

Science and Social Justice

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I was born and raised in rural, northern Mississippi. I went to a local school, the North Pontotoc Attendance Center, from first grade on. My family wasn't rich. On the contrary, my father labored at a local scrap yard for most of my life. At times, he was called back to India for family reasons, and we even spent some time on public assistance. We lived decently, if not lavishly, and tried to blend in for the most part.

I was always interested in math and science, but, then, I was interested in most all subjects. The expected path that my friends and siblings had followed was clear: attend a junior college or maybe Mississippi State University; make use of the best that Mississippi had to offer; perhaps become a doctor or an engineer.

The Mississippi School for Mathematics and Science (MSMS) came into my life at just the right time. The advertisements we saw on TV inspired me to apply, as much because it was free of charge as because of the great opportunity. I was lucky; Mississippi poses more of a financial burden on today's MSMS students.

I knew that I would get more and deeper science and math instruction at MSMS than at North Pontotoc, but I had no idea of the breadth of exposure to the world that the school offered. To think that in my little state there were other ethnic minorities as small as my own! I met my first Jewish classmate, my first Hindu friend - odd for and Indian-American, I know - and so on. I even befriended the most rare and dangerous species in Mississippi high schools: actual wealthy kids! The students were just the beginning and the instructors were phenomenal. Two of my teachers were great examples: Ms. Helen Perry and Ms. Judy Morris. They both expected way more of me

than I gave, and raised my sights in physics, and public speaking and leadership, respectively.

The whole approach of MSMS, the fact that they dispensed with the practice of ranking students against each other, the open and discursive style of discovery, and the residential atmosphere helped foster a type of collaborative problem-solving that stuck with me ever since. Ah, the extracurriculars! Did I take advantage of those! More than just the math and science competitions with which I'd been familiar from my North Pontotoc days, MSMS got me involved in debate, mock trial, as well as a run for student body president. One summer I even got to visit the Department of Energy's Fermilab in Illinois! It was at MSMS that the seeds of an idea were sown: that science and policy could be pursued in tandem. Most shockingly of all, Dr. Dewey's Judo class almost got me into shape.

To understand the atmosphere I experienced at MSMS, just take a look at the college application season. We were all under various amounts of stress: driving all the way to Atlanta to take a last-minute SAT exam; confirming all the required letters of recommendation from those stellar MSMS teachers; choosing which schools to approach; and getting the applications signed and delivered. The administration of MSMS was incredibly supportive, of course, but so were the other students.

I always think back to a time when a good friend of mine came to me with a suggestion. He'd gotten hold of an application to the California Institute of Technology - a school I didn't even recognize at the time, but which was apparently quite prestigious - and claimed that there was no way he would be able to get in. Since he didn't

want to waste it (all applications were on paper in those days), he offered it to me, thinking I would have a better chance to get in. I was quite honored by this act; I accepted, immediately. I was mostly applying to the schools my friends had chosen, so it seemed natural enough. Then I realized that it was due in a few days, so I completed it and rushed it out the door. The essays for Caltech weren't my best work, but they would have to do.

Because of the amazing preparation that MSMS provided, there were many options when we were choosing colleges. The initial plan was to find my way to Boston, but when the (largely need-based) financial aid offer from Caltech came back, there was no turning it down.

So that's how I got to Pasadena. I was really quite pleased to find a similar collaborative atmosphere among my friends at Caltech. Later, after meeting folks from other high schools, both public and private schools, I found out how lucky I'd been. MSMS prepared me exceedingly well for a top-tier science school like Caltech. The only trouble I ran into was the same that would draw me away from science repeatedly. I think it was my experience at MSMS that encouraged me to jump into student government in college, and I eventually ran for student body president there, too! Fortunately, this time I ran unopposed, so I won by default. Persistence pays off.

My southern accent, one of the most obvious elements of my Mississippian identity was lost in Pasadena. Sure, it still comes back now and again, but the joy in consistently getting two double-takes from new acquaintances - one for being from Mississippi and the other for being an Indian-Mississippian - was a treat while it lasted. It was then that I began answering the questions that would always pop up as an ambassador from MSMS: What's Mississippi like? Was it hard to grow up there? How did you leave? Would you want to go back? Representing Mississippi well, and forming true and coherent answers to those questions has never been easy.

Graduate school found me in Santa Barbara, California, pursuing a Ph.D. in semiconductor physics. Thanks in part to the influences of Ms. Perry and Ms. Morris of MSMS, I was still chasing the dream of merging science and policy work, but realized that I could use an advanced scientific degree for credibility. Finishing grad school would be tough, no less so because I wouldn't be doing research afterward, so I had chosen UCSB pragmatically, as a relatively apolitical campus, beautiful enough to make it easy to get up in the morning. Along the way I was able to study my family's language, Punjabi, getting only my second serious exposure to the broader Indian-American culture, after MSMS.

As graduate school was winding down, I decided to do some serious volunteer work. After the blossoming of interests at MSMS, my focus on academics and a few activities like Judo had become increasingly exclusive. I wanted to use the time between graduate school and my next, then-unknown position to do work of genuine importance to real people. Learning a bit of Punjabi had opened up India as a possibility, and I had heard awful stories of the corruption there. So, in true MSMS spirit, I struck out for Delhi to work on governance and transparency.

The anti-corruption work was some of the hardest I've ever done, and some of the most fulfilling. I could feel a part of my mind stirring - the rhetorical, paralegal, policy-wonk facet, passionate about social justice; it was a facet I'd last explored over 10 years prior at that amazing high school. I used that part of me to connect with groundbreaking organizations, to make immediate and lasting changes in the lives of extremely poor human beings. The startling successes I saw in Delhi revealed that pro-poor policy work in the developing world is not only important, but extremely tractable as well. It was also quite frustrating that the powerful legal tools available to Indian citizens make ours look like toys! With a bit of hustling and many frequent flyer miles, I managed to land a Science and Technology Policy Fellowship from the American Association for the Advancement of Science. This entailed a

two-year position as a senior policy analyst in Washington, D.C., for the Department of Energy's Office of Science. There I was dealing with Fermilab in a completely new capacity. How far I had come from visiting the laboratory as a high-school student from MSMS! I had the privilege to help guide the Federal policy-making process in a number of ways reaching far beyond typical energy concerns.

I recently acquired another AAAS Fellowship to work with the State Department, also in D.C. If all goes according to plan, I'll be returning to human rights work in their Office of International Labor and Corporate Social Responsibility, managing the programs in all of South Asia. I hope to use this next year to integrate relevant elements of science policy into the social justice scene.

It's quite clear how formative and lasting the influence of MSMS has been, especially in revealing my twin missions in science and social justice. I don't know if I'll be able to repay Mississippi for that inspiration. I only hope that my life in public service, as an ambassador from MSMS and the State of Mississippi, can somehow return the favor.