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PENSÉE

Monthly updates from Cognitive Science

Image credit Andy Brunning/Compound Interest

This month, we break from the Science to focus on the people that constitute STEM. We have conversations about how their relationship with their identities transforms their relationship with Science. How what we view as valid science is modulated by our identities and folkways.

In attempting to unpack the status quo and trends within Diversity, Inclusion and Gatekeeping, we talk to four young scientists about how they have navigated their journey of consolidating their identity as a scientist and as a person from a marginalized group.

We analyze each of these complex socio-cultural terms through the lens of these individuals' lived experience in order to understand why popular connotations might be too simplistic to metamorphose academia.

Trigger Warning: Transphobia, Caste based violence, Sexual Assault, Sexual Harassment

IN THIS ISSUE

We Recommend

- **Racial and ethnic imbalance in neuroscience reference lists and intersections with gender**
  How do ethnicity, race and gender influence citations? This analysis looks at reference lists from 5 neuroscience journals to find out.
- **GENDER (STILL) MATTERS IN BUSINESS SCHOOL**
  This study investigates why women in business schools score less than male peers on quantitative courses, and why this gap closes when the instructor is a woman. Read detailed summary here.

Events and Opportunities

Society for Neuroscience Virtual Graduate School Fair (November 5-7): Register here.
Annual Conference of Cognitive Science: Call for Abstracts(Deadline November 15): Details here.
NeuroNovember Convention (21, 22, 28, 29 November): Details here.

Digital Gems

Machine Learning Summer Schools
This list contains a list of major ML summer schools conducted since 2018, with links to many open-access lectures, tutorials and panels.

Making Academia Inclusive
Abhilasha Joshi and her fellow researchers created a list of Action Items (institution-level, lab-level, PI-level and trainee-level) aimed at making STEM inclusive and kind. See here**.**

Gender Roles in Academia
BiasWatchIndia analyzed gender representation data (primarily men vs women) from June to September 2020. Here is a short talk on what they found.

Queer in Science
If you're a neuroscientist looking to network with fellow queer researchers, head over to Queer In Neuro. Also check out 500 Queer Scientists, a visibility campaign for LGBTQ+ scientists.

Industry Careers
Tanya Jonker's list of possible industry career paths for graduates trained in Neuroscience, Cognitive Science or Psychology.

Meet STEM: Rishika Mohanta

Rishika Mohanta (she/her) is an undergraduate student at IISER-Pune, where she also works in the Theoretical Neuroscience Lab with Dr. Collins Assisi.

What are you doing right now? How did you come to be where you are, academically?

I am currently a 4th year undergraduate in the integrated BS-MS programme at IISER Pune. I am also working as an intern in the Theoretical Neuroscience Lab there. I'm working on a computational project so I still can do most of the work online during the pandemic. I plan to start working on my thesis next year.

When did you come out as a trans-woman? What was the reaction from the people around you and in what way did that alter your academic life?

I came out around October 2019, when I was in my third year. The early stages were more about articulating my gender identity for myself. It became more obvious to others when I started presenting as female while going to classes and labs. It was a slow, incremental process. I didn't explicitly come out to everyone right away. By then I hadn't decided a preferred name, and was going by my old name. There was a lot of internal confusion and dialogue that affected my mental health and productivity. There was an incredible amount of additional stress from my coursework.

Luckily, I had one out, trans* person for support around me. I was able to talk to other academicians who also identify as trans. For instance, I reached out to Dr Bittu from Ashoka University who was an immense help in my journey. At this time I did not know how to deal with the stress of navigating my gender identity. I was struggling with poor mental health and dysphoria. I was fortunate to be able to talk to some professors from the LGBT community who were able to help and guide me, even though they weren't my direct academic mentors. The idea that someone successful in academia had similar experiences felt very comforting. It played a big role in me being able to come out as Trans*.

After I came out and started presenting more feminine, my friends were extremely supportive and understanding. I decided to come out to my mentor. It didn't seem to affect him at all, which I felt was the nicest thing. At this point, I was still undecided about my preferred name. I was working on a publication with my group and my advisor asked me if I would like to change my name to my preferred name and that he would get it done if I needed it. My advisor and his wife, Prof. Suhita have a joint lab, and have both been extremely encouraging and supportive to the best of their ability.

Things also changed in the hostel I was living in back then. A person presenting feminine in an undergraduate boys hostel can be a scary experience, and it was quite jarring in the beginning. It is still challenging to use the same washroom while identifying as trans or putting makeup there.

It isn’t just academic advisors but also the immediate environment where you live, work and spend time that matters. We are still at a position where people at the top of the academic hierarchy are completely unaware of this. How can we, then, expect the general populace to be more understanding of gender identity?
The small amount of support from professors gave me the strength to keep going. If I were to face overt discrimination, I would likely have been too scared to come out. Something like that has terrible effects on one's mental health. I now have Trans* folx who reached out to me to talk about their Gender identity, because they see me publicly being out. But they are too scared to talk to their professors. This is because very few things in their immediate surroundings give them the assurance of safety if they were to come out.

This raises an important question about student housing and policies for Trans* and Non-Binary identifying students. Do you feel there should be explicit rules in institutes for such students based on how they self-identify? How has your experience been navigating these issues at IISER?
IISER doesn’t have any special policies for Trans identifying students. I don't think any STEM institute in India has come to the point yet. I would likely be the first student in the scenario I am in, dealing with gender-segregated accommodation as an undergraduate student. I was figuring out a way to petition the administration before the pandemic hit, and will approach them whenever we return to the campus.
I do realize that it is a difficult issue to readily solve, especially if the individual hasn't legally transitioned. NALSA judgement states there is right to self-identification for Trans folx. But until that is verified in a court of law, it does not stand official ground. I hope the administration allows people to change hostels on the basis of self-identification, without requiring legal basis. But this might pose a challenge for public institutes with limited infrastructure at hand.
These issues need support of cis-gendered allies, because otherwise we are too small a minority to be able to affect change. In the long term, there is a definite need to identify infrastructure to house Trans* and NB students. Ideally, every institute should prepare for it, because that preparation will make a huge difference for someone who applies there and finds there is acknowledgement of their concerns.

Recently there was an article about misogyny at IISER-Pune. It talked about harassment and experiences that are very familiar to women. Does IISER provide spaces to talk about such issues? What do you think about mental health support systems there?
The article did a great job in collating this information. Often, people are too afraid to come out and talk about it, some are even afraid to share their experiences anonymously. The article was really helpful, in that we ended up talking to each other a lot more about sexual harassment and the culture for Women and Trans folx. This was in large part due to the strength of the individuals who talked about it before us, and in more visible settings.

IISER has a Women's cell which takes in complaints against sexual harassment. However, most harassment goes unnoticed or unreported. They do try to do a good job in the cases I've known about, and are well represented with women on the council. It is headed by a female Professor, but it doesn't have Queer representation. LGBTQIA+ people are still afraid to go there and report their complaints. This is something we need to work on changing. During orientation, we are told that the Women's Cell exists but we are not told how to approach it or its functioning.

There are power dynamics at play even within institutions. There is always a fear of what might happen if this information becomes public. I presented male for at least 2.5-3 years at institutes. I took back some of that privilege when I transitioned. Personally, I haven't felt overt discrimination. I feel lucky because my institute is significantly better in that aspect. Most women are very active in talking about issues regarding harassment. However, since I live in a boys hostel I witness a lot of 'locker room talk'. As a woman, it's really scary when it happens. There is a need for systemic change; and education about LGBTQIA+ issues for students, faculty and staff.

There was an instance when I was waiting for the lift in my hostel and the guard abruptly grabbed me from the back. When I turned back, they said 'oh you're a boy!'. It was a very disconcerting experience. The guard after looking at me misgendered me and asked me why I was dressed like a girl. I was forced to laugh it off and tell him 'I dressed like this today because I felt like it'. But in retrospect, it's something that I shouldn't have to face in a place where I live. Even the counselors aren't trained to address queer issues. Not every counseller is capable or experienced to deal with issues faced by queer individuals or marginalized identitites; or trained for particular situations that these people face. I feel that Indian Academia can really benefit from organised peer support. IISER pune started a queer safe space, Satrangi last December. Now, this group has become the safe space to talk about all issues including mental health issues that may not have anything to do with queer identity. If more people come out and express themselves, it might help even people who are cis-heterosexual to reach out for support.

Have you ever felt like your identity has kept certain opportunities from you or limited the scope of your work?

This was not a concern I had before I came out, because my sexuality was a private affair. I was not very vocal about being on the asexual spectrum since it is not externally presenting in the way being Trans is. My decision to choose my current advisor was in part guided by the fact that I knew they were not transphobic. The first question I have to ask for every lab and mentor is whether they are likely to be transphobic, instead of solely looking at the research. My trans identity has limited the countries I can go to for research, considering some have explicit laws or cultural biases against Trans identity.

I did an internship in 2019 and the space did not have any gender-neutral toilets. I realised that even if the professor I were to work with is supportive, deciding which washroom I could use would remain an added concern. It is unfortunate that I have to worry about that instead of my research. Things aren't built to be explicitly inclusive. There is prevalence of harassment and violence against non-conforming people. I was unsure of coming out publicly because of the potential repercussions on the opportunities that come my way. But I realized that it was vital to deal with mental health and dysphoria. Even if I get into a 'good' place, if I am in a bad mental state due to hiding who I am, it would be equally adverse to my research goals.

Do you intend to remain a part of Academia? What are your future academic and career plans?
I do hope to stay in academia and intend to become a Professor. I expect to graduate in December 2022 and will apply for a PhD in the 2023 cycle. I plan to major in Neuroscience but I am also interested in Feminist and Queer theory. I want to continue social activism and write more on that front. I've written articles with some professors in the social sciences department. Currently, I'm part of a project where we are looking at diversity within the neuroscience community, and we hope to expand the survey to include class and caste.

Meet STEM: Melvin Selim Atay

Melvin (he/him) is a PhD candidate of Neuroscience and Neurotechnology at Middle East Technical University, Ankara, Turkey. He is deeply passionate about AI theory and applications and works on developing AI solutions for early diagnosis of neurodegenerative disorders.

Let's start with your academic background. What brought you into neuroscience and what do you do now?

I have a Bachelor's in Biology and a Masters in Biotechnology. I became interested in computers and started thinking about how we could understand the human brain using them. I took Deep Learning courses in my PhD and now work on the diagnosis of Alzheimer's Disease using Deep Learning. DL tools like Artificial Neural Networks are black boxes. You see the input and output, but the process is difficult to interpret. Such tools cannot be useful for people with non-engineering backgrounds because they're not interpretable. That's the challenge I try to address by making neural networks more understandable and useful, specifically for clinicians.

What about your personal journey as a member of the LGBTQ+ community?

My diversity comes from being a non-engineer in an engineering school and from being a transman in a cis-male dominated space. Being a diverse person is challenging and difficult, especially because I live in a country like Turkey. My country barely has the notion of diversity. Existing and displaying my existence is a big thing in itself.

Living in a society that is not accepting and open can make coming out very challenging. What has been your experience with coming out to yourself and to other people?

I grew up with my mother and grandma, with no notion of patriarchy. I was very afraid of being a man because I thought it was bad. But irrespective of what I looked like, I felt like a boy. When I came out to my mum, she cried because she thought she'd lost her girl. But my family and friends have been very supportive and accepting.

In academia, on the other hand, coming out has been very hard. Some younger faculty members have accepted my name, but the others deadname and mis-gender me. It's very anxiety-triggering and I don't like it. I'm trying to deal with this by telling people my name and the correct way to address me. It's an ongoing continuous process. However, I want to add that the online academic community I found, at NeuroMatch and OHBM, is an incredibly safe space for me.

As students, it's very important for us to know that people like us exist and succeed in academia. Did you think there was a lack of representation in your case? Or were you able to find and reach out to people who understood your experience?

At my current institute, younger researchers are more friendly and interested in your ideas and what you can bring to the community. What you can do is more important than what or who you look like. It's not easy to change the established rules, so I have to accept the others and keep my distance. I don't blame them — the culture they come from is very homophobic and transphobic.

In India, we've seen the birth and growth of many student-run LGBTQIA groups on campuses, especially over the past 5 or 10 years. Even though they can't always bring about systemic change, they do provide support and a safe space to people. Do you have something similar at your university, where students feel safe discussing their issues?

My school does have such groups and I feel very lucky that it does. But it's not enough because we're just students and don't have any power over decisions. A few years ago, all LGBTQ+ events were banned in Turkey. Some of my friends were arrested for just trying to organize Pride. Any signs of a rainbow were seen as criminal activity.

Those legal actions have been lifted now and being able to form these groups gives us a safe place and is very critical to us. We established an association called Unikuir to provide guidelines to all universities on how to start LGBTQ+ groups.

Infrastructure is a big problem for most trans-identifying university students. For instance, university living spaces are usually binary, and if you cannot afford to live at a place of your own, things can get difficult. Do you think you're in a position to start asking for infrastructure-level changes?

We tried to establish gender-neutral toilets at my university and the media portrayed it in a very perverse manner. I've seen some other places adopting gender-neutral restrooms due to a lack of space and even that feels reassuring. I was lucky to be accepted by my family and be able to live at home, but many of my trans and non binary friends feel threatened in binary spaces. Trans-men are forced to stay in female accommodations and other women feel threatened by them. It's a major issue but I can't imagine this changing anytime soon. I hope it does, I'm trying my best to increase representation and want to see safe non-binary spaces. Even in a heteronormative culture, safe spaces are important and I want to see them happen for everyone.

How did coming out affect your work and academic life?

I used to feel like it would be better to keep my identity secret in academia. But now that I'm officially changing my name, it can't be a secret anymore. Not everyone knows it and I am very anxious about how people will react.

Do you know what you want to do after your PhD? What are your academic goals?

A week ago, I would have said I will move to the woods and do nothing. But I know that I need to keep fighting for myself and for people like me. The pandemic is a terrible situation, but it has been a blessing for me because I've found communities like Neuromatch and OHBM. They provide me a space to express myself and have showed me that I can do many things.

I may not be the best PhD student around, but I know that there are resources for me, and there's people who are very welcoming. That gives me hope. I used to make long-term plans, but for now, I'm just trying to finish my thesis. I like research and want to be in an environment where I can continue asking questions.

You've mentioned the online communities you found at the Neuromatch and OHBM conferences. How did they influence you at the work front, if at all? And did they make you feel more secure in your capabilities as a researcher?

I've been a victim of a lot of online harassment. I was targeted during Neuromatch 1.0. I wasn't the only one who was Zoom-bombed, but when you're a minority and out in the open, you're an easy target. Had something like this happened in my university or in my country, I would have been separated and the conference would have gone on. But Neuromatch's handling of that situation was different — we documented what happened and the organizers paid attention to how it could be prevented in the future. They respected me and accepted me for who I was. My opinions were respected and that gave me a sense of belonging.

I participated in the Neuromatch Academy as a TA, which was a big privilege. Some tools I taught weren't familiar to me and some were tools that I used everyday. I was able to learn and teach at the same time. I didn't have any teaching opportunities at my department, but NMA gave me that. I'm still in touch with people I met then and we often exchange feedback and suggestions about projects. At OHBM, I attended BrainHack where I dealt with online transmission of information. Hacking is generally competitive, but BrainHack is collaborative. Both Neuromatch and OHBM have made me realize that diversity is vital for collaboration, and you can't have one without the other.

How do you think you'd like to mentor new students?

I try to share advice and resources with my peers frequently. I also translate things I learn so that they're accessible to more people. In my department, we're trying to organize BrainHack and we want everyone to participate. I want to be the mirror I saw at Neuromatch and enhance the academic experience for others.

Meet STEM: Sayantan Datta

Sayantan Datta (they/them) are a queer-trans science writer, communicator and neuroscientist-in-training.

Tell us a little bit yourself. What's your academic background and what do you do now?

I have a Bachelor's degree in Life Sciences from Presidency University, Kolkata. I developed an interest in Neuroscience during my Bachelor's and got involved in research related to Alzheimer's Disease. I was introduced to the model organism Drosophila melanogaster back then and continue to work with it till this day. I was awarded Indian Academy of Science's Summer Research Fellowship and worked at BHU on Drosophila development.

I then went on to get a Masters in Neural and Cognitive Science (and a University Gold Medal at the end of it) from University of Hyderabad. My Masters thesis work happened at TIFR-Hyderabad and I decided to stay there for my PhD as well. In addition to doing doctoral research, I'm currently collecting data for a project with TheLifeOfScience.Com to understand what keeps trans people from doing science.

How has your identity as a queer-trans person affected your academic life, if at all?

I began to grapple with my divergent identity while I was in school. While I was trying to figure out my gender and sexuality, I was sexually abused, harassed and bullied. This, coupled with the slightly more usual high school pressure, made the experience traumatic. Bachelor's was better, but I was going through a severe mental health crisis around the time. I was undergoing psychiatric treatment and was on medication, which affected the amount of effort I could put into my courses. Also, both Presidency and its politics were dominated largely by savarna, upper-class, cis-heterosexual men. I was, to some extent, co-opted and tokenized as the only open, out and vocal queer-trans person. Within the toxic brahminical hypermasculine space, I felt like I had to lead a double life in order to ensure my safety and security.

Moving to Hyderabad and being at UoH changed my outlook towards myself and my future. I gained a lot of caste consciousness and found more queer-trans people I could connect with. At TIFR, however, things were different because science institutes run with a different notion of how science should be done. At science institutes, people are perceived in terms of their efficiency, productivity and research output. When I attended conferences, or looked around in my institute or in the community of scientists, I didn't see people like myself. I didn't have any role models to look up to and felt a definite lack of representation and conversation at TIFR.

Science has been a fairly lonely journey for me. I want to see changes, at the level of institutions and policy, that enable people to feel comfortable being who they want to be. Policy-level changes also need to allow more people from marginalized communities to come in, and I hope I can facilitate that in some way.

Productivity can be measured both externally (say, by your institute or mentor) and internally (by yourself). How did your productivity, as measured internally, change as a function of your environment?

I've never wanted to be a scientist who spends all their time in the lab. I like to think that I have varied interests and am good at more than one thing. For instance, I'm very interested in writing non-fiction and investigative journalism pieces, looking at neuroscience from a feminist lens and critiquing methodology and epistemology using feminist frameworks. I don't think this should not count as doing science. Science is more than just laboratory drudgework. My interests also inform each other and help me think in a more nuanced manner. Taking that into account, I would say I have been fairly productive throughout. I may not have done a lot of experiments, but I have written a lot, dealt with mental health issues, and done a lot of good work related to things I was interested in. Thinking that I haven't done enough work affects my mental health and I like to measure productivity holistically.

Many people from underrepresented and marginalized communities find a platform on the internet. Since you're also a writer for an online multimedia collective, what role has your online presence played in your life?

Most of my earliest connections with other queer people were formed over the internet. It also provided me with resources on gender and sexuality, and continues to do so for young queer people. My knowledge comes from the internet more than it does from the formal education system. The barrier of the screen allows people to express themselves much more freely, but it also allows other people to harass them and disappear. Overall, the internet has been a life-changing force for me, and probably for others like me as well.

You made a conscious choice to stay in India for both your Masters and PhD. Was there a reason for this or was it just something that happened?

For one, I don't think I could afford it. Even for fully-funded programs, the application process itself is very expensive. Aptitude and language tests, applications, visa and passport cost a lot of money. Also, it has taken me a while to establish my feet on the ground here. The prospect of going abroad is scary because I could be trampled by racism. I don't have a mentor guiding me and feel both scared and wary about working outside India.

When you're vocal about your identity, you're at the receiving end of tokenization and pity. You said that that happened to you during your Bachelor's. At the same time, you're someone other people from within your community can look up to and reach out to. How do you deal with this dichotomy?

I've found ways to work with it. For example, if a company wants to tokenize and display me, but pays me for it, I can use that money to help other marginalized people. If my tokenization helps someone else, I can live with it. It makes me happy to think that my openness can potentially help other people feel more comfortable about themselves. What I do not like is people appreciating my identity expression, but not being allies. The company that calls me for one queer event will do nothing to employ more queer-trans people. That kind of tokenization, in my view, is very problematic and disturbing.

Meet STEM: Palashi Vaghela

Palashi (she/her) is an activist-scholar currently doing her PhD in Information Science at Cornell University. Her work looks at cultures of knowledge production and expertise in technology from an anti-caste, decolonial and queer feminist perspective. You can read more about her at palashi.github.io and follow her on twitter at @lapshiii

Tell us a bit about your academic background.

I'm currently doing my PhD in Information Science at Cornell University. I'm on fieldwork right now working on my dissertation while also working with Microsoft Research India within the Technology for Emerging Markets group. I did my Undergraduate as an Engineer and worked as a Software Developer for some time. After this, I worked with feminist organisations using technology for community development, and consequently applied for a PhD. It's been an interesting journey starting my work as an engineer, to Feminist Technologies, and arriving at the point I'm at now. Off late, my dissertation work is driven a lot in the direction of studying Caste and Computing.

Could you tell us more about Caste and Computing, because it's not something one hears of commonly.

It's something I'm still unpacking and working on myself. The work I'm doing at Microsoft Research is looking at Social Media and Caste. The work that we recently put out uses network analysis methods to understand how caste networks might be manifesting on Twitter within members of Parliament. Members of Parliament is just a small subset that we are working on since Caste is usually difficult to study in the online sphere because of various reasons. Because the members of parliament have a more public presence where their caste is more legible than others, we are utilizing their engagement on twitter as a proxy to study caste relations online writ large. I started thinking about caste and tech as something I want to pursue because I came into doing my PhD and getting trained in different courses along the lines of both information science and computational science as well as simultaneously being trained in Anthropology and Feminist Studies.

How does your experience contrast as an undergraduate in India to doing a PhD at Cornell. Do you feel there is a slight hesitation to talk about Caste representation in India?

I did my undergraduate as an engineer in a fairly interdisciplinary course in DAIICT Gandhinagar, which was quite a unique program back then when humanities and social sciences were not necessarily part of core training for all engineers. Ofcourse, now I am doing my PhD in Cornell in a rather interdisciplinary program again, but my experience is very different because I am focussing on the study of socio-cultural aspects of technology. In terms of navigated academic relationships in both these institutions, I remember I was speaking to a Dalit woman a while back who was then a computer scientist and is now an activist in Tamil Nadu. When she found out that all my advisors are White and not of Indian origin, she concluded that this was probably why I was able to do the study that I'm doing on caste and computing.

This is really indicative, right? My affiliation with Cornell has something to do with the fact that I don't have to navigate the same kind of relationships, I have to navigate different kinds of relationships but not the same kind of gatekeeping I might have to with savarna advisors as a PhD student in India.
I agree with you that if representation is talked about, there are some questions which are easily ignored. Even when I was in engineering, the question of how many Women are in engineering was around. It's an important question but I feel as more people started focusing on Women in Engineering and Tech, the less legible the different nuances of what Gender, Sexuality and some of these Marginalities mean became. So now it is this Men-Women binary that needs to be resolved. Science and Technology at their core are very exploitative in nature. It is difficult to claim that representation itself is going to solve the problem which is that science tends to privilege certain kinds of knowledge and expertise versus others. I don't think only representation of minorities is going to solve that problem unless we start understanding the kind of perspectives they bring into thinking about Science and Tech. About how the field itself and the ideas of what is Science and Tech itself has transformed with their participation.
While I was doing my undergrad, these questions emerged as a part of the humanities coursework we did, which despite being very rudimentary made quite a difference. What I notice in my own college over time is there is an erosion of humanities courses and humanities professors and how much say they have in terms of shaping ideas of Technology and Science. That is a great disservice because I noticed that when I went to Cornell, I realised the value of liberal arts education in a way where one becomes an engineer without necessarily privileging only technical forms of education to become an engineer. There are a few colleges(in India) that offer that, but it's very limited right now that perhaps a lot of minorities cannot access it because they are either private or elite institutions. I might not have taken the route I'm taking or be asking the questions I'm asking, doing the work I do if I didn't have a first experience in thinking about Humanities and Social Science along with my technical training.

At the same time I think the engineering education in India is not designed to make engineers the thinkers of society. This again goes back to privileging certain kinds of knowledge as technical/scientific over others. They're trained to be thinkers of the world of Technology in a way that is really removed from the context in which technology is really built. Unless we think about how society constructs technology and technology constructs society, bring the two together in conversation both at the undergraduate and higher levels, we cannot transform the field or its hegemony by adding more under-represented/marginalised people.

You mentioned that more representation by itself is not a solution. Could you expand on that and help us unpack what is potentially the way to improving the landscape of Science and Academia in India?

This is a question I'm also looking at as a part of my dissertation and I don't think I have a perfect answer to it but the ideas I have been encountering in the question of representation have a lot more to do with checking the boxes. How many kinds of people are we able to bring to the table?
Within this context, the question of reparations becomes lost in the question of representation. I think Science and Tech in India has built itself on the labour of a lot of marginalised folx, as well as simplifying and erasing their histories of claims and expertise in what science and tech used to be at one point.

When we think of representation as the end goal, we end up denying the role that history plays in shaping what Academia overall becomes. A good example in the US context is of indigenous people pushing back on academic institutions. The demands coming in ask to think about how they will make up for the fact that the entire institution is based on violence against a certain kind of people and occupation of their lands. That demand comes from a place of reckoning that representation is not solving the question at hand, which is, how has the institution of Science and Tech benefited from communities that have never been a part of the imagination of Science and Tech. So we have to think about how we can repair the damage that we have done, beyond welcoming them to our institution, by also distributing capital, resources, knowledge; not gatekeeping intellectual capital and capitalizing on erasure of minorities in the name of advancing science and tech. This is not just true of India, this is true of the world in general.

Your work on caste networks has implications on how they reinforce gatekeeping within the political context. Based on your experience, what kind of gatekeeping do you think exists within Academic Communities both in India or elsewhere?

It's hard to talk about what kind of access has been denied to me within the Indian context because I am in a rather in-between relationship with Indian Academia as yet, where I am based in US academia for my PhD but also work with academics in India and did my undergraduate study here. So I do want to qualify the fact that I have not done my PhD in India, but have heard stories from marginalised people who have tried to or currently are doing their higher education in India, a lot of whom are actively sabotaged or appropriated in the work that they've been doing. So similar to the anecdote of the Dalit woman computer scientist above, I believe that ideas and works of marginalized folks are gatekept or even appropriated/co opted in Indian academia by some privileged folks.
.Putting that caveat forward, I think the most common form of gatekeeping in terms of caste that might also be true for other forms of marginalities, is the kind that is more covert than overt. It has more to do with silencing and being silent. Non-engagement is almost as telling as engagement. This is a claim you will hear from a lot of Bahujan people, that while there are a lot of instances of overt caste based discrimination, it is more often that they are pushed out of networks or out of conversations; or not engaged in conversations in the same way as their upper caste peers have been. This is something I've definitely experienced too in the settings that I have been a part of, because some of the conversations I've tried to have are so uncomfortable, or because I've been marked as a specific person, there is a form of silencing that will happen. This is why the form of passing is such a major form of fitting in within the community of STEM and when you look at it from an intersectional lens, it gets even more complicated. If you're a Dalit-Queer person, you'd have to manage a lot more negotiations of what to say, when and how to say it, as well as how much to reveal about yourself on an everyday basis in your workplace.

The other form of gatekeeping I'm seeing is in the form of knowledge. Questions about the legitimacy of methods and what is considered expertise is definitely a form of gatekeeping. For a long time, writers of fiction, writers of works in vernacular language, oral histories and writers who write about real life experiences were considered biased or unscientific in their approach. These are forms of knowledge coming from the communities that are sometimes most marginalised. Access to language, as well as articulation that is made possible by becoming a part of privileged networks is very unique and not available to everybody else. Gatekeeping of who can have a claim on science and tech, what

kind of genre of work speaks to it and drawing of boundaries between science, literature, art, humanities, etc. -- this is all a practice of keeping disciplines of STEM exclusive.

The third part of it is that a lot of gatekeeping is not necessarily at the workplace, a lot of it occurs outside. This is the most tricky bit because forms of socialising that are based on heteronormative ways of living, or masculine forms of being in the STEM community, or upper caste ways of knowledge speaking, or even cultural associations like with Carnatic music are all happening in the form of social setting that is a part of the STEM culture that we occupy. These are the spaces I feel marginalised communities lose out the most, because not only is our culture different from some of these normative ways of building social relationships and bonds with each other, but also its somewhere it is not easy to express that, for instance, you love Bollywood music when you have a Tamil-Brahmin professor emphasising his affection for Carnatic Music which is a heritage shared by other upper-caste peers over generations. Professing your experience of growing up to old Bollywood music within your family is then a way of outing yourself. This form of gatekeeping can be so subtle and covert that it is difficult to put your finger on it most of the time.

What is your current fieldwork about and what are the directions you're planning to take your work in the future?

I'm doing a couple of projects, one of them is coming out of the work I did on Twitter that continues to look at networks of members of Parliament. But using network analysis methods to understand caste capital and how it manifests in this space on Twitter. This will be a proof of concept on the smaller community of members of Parliament but I am confident what I find within this group can be traced if we do other empirical studies in other kinds of communities. Maybe the relationship can be different but there is value in looking at networks and capital.

The other thing I'm doing which is also my main dissertation topic is looking at relations of caste and gender in the world of Technology.

Given this culture of silence around Caste, how can upper-caste/savarna individuals who want to be good allies create the space where these issues can be discussed better while being in academia?

One thing that needs to stop happening by savarna academia is taking up space to talk about Caste. One of the things that is really difficult for Bahujans in academia, why we are so protective about our ideas is because we are so easily co-opted and appropriated, given that savarnas already have so much more capital than we do. Ideas and form of intellectual thinking is the economy of research and academia. If you call yourself an anti-caste ally, you need to be conscious of where you are taking up space to talk about Caste. Don't be opportunistic about this topic, there are plenty of other ideas you can pursue.

The second is the gaze towards lower caste communities needs to change. STEM is really specially complicit in this. Refusal is a form of critical practice and savarnas need to actively practice this when it comes to doing research on lower caste and lower class communities in the name of "social good." You can work on caste within upper caste communities to truly advance the anti-caste movement by organizing, educating for change and giving up space and capital to Bahujan folks. Being an anti-caste ally is not easy because it will demand that you give up privileges you've enjoyed most of your life, but there is no allyship if you aren't willing to give up space and share capital/resources - aka, REPARATIONS!

The third thing is amplifying the work of lower caste academics. Do citational justice and ensure you are giving space to Bahujan scholars, not just because you would look good on a particular panel, but because you really think that we are bringing something important to the table. If you don't think that, you really can't call yourself an ally. While all of that is being said, relationships of power in academia are so difficult to challenge that if you are an upper caste advisor, be mindful of your teaching practices and practices in the academy that might be marking your territory as a savarna scholar where others cannot belong. I myself am collaborating with savarna scholars, I am all for collaboration but my point is that it has to be on the terms of Bahujan scholars, it cannot be on the terms of savarna researchers.

The last thing is just admitting to mistakes when they happen. One of the biggest disadvantages of the idea that has come out of cancel-culture or identity becoming a static form of engagement, that I don't agree with personally, is people feel the need to be correct all the time. I think it's possible to be a really good ally and making mistakes as long as you're open to listening to lower-caste folx when they tell you 'this doesn't sound right to us'. And sitting back and saying 'you know what, maybe I wasn't right'. It becomes harder to do this the higher you climb the ladder of academia because your expertise is equated with how right you are which is ridiculous but tends to happen.These are some of the recommendations I would have to be a good anti-caste ally and even an accomplice if you are truly committed to anti-caste thought.

When I was an engineering student, There was a huge inferiority complex I was feeling, A feeling that I don't belong here. If it wasn't for this one professor who thought I was a good thinker and had a lot more potential in thinking about technology in ways that are not traditionally associated with engineers, I would have probably not done what I'm doing with my life right now. If you're at any level and see there are people in the STEM community that don't fit in, those are the people you should be talking to because those are the people who are most likely marginalised. People who are failing or barely surviving courses, hardly being able to talk in English, people who think differently are likely the people who need attention in STEM communities and have something really important to offer but it goes unnoticed because of the normative, populist politics and practices of STEM. This is something I try to practice in my own pedagogy but also hope other educators are able to practice as well.