans experience material harm related to the impact of racial stereotypes. Because Asian Americans are considered overrepresented, there is often a lack of support provided to Asian American college students and early-career professionals. Asian Americans may not be directed toward undergraduate training and mentoring programs, financial support resources, early-career mentoring opportunities, or grant funding because they are told they are ineligible (Shivaram, 2021). Even if Asian Americans might be eligible because of an institution's local definition of who is considered underrepresented, the lack of knowledge from faculty mentors and PIs regarding eligibility prevents them from informing and guiding Asian American trainees from applying to STEM/M opportunities.

Furthermore, stereotyped traits that would appear to advantage Asian Americans in entry-level STEM/M positions are considered unfavorable for professional advancement. Corollaries to the high-achieving technical aspects of Asian American stereotypes are the perception of Asian Americans as meek, uncreative, and anti-social—characteristics considered incompatible with leadership and management. Indeed, in STEM/M, stereotypes of Asian American sociocultural foreignness may outweigh stereotypes of technical competence (Williams et al., 2016). Thus, while some stereotypes may modestly advantage Asian Americans in STEM/M, other stereotypes may disadvantage their upward mobility within those fields, creating a glass ceiling that limits Asian American advancement to leadership (Chin, 2020; Huang, 2021).

Racial stereotypes and microaggressions can further compound Asian American barriers to professional advancement and promotion. Although Asian Americans at large tech firms in Silicon Valley make up nearly 30% of workers, they were only 19% of managers and only 14% of executives (Gee et al., 2015). This pattern remains true in academia, where Asian Americans (particularly Asian American men) are reasonably well-represented among tenured and tenure-track faculty but are unable to break into administrative and leadership roles (Hune, 2006; Kim & Cooc, 2021).

Obstacles to STEM/M Matriculation and Advancement

A handful of studies have found that Asian American students are significantly more likely to major in a STEM/M field in college compared to white students—and specifically in the fields of engineering, biology, and computer science (Liu, 2017; Poon, 2014). Through a parity lens, Asian Americans are also well-represented in STEM/M careers. However, these generalized statistics should not be mistaken for political or social power in STEM/M (Fry et al., 2021). Instead, these data mask key challenges and persistent power imbalances that continue to challenge Asian Americans as they progress into and through STEM/M careers.

STEM/M Education Pathways and Workplace Experiences: Ethnic and Gender Disparities

Aggregate statistics on Asian American representation in STEM/M higher education fail to account for striking inter-ethnic disparities in access to STEM/M majors. Students from some South and Southeast Asian American backgrounds, for example, are less likely to declare a

STEM/M major compared to students of East Asian American backgrounds (Kang et al. 2021; Liu 2017). For example, although 31% of Asian American students declare a STEM/M major, only 24% of Southeast Asian Americans pursue STEM/M study (Liu, 2017). Data showing an overall Asian American preference for STEM/M majors fail to account for disparate barriers between Asian Americans. Over 40 percent of Asian American students attend community colleges despite common assumptions of high attendance at highly rejective four-year institutions (Park & Assalone, 2019), with higher rates for some Asian American ethnic groups (Fong, 2017). Among Asian American and Pacific Islander students enrolled in developmental math courses at community colleges, only half move onto the next level of math, and even fewer (30–35%) move on to transfer-level math courses (Teranishi et al., 2014). Pacific Islander, Asian Americans, especially Southeast Asian Americans, enrolled in public California universities have a lower four-year degree completion rate than white students (Reddy, Lee, & Sisqueros, in press).

A little over 47% of STEM/M post-secondary degrees earned by Asian Americans are awarded to Asian American women (National Center for Science and Engineering Statistics [NCSES], 2021). However, Asian American women are underrepresented in STEM/M graduate-level training programs and in the workforce, particularly in certain STEM/M fields such as engineering and computer science (Fry et al., 2021). Asian American women make up 6.5% of the STEM/M workforce, compared to 14.1% for Asian American men, 17.7% for white women and 46.3% for white men (NCSES, 2021). Moreover, there is a sizable wage gap for Asian American women in STEM/M. Asian American women workers earn only about 85 cents to the dollar that Asian American men in STEM/M earn (Fry et al., 2021). Additionally, Asian American women scientists are nearly twice as likely to be unemployed compared to Asian American men (NCSES, 2021).

For Asian American women, experiences of racialized and gendered harassment can limit their long-term career success and also push them out of STEM (Castro & Collins, 2020; Patel, 2008; Vargas et al., 2021). In a study of 23 Asian American women doctoral students, every participant either personally experienced or observed of bullying, sexual innuendos, and/or racialized sexual harassment toward themselves, Asian American women colleagues, or women in general (Castro & Collins, 2021). Relatedly, Asian American women reported receiving pushback for being assertive at work at higher rates compared to their Latina, Black, and white counterparts (Williams et al., 2016). In Silicon Valley tech companies, Asian American women are less represented than Asian American men in managerial and executive positions. (Gee et al., 2015) In academia, Asian American women in STEM/M at 4-year universities are significantly less likely to be hired as full-time tenure-track faculty, (Kim and Cooc, 2021; NCSES, 2021), less likely to receive federal research support (NCSES, 2021), and significantly less likely to receive tenure compared to white men, Asian American men, and white women (Kim & Cooc 2021).

Immigration Laws and Highly Skilled Immigrant Labor

The experiences of Asian Americans in STEM/M are inextricably linked to policies and laws that structure immigration and research priorities. Most international students in the United States originate from Asia (Israel & Batalova, 2021) and two-thirds of those F-1 visa holders pursue a STEM/M degree (Ruiz, 2017). More than half of international students who go on to receive temporary work authorizations in the form of work visas join the STEM/M workforce

(Ruiz & Budiman, 2018). Currently, 82% of Asian Americans in the STEM/M workforce are first-generation immigrants (Funk & Parker, 2018).

Among H-1B visa workers in STEM/M, most are from Asian countries, with half from India (Ruiz, 2017). Yet, the H-1B visa—as well as F-1 and J-1 educational visas—are “temporary” visas that can restrict visa holders’ pay, professional mobility, and access to employee benefits. For example, H-1B visa holders are often paid lower salaries compared to their U.S.-born counterparts (Stevenson, 2014), and are not always eligible for health insurance benefits from their employers. They are also restricted from obtaining, let alone being compensated for, supplemental work. This structural condition can contribute toward inequalities in immigrant STEM/M workers’ professional development (Rangel & Shi, 2019). Academic and industry STEM/M employers continue to demand and exhaust the annual supply of H-1B visas each year (Eng, 2013), which result in these temporary work visa programs becoming a mechanism by which employers can gain access to a steady stream of highly skilled and underpaid labor.

The exploitation of Asian STEM workers with temporary visa status challenges their ascent through company leadership. Through this system, U.S. based organizations—both academic and industry—can “amass the material benefits of Asian migrant labor” (Chen & Buell, 2018, p. 613). This context complicates the dominant narrative of Asians in STEM/M as successful and thriving.

Recommendations

What we know from research on race and racism in STEM/M pathways often centers parity frameworks, driven by troubling and persistent racial disparities in STEM/M education and career pathways. Material inequalities in STEM/M participation characterizes the experiences of some Asian Americans and in specific contexts. However, as some of the highlighted research demonstrates, an explicit critical intersectional lens is needed to advance research that illuminates multi-layered racial inequalities. A focus on systemic and intersectional racial power would not only guide research and practice for DEI to counter the complexities of anti-Asian racism, but it would also advance research and practice to more effectively illuminate the mechanisms that reproduce racial disparities and possible strategies to dismantle them.

Future Research on Asian Americans and STEM/M

Asian Americans are often excluded in research on race and racism, because as a group they do not fit a racial parity framework that centers narrow numerical metrics of participation and disparities. As we have pointed out though, there are documented barriers and disparities in STEM/M education and employment along gender, ethnicity, and immigration status. A sole focus on racial parity as the definition of racism and its outcomes can limit a more comprehensive analysis of systemic racism and its range of effects.

Future research should center a critical intersectional framework to tend to power and systems and how they reproduce a range of inequalities in macro policy structures, meso-organizational practices and norms, and micro individual experiences. Recent studies and new frameworks that center critical analyses of racialization, work norms, and cultures of power in organizations can offer insights and models for such work (e.g., Nguemini Tiako et al., 2021; Posselt et al., 2020; Ray, 2019). Such work can draw attention to how inequalities are systemically reproduced, to inform strategic solutions toward DEI and anti-racism in STEM/M.

For example, additional research is needed to identify and better understand the factors that can contribute to attrition of some Asian Americans from the STEM/M pipeline. More research should focus on Asian Americans in public universities and community colleges (Kim et al. 2022). There is also a need for more discipline-specific research in STEM/M to understand the nuanced yet important differences in how structural inequity operates within the context of each discipline's network of conferences, faculty, programs, representation of Asian Americans within the field, and norms. Asian Americans still face challenges such as invisibility in certain disciplines. For example, Asian American doctoral students in Psychology are significantly more likely than all other racial groups to report that Asian Americans were not represented at all in the field of Psychology (Maton et al., 2011).

Research drawing more robustly on intersectionality can also expand what we know about Asian Americans in STEM/M. Few studies on Asian Americans disaggregate data on Asian American subgroups such as ethnicity, gender identity, socioeconomic status, or immigration status. Instead, similar to Latine/x groups, Asian Americans are often aggregated as a monolithic group to the detriment of several subgroups who are truly underrepresented in STEM/M fields. Although Castro and Collins (2021) revealed that Asian American women experience profound workplace harassment, this is one of only a small handful of studies to address the specific experiences of Asian American women who nonetheless remain underrepresented in STEM/M. Even less is known about Asian American LGBT+ individuals in STEM/M despite evidence that women and gender non-conforming individuals are more likely to report less comfortable experiences (Barthelemy et al., 2022). Such works could reveal how racism works with other systems of oppression like patriarchy, compulsory heterogenderism, and others, to compound the effects of racism.

Another area of research expansion could focus on the relationship between immigration and STEM/M. Given how central immigration laws have been to the formation of Asian American communities and racialized perceptions, stereotypes, experiences, and treatment, this area of scholarship could offer important new possibilities for inquiry. Some have begun examining the experiences of the immigrant second-generation (i.e., children of immigrants) and how their career advancements have not aligned with expectations based on their educational achievements (Chin, 2020). In other words, even when Asian Americans are highly educated, there remain ethnoracialized barriers to their career advancement (Huang, 2021). However, more research should examine the diversity of Asian American immigrants' experiences in STEM/M to unveil how intersectional systems of racism shape them. This is especially needed given that the largest segment of Asian American workers in STEM/M fields are immigrants with a diversity of legal status. U.S. citizens and legal permanent residents have different legal rights than immigrant workers with temporary visas.

A related area of inquiry that could offer promising directions is research on organizational climate or environments. In higher education, campus racial climate studies represent a robust area of work. Hurtado and colleagues (2012), for example, offer a multicontextual model for diverse learning environments (MMDLE). This model points out that many dimensions contribute toward how inclusive or supportive of diversity campus climates and environments are. Demographic composition represents one of many dimensions. In this area of research, it is well understood that demographic diversity and representation is only one component of what makes up the social climate for learning. We are unfamiliar with a similar model applied to workplaces. In any case, further research on STEM/M educational and perhaps

work environments could offer promising directions for inquiry to illuminate new ways to increase DEI in these settings.

Recommendations for Practice and Policy

To date, STEM/M DEI efforts have focused on achieving and maintain numerical parity for underrepresented groups. While a commendable goal, numerical parity is by itself insufficient to address and correct for systemic and structural racism that historically and contemporarily challenge non-white scientists in STEM/M. We argue that this framing is limited, and only partially addresses individual and structural inequities for people of color (Hurtado et al., 2012).

Through a parity lens, current public and private diversity programs use federal definitions of “underrepresented” groups to target their efforts towards increasing the numerical representation of these groups in STEM/M (see, for example, NIH’s Notice of Interest in Diversity, NIH 2019). To be clear, efforts to improve STEM/M access for underrepresented Black, Latinx, and Native students and workers has been highly beneficial in diversifying the STEM/M workforce. However, Asian Americans as a group fall outside of the underrepresentation framework, even though some Asian American groups are “underrepresented.” This dominant framing contributes to a persistent invisibility of Asian Americans in anti-racism discussions, scholarship and actions in STEM/M, and fails to address structural racism that Asian Americans who are present in STEM/M still face.

Therefore, our first recommendation is for an expansion of how leaders and organizations that care about DEI and anti-racism conceptualize racial inequities to take up a critical, intersectional lens to interrogate racial power. A focus on understanding how power operates allows for a more expansive investigation of that ways that inequity continue to challenge minoritized groups. Indeed, while some Asian Americans may appear to benefit from the current policies and structures, STEM/M fields themselves serve as “a site of reproduction for ideologies such as meritocracy and producerism” (Chen & Buell, 2018, p. 611), and thus anti-racism efforts in STEM/M require a deeper understanding of the ways power operates and shapes laws, policies, and inequities in STEM/M fields. This is particularly critical as national agencies like the NIH, NSF, and HHMI have developed specific anti-racist initiatives and workgroups. Similar calls have been made in medicine (Samra & Hankivsky, 2021) to go beyond focusing on singular dimensions (e.g., racism, patriarchy, classism, etc.) in research.

Second, and related to the call to expand beyond a parity framework, federal diversity initiatives in STEM/M should include Asian Americans in their strategic efforts. The exclusion of Asian Americans from participation eligibility contributes toward a persistent absence of Asian Americans and their experiences from program evaluations, career advancement resources, and public health research funded by federal research and training grants. For example, some STEM/M researchers, their careers may rely on grant getting. There are many funding agencies with eligibility policies that prevent non-U.S. citizens from applying to even compete in grant competitions. We wonder how funding structures may be a culprit in systematically constraining the career advancement of Asian Americans in STEM/M and how they may also limit funding support for research on how systemic intersectional racism affects Asian Americans in STEM/M.

Third, we recommend STEM/M and public health funding agencies reconsider their priorities to include Asian Americans. Studies have found that Asian Americans are at higher risk for several diseases, including type II diabetes (Stewart et al. 2016) and cancer (McCracken

et al. 2007), but that they may be less likely to seek early medical intervention for chronic physical and mental illnesses (Chu et al., 2011), due in part to lower healthcare access (Brown et al., 2000; Chevarley, 2010; Clough et al., 2013) reduced doctor-patient trust (Ngo-Metzger et al. 2004), language barriers (Clough et al., 2013), and cultural stigmas around seeking care. Reports of everyday discrimination from Asian Americans were associated with increased chronic health conditions, even after controlling for age, gender, income, language proficiency, and several other factors (Gee et al., 2007).

Finally, we encourage the inclusion of Asian Americans in new and existing decision-making spaces in STEM/M organizations. In 2021, the NIH formed the Asian American Pacific Islander Health Scientific Interest Group ([AAPI-HSIG](#)) to improve Asian American and Pacific Islander health by stimulating research, collaboration, mentorship, and scientific input to NIH leadership. Federal interest groups such as the AAPI-HSIG importantly signal that Asian Americans in STEM/M warrant attention and advocacy. Additional initiatives like AAPI-HSIG should be created and sustained to promote engagement of Asian American STEM/M scholars in decision-making spaces that can help shape local, state, and federal policies relevant to the Asian American STEM/M community.

Conclusion

Racism shows up in many ways, not just in outcomes of racial representation. Overall, Asian Americans are well-represented in STEM/M education and the labor force. However, they still experience hostile social and political conditions, which are reproduced through complex racial power systems. Representation matters, but it does not provide a full analysis.

Racial power is intrinsic to organizations of higher education and workplaces, which reproduce dis/parities in racial representation, subtle and explicit hostilities in organizational cultures, and daily norms of interactions. Therefore, it is essential to center an analytic framework of intersectional racial power, in addition to recognizing representational dis/parities, to appropriately understand how systemic racism, as it intersects with other systems of oppression, reproduces diverse Asian American experiences and their presence in STEM/M education pathways and the workforce.

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Appendix

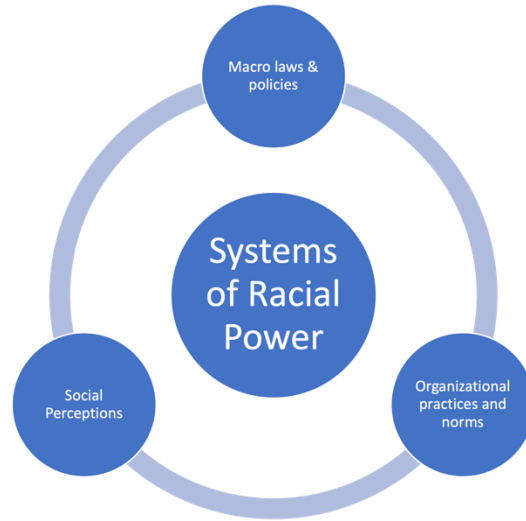


Figure 1. Critical Intersectional Frame of Macro, Meso, and Micro Systems of Racial Power