



A Chance Encounter with Professor Martha Jones

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It is probabilistically quite striking that the University of Michigan, where I have been a faculty member in Biostatistics for 10 years, is also celebrating its bicentennial anniversary in 2017.

As I was thinking about writing this article to honour another institution of academic excellence, my alma mater Presidency College, I could not help but draw parallels between these two institutions and their rich legacies spanning 200 years. I reflected on the different ways in which they have influenced my career and my life, my past and my present. I want to share a simple story, a story that reflects the signature spirit of the liberal arts education I received at Presidency College on my daily existence, thoughts, and scholarship. It is also a story that could not happen had I not been immersed in biomedical sciences research at the University of Michigan for the past decade.

Standing by the kitchen counter in my Ann Arbor home, watching the first winter snowflakes wrestle with the red, yellow, brown and orange leaves on the wooden patio, listening to the wuthering winds, this composition reflects an attempt to connect my past to my present. After the unpredictable US election results, I have witnessed many civil and uncivil discourses about race, gender and the immigrant population that have left me confused. This is perhaps my own afternoon of making peace with reality. Time to heal, recognize, treasure and embrace my hyphenated academic and social identity as I pay tribute to the two educational institutions that shaped my life and my values.

In 2016, I was inducted to the Michigan Society of Fellows. A dear colleague of mine nominated me to the society as he felt it would be good for me to interact with intellectuals from all across campus — not just quantitative scientists

— and it would expand and add colour to my Michigan horizon. The Michigan Fellows is an eclectic honour society that brings together distinguished faculty and post-doctoral fellows from across the University, scholars in language, arts and sciences, history, law, biomedicine, engineering, social work, business, music, public health, and other disciplines. An elected senior fellow is expected to give a lecture to the society, a lecture that captures the spirit of one's own research while remaining accessible to all disciplines. For this year's lectures, the fellows isolated themselves at Camp Storer, a YMCA camp 40 miles from Ann Arbor. Summer camps are a usual thing for kids in the United States: You sleep in bunk beds, eat in a cafeteria, do chores on scheduled time, swim and canoe in lakes, and in the evening you light a bonfire to make "s'mores," roasted marshmallows with graham crackers and Hershey's milk chocolate. My 18-year old daughter had been sharing her camp experiences with me over the years. Being raised in Kolkata, I am pathetic with camping and all these outside activities. I can neither swim nor bike! At 43, I was not looking forward to sharing a small lodge room with a stranger, or eating fried chicken in a cafeteria. I had never stayed in a dorm my entire life! My first group camp!

As I pulled my luggage into the lodge, I found my room assignment. On the door of the room were two names: "Bhramar Mukherjee" and "Martha Jones". Professor Jones had not arrived, so I claimed my preferred bed and organized my belongings. I then went to the evening lecture thinking and wishing my roommate better be nice! I returned to my room, to find Professor Jones tucked in bed. She introduced herself as a professor of law, history and Afro-American studies. She was curled up under the blanket with her i-pad, looking over her lecture for next morning. Professor Jones is a soft spoken, elegant woman

and we spoke gently about Biostatistics, Public Health and a bit about my education in India.

I told her how I loved to spend time with students of history, political science, economics, literature when I was an undergraduate in Presidency College. The Michigan Society of Fellows was now providing access to that renaissance-type broad-based liberal arts environment that had enriched my education and deepened my perceptions. I also told her I miss hanging out with academics that are not in the mathematical or biomedical sciences!

The next morning, at her lecture, Professor Jones shared three pieces of her writing with the fellows. Born to an African American father and a Caucasian mother, the quest for lineage and identity was complex for her. Looking at history through a personal lens she transported the audience to the summers she spent as a kid in her grandmother's house in North Carolina, where she had to raise her hand to a fundamental question "Who here is a Negro?" Being the child of a mixed race couple, Martha Jones did not look like a "Black girl" but grew up with a black cultural identity. I had not identified her ancestry as I had entered the Camp Storer lodge the evening before and I, in fact, never even thought about it. For about 50 minutes, all of us that morning were thrown suddenly, often to our discomfort, into the riveting story that the colour of our skin tells. I felt we were all under a mass hypnotic spell that ended in tears of confusion, celebration and pain. Professor Jones teaches critical race theory at Michigan and I felt like a student. There were more questions than there were answers, there were moments of pause and one could not just go on to the next chapter.

Being a statistician by profession, I started to think about race as a "treatment" like in a randomized clinical trial, if we could randomize people to race, what would the "outcome" be? What if we do a study of children of mixed race who have a black cultural identity under a non-black skin, or who have an American identity under a brown Indian skin like my own offspring? There has been substantial innovative work on race in a causal inference framework. In the counterfactual world of living as a white man instead of a brown immigrant woman, what alternative outcomes will I achieve? In my academic work, whenever I have crossed boundaries between Statistics and another discipline, it has led to a liberation of new ideas. In my role as the Associate Director for Cancer Control and Population Sciences at the University of Michigan Comprehensive Cancer Center, rather than thinking of

race as five boxes one of which you mark in surveys, we try to understand the molecular characteristics of tumors from different ethnicities by measured data. In treating race and sex objectively as biological variables we try to understand the granular level of molecular differences, through measured high throughput biomarkers in different cell types, tissues and serum samples. My primary scientific area of work is in gene-environment interactions. A reasonable study design that I have often thought about in order to tease apart the genetic and the environmental influences is to study immigrant sib-pairs, my sister and I share my parents' genetic pool but are subject to different environmental influences as she lived in India all her life. The lecture by Professor Martha Jones that Saturday morning stirred not just new emotions, social reflections, but new scientific ideas, and a determination to pursue them. I am in a position to actually pursue this type of interdisciplinary research that spans across biology, medicine, social sciences, history, biostatistics and epidemiology. Without the broad-based liberal arts education of Presidency College, I would not be susceptible to conceptualizing such projects and without the interdisciplinary and thriving research environment at the University of Michigan, I would not have the courage of conviction and resources to pursue them.

After the day's event, I and Professor Jones checked out of our shared room. I was in awe of her scholarship, determination, writing style, her simple elegance and dazzling brilliance. As we were walking towards our cars, and it was time to say goodbye, Professor Jones paused and quietly said "Can I give you a hug?" In the woods of Camp Storer, in the dusk, in a parking lot, two human beings and scholars came close, dissolving all boundaries of arts, science, race, culture and country of origin. There really are no boundaries. Not in Presidency College, not in the University of Michigan. There is knowledge, and we explore that knowledge. I feel grateful to be a part of two distinguished institutions, as a student and educator, and to have the privilege to continue my personal quest for knowledge. I found my vision and mission in academia, as an explorer of a new horizon. Every time I come closer to it, the horizon moves further away. I feel grateful for ALL my professors and students who help me with my journey each day and I feel thankful to life, for giving me the opportunity to meet and greet Professor Martha Jones.

Happy 200th birthday to Presidency College and to the University of Michigan!