# Taking Down Statues and Renaming Theorems

Michael R. Pilla

July 18, 2020

"*In the End, we will remember not the words of our enemies, but the silence of our friends.*" - Martin Luther King Jr.

Quite a few years ago I had visited New Orleans, LA where I happened upon a rather large and imposing statue of the American Confederate general Robert E. Lee. I specifically recall my middle school textbooks telling me that, although he was a general for the confederates, General Lee was an honorable and respectable man, even though he fought for the South. I was taught that the American Civil War was fought for an array of nuanced reasons, one of many being slavery. General Lee, said to be a good man, just happened to be on the losing side. In fact, many people are named after him. There is a mathematical teaching method of Socratic inquiry known as the Moore Method, named after Robert Lee Moore who, in turn, was named after General Robert E. Lee.

As I stood in New Orleans, next to this statue of Robert E. Lee, I noticed the majority of people around me were African American. I wondered what they thought about that statue and this strange juxtaposition they had to live with each day. After all, the true history of Robert E. Lee is not so kind to his beliefs. The American Civil War *was* about slavery and Lee was firmly on the frontlines of the wrong side of history. Yet his legacy seems to live on, in part through the naming of children in a way that generals of the North, such as Ulysses S. Grant, do not. I'm sure it, in part, has to do with the aesthetics of the name Robert Lee relative to Ulysses. Even conceding this point, it doesn't detract from the discomfort of being named after someone with a legacy such as Lee.

These issues still resound today. The recent protests in reaction to the murder of George Floyd has prompted the downfall of many confederate statues. In the mathematical community, we give honor by naming theorems, conjectures, and so forth after mathematicians of history. We saw that there is a popular pedagogical strategy known as the Moore method. It is an unfortunate reality that Robert Moore refused to teach African American students [1]. Even in my narrow field of study, the study of complex maps of the unit disk into itself, the problem is pervasive. One important topic of study is known as the Nevanlinna-Pick interpolation problem which asks when there exists a map of the disk into itself that sends one specific set of points to another. This problem is named after Rolf Nevanlinna and Georg Pick. Nevanlinna was a documented Nazi

sympathizer while Pick, a Jew, died in a concentration camp. At the time Pick died in 1942, Nevanlinna, a Finnish citizen, was chair of a committee to improve relations with Nazi commanders and Finnish volunteers fighting for Germany [2], [3]. Turning to another example, there is an important and interesting class of these self maps of the disk, called inner functions, which can be thought of as maps that send the boundary of the disk onto the boundary. The reason for the name "inner" is unclear but everyone has gotten used to calling them by this name. There is an important subset of inner functions, called Blaschke products, that are named after Wilhelm Blaschke, an Austrian mathematician who signed a vow of allegiance to Hitler [4]. It's not clear to me why we can't just call them something like "boundary products" instead. After all, it makes more sense than inner functions. There is also the famous Bieberbach conjecture [1], named after Ludwig Bieberbach, an enthusiastic Nazi who held firm the view that the German race was superior [5]. All of these reside in my narrow field of study.

I have heard the argument that the political opinions of these mathematicians are irrelevant to the mathematics they did. And this is true enough. Our books should continue to acknowledge the scientific contributions of historical figures, independent of their beliefs. We should not rewrite history. Nevanlinna should be credited with his work on the problem. Blaschke should be credited with introducing the class of functions currently known as Blaschke products. But this does not mean we should do the honor of naming these things after them, so that we as mathematicians must repeat their names every time we refer to the problem.

One rather common response is that fault can be found with any historical figure and renaming one theorem, taking down one statue, will bring the whole lot down. Anyone who has taken any sort of critical thinking class will immediately identify this line of reasoning as a prime example of the logical fallacy known as the slippery slope argument. After all, this could be applied to anything. Freedom of speech is important but you cannot run into a theater and shout "fire!". Like everything else, we should start with the cases that are clear, those who, in great excess to their peers, were racist, sexist, and so forth. We then proceed to debate the intermediate cases just like we do in every other outlet of human discourse.

We ought to take down racist statues and rename the things that are named after people who went out their way to support ideologies that were actively oppressive to different demographics, even by the standards of their peers. The sooner this step is taken, the sooner we put an end to an erroneous practice. Some steps have been taken. The statue of Robert E. Lee was taken down in 2017. The prestigious Nevanlinna prize was renamed as the IMU Abacus Medal in 2018, although the IMU failed to specify why the change was made [6]. We are moving in the right direction, but we can move faster. As part of the mathematical community, I do not want us to be seen as a community that dragged our feet on progress or took our time to remove barriers that are

[1] After being proven by de Branges, it is now called the de Branges theorem

insulting to so many, including members of our own community.

## References


[1] Retrieved from http://www.math.buffalo.edu/mad/special/RLMoore-racist-math.html

[2] A. Soifer, *The Scholar and the State: In Search of Van der Waerden*, Birkhäuser; 1st edition, 2014.

[3] Retrieved from https://mathshistory.st-andrews.ac.uk/Biographies/Pick/

[4] Retrieved from https://mathshistory.st-andrews.ac.uk/Biographies/Blaschke/

[5] Retrieved from https://mathshistory.st-andrews.ac.uk/Biographies/Bieberbach/

[6] Retrieved from https://scilogs.spektrum.de/hlf/imu-abacus-medal/