

Diversity and Inclusion

Despite being an immigrant to the USA, I was fortunate to be born a white male in an English-speaking Western nation. Beyond this, I was raised in a semi-rural area in a low socio-economic status family and graduated as a first-generation student. Throughout my schooling, I have been almost exclusively advised by mentors who identify as female and worked in diverse laboratory groups that embraced the racial, sex, gender, and cultural differences of their members. And so, my position and commitment to diversity and inclusion has been shaped in only a small way by my lived experience, but mostly by the enormously generous lessons afforded to me by colleagues and friends of varied age, status, culture, gender, ethnicity and so on. In addition, I have been fortunate to be able to actively build a better understanding of the world as experienced by those around me, and how my empathy and efforts may best serve others. As best I can, I carry this perspective into all my work including teaching, research, and my collaborations.

My approach to diversity is one that informs my teaching and mentoring, where I want to foster a culture among my mentees and collaborators that embraces and values our diversity and I intend to do so by seeking diverse persons to mentor, empower, and work alongside. Further, my experience as a first-generation student makes me aware that there is often a critical gap between the institutional resources and specific programs, that are available to support students and students' awareness and ability to navigate these resources. All too often, we, as researchers, perceive ourselves as outside the connection between the student and the resource office rather than a bridge through which students can navigate this complex machinery. In the classroom, I recognise that grades often do not consider the entirety of an individual's context; and so, I have incorporated prior knowledge assessments alongside active learning pedagogies into my classes to enable students to better engage and learn on their terms. Further, I aim to be available to all my mentees and strongly encourage them to connect with me as best works for their needs (online, in-person, etc.).

Moreover, my chosen field of developmental psychophysiology presents me with the opportunity to actively approach diversity and its impact, and I intend to recognise and address that opportunity now and into the future. Indeed, my work on the Family Life Project (FLP) did and continues to do so by specifically investigating the development of children (many of whom identify as people of colour) raised in low socioeconomic status rural regions of Pennsylvania and North Carolina. Moreover, my previous time at PSU instilled me with a genuine appreciation for the importance of diversifying psychophysiology and its participants (noting that representation is not achieved when a diverse range of individuals is averaged together under the implicit assumption that they are interchangeable) and led to designing and implementing an additional project inside FLP. This project empirically examined EEG and ERP data quality across the full spectrum of hair types in an effort to dispel a very common presumption, that EEG is not feasible with highly textured hair, which disproportionately affects people of African American or African descent. We found that hair volume rather than type is associated with small, but systematic differences in signal quality and signal amplitude. Notably, these differences can be attenuated by controlling for the volume of electrode gel used in the recording (Lees et al., 2024). Moreover, I have been able to bring my experience from this project to McLean and CDASR and have been advising our Inclusive Neurotechnology DEI subcommittee on a pilot project aimed at conducting a similar study in high-density EEG systems.

Beyond academia, my commitment to diversity and inclusion extends to my service in the broader community, where I have and continue to participate in outreach programs that primarily engage underprivileged or disadvantaged groups. Throughout my career, I've participated in several 'Ask/Meet a Scientist' networking sessions; one such session was for a summer program that aimed to engage middle-school students who were visually impaired in STEM disciplines from which they may have previously felt excluded, while another session was for local school students, and another was for first-generation PSU students. In these sessions, I was able to speak to students about my academic path, and their aspirations and options for entering STEM. Previously, I compiled a program of interactive perceptual neuroscience demonstrations for K-12 students that was to be presented at the USA Science & Engineering Festival but was unfortunately cancelled due to the Covid-19 pandemic. Community outreach events like Brain Awareness Week could be fantastic opportunities for these and other demonstrations. Finally, in my time at PSU, I co-organised the 2020 annual Postdoc research exhibition, and our program focused several events around enabling postdocs from various backgrounds to discuss approaches to promoting diversity and inclusion, and the value and impact of diversity and access to education.

Whilst the aphorism '*a rising tide lifts all boats*' is questionable in its native field of economics, in my mind it is without a doubt true with respect to diversity. Simply put, I recognise that the world is diverse and when we actively embrace this truth in a quest for equity, we all benefit.