

Gioia De Cari on Women and Math, Sexism in Higher-Ed, Spaces with Souls, Proof, and TRUTH VALUES

One of the special events in the 2015/2016 [EST/SloanFirst Light Festival](#) is the one-night-only performance on Monday, January 18 at EST of *Truth Values: One Girl's Romp Through M.I.T.'s Male Math Maze*, a one-woman show by writer/performer and “recovering mathematician” Gioia De Cari. De Cari has been touring and reinventing this show to [rave reviews](#) for several years, but she paused a moment to answer our questions.

In Truth Values you inhabit some thirty characters as you relive what it was like to be a Ph.D. candidate in mathematics at M.I.T. in the 1980s. That's now some 25 years ago. Do audiences respond to it as an 80s nostalgia piece or are the sexism issues you faced then still as real for grad students today?

My sense is that audiences respond to my work through the lens of their own experience. Usually, if there is an opportunity, audience members approach me afterwards to talk. On many occasions young women have said to me, “You’re telling my story.” On the other hand, my work is often presented with a post-show discussion panel with experts in STEM fields. At these discussions there seems to be widely differing opinions as to how these issues of sexism play out today as opposed to when I was at M.I.T.

The most interesting example of this occurred with the same person! There was a scientist who was invited to participate in one of the post-show panels. At the outset of the discussion she said that she had never experienced any sexism in her career, and it was evident that my story did not sit well with her. A year later I was invited back to the area to perform again. When I looked at the post-performance panelist list, there was her name! I thought, with some horror, “She didn’t like it before, why would she want to see my show again?!” During the talkback she said she returned because her thinking had changed because of seeing my play. She said in the months that followed she began to see instances of sexism that she hadn’t noticed before, like when she pushed to make the written qualifying exams in her department blind as to the gender of the student. There are studies that clearly show there is a gender bias in such situations, but her department resisted the change, valuing tradition over fairness.

Truth Values premiered in August 2009 at the New York International Fringe Festival, winning a FringeNYC Overall Excellence Award for Best Solo Show. Since then, according to your website, [unexpectedtheatre.org](#), the show has had 95 performances in 45 different venues in 17 states. How has it changed over the years?

Well, actually, we are keeping track of every number, and it is now 101 performances in 51 venues in 19 states! It is tricky to answer this question because of course part of the art of theater is to perform the same script over and over while keeping it as fresh as the very first performance.

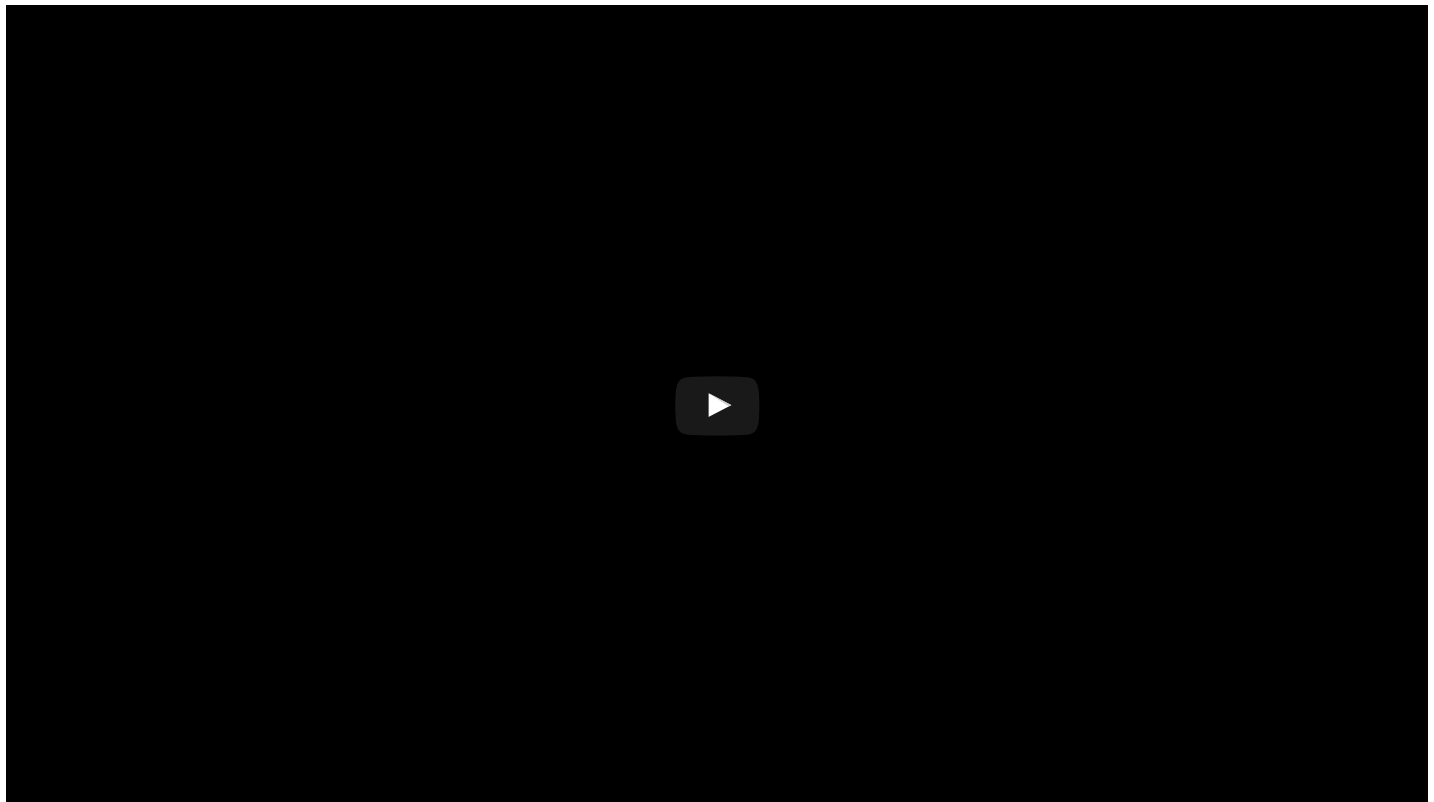
I am passionate about the work we did to premiere the show at FringeNYC and much of it is still the same. Of course the Fringe is developmental for a lot of those who participate in it, as it was for us, and there were elements that were missing at that time, or more sketched than fully realized. These have been fleshed out, particularly certain design elements such as the lighting, and also the costume. In fact, there was an early review of the show that was a rave, except that they panned the costume! The characters also have taken on new layers and resonances and continue to surprise me.

I experience the road like a kiln for the work. It has been the most extraordinary learning experience to keep re-crafting aspects for each new venue, new audience and new community. I am madly in love with venues. The aesthetic of this show is extremely minimal, making the most of an empty space. To me, spaces have souls. I feel I learn something from each one that adds to what I do in the next.

You have a wonderful series of [video interviews](#) with mathematicians, a biologist, computer science engineers, and science writers on your website about their reactions to your show. I was especially intrigued by the one from 2011 with the acclaimed biologist [Nancy Hopkins](#). She empathizes with the character in your play, saying “she’s too young to know how much of it is ‘I’m just not suited for math’ and how much is the environment she fell into. She can’t disassociate it.” But Hopkins goes on to say that a grad student today would have a better chance resolving this dilemma because there would be people around who would try to help. Does what you’ve heard in the 65 post-show talkbacks you’ve been part of confirm this? Any memorable revelations from these many talkbacks?

I am smiling because actually it is now 71 post-show talkbacks. These talkbacks have nourished me through all my touring adventures. I think the one that has impacted me the most was done at USC’s Visions and Voices Arts and Humanities Series. The day after the performance they held a most extraordinary discussion event on unconscious bias, illuminating how my work is related to this very important and current issue.

Yes, I want to ask you about a video interview from that USC series. Over the years we’ve heard many scientists rave about David Auburn’s Proof as being one of the best examples of a “truthful” play about science. So I was quite surprised to hear in your interview with USC mathematician Sami Assaf that she “hated” Proof, finding it “artificial and written by someone out of touch with mathematicians and mathematics.” By contrast, she found your show “genuine and authentic.” I wonder what you thought of Proof, especially given your interest in father-daughter dynamics, a central theme in Proof and in your show.



I have to admit being torn over *Proof* myself. On the one hand, my beloved acting coach Wynn Handman, who

was unaware of my hybrid arts/math background at the time, assigned it to me to work on in his studio. I found the play so well-written for the actor that putting on my role (I played the sister) was like putting on an Armani gown.

On the other hand, for years, at every get-together and meeting, when my background became known, a discussion of *Proof* with my new acquaintance would invariably follow. After the zillionth such conversation, which usually began with the question “Have you ever heard of a play called *Proof*?” and would continue as if Mr. Auburn's excellent fictional play about a very specific character were a treatise on women in mathematics, this began to wear thin. It has been fascinating to hear opinions from other women in math.

[For those interested, David Auburn describes the gestation of Proof, including how much time he spent with mathematicians during its writing, in the [blog post](#) summarizing the 2012 EST/Sloan Artist Cultivation Event.] You've said in previous interviews that what inspired you to write the play was Lawrence Summers' famous statement in 2005, when he was President of Harvard, that women are less represented than men in the sciences because of “innate” gender differences. Has Summers seen your play? If so, what was his reaction?

No, he hasn't seen it — I dream of the day he is in the audience! When I performed at Williams College, I found out afterwards that his daughter was in the audience. My production manager knew, and so did the presenter and the crew, but no one told me, for fear of freaking me out!

I discovered [two videos on YouTube](#) in which John Olson, your husband, plays guitar while you demonstrate quite a lovely singing voice. The videos' captions say the songs are from Frank Wallace's "Men, Women and Molecules," a setting of six poems of Roald Hoffmann. Is this a show we can expect to see produced at some point?

Yes, my husband and I are classical cats, and we have a [guitar and soprano duo](#), which is completely separate from the sort of work I do in *Truth Values*. Your readers may be particularly interested in the cycle you mention, because Roald is a Nobel Laureate chemist as well as a poet and he co-curates the monthly [“Entertaining Science”](#) series of events at the Cornelia Street Café in Greenwich Village. So the songs mix science, poetry and music, and were especially created for us by Frank Wallace.

These days John and I are creating a new full-length concert program that would feature “Men, Women and Molecules,” some standard voice and guitar repertoire, as well as several other newly commissioned cycles. Right now we are working on a new piece created for us by guitarist and composer David Leisner using texts by Mark Twain.

What's next for Gioia De Cari?

Besides the music, lately I have been developing new non-theatrical content related to my experiences and post-show conversations on tour. My idea is to expand on my video interview series that you mentioned above, but via a different medium. I like to keep new projects hidden away while they percolate, so I'll stop there. If any of your readers are interested, I hope they sign up for my news by writing info@unexpectedtheatre.org

The [First Light Festival](#) is a three-month-long series of workshop productions and readings that is part of the play development process of [The EST/Sloan Project](#), a joint venture of the Sloan Foundation and the Ensemble Studio Theatre. Roughcut Workshops of THE ICE will take place at EST on January 13 and 14 at 7 PM. Tickets are free, but reservations are required. To reserve tickets [click here](#). Watch a trailer for *Truth Values*