

## MEDIA COLUMN

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### Reflecting on *Truth Values* as Faculty Member of the MIT Mathematics Department

Gigliola Staffilani

We first learned of the solo performance, *Truth Values: One Girl's Romp Through MIT's Male Math Maze*, when our department head Michael Sipser announced its fall 2009 Cambridge production to the MIT math community. Written and performed by one of our former graduate students, who goes by the stage name of Gioia De Cari, the news generated a lot of excitement and a few jitters. As a member of the MIT department faculty I was anxious to go, but wondered if the play might paint the faculty and department's character in an unfair light.

I made the play's opening night. It was performed at the Central Square Theater, a newly outfitted, inviting and intimate space in the heart of Cambridge. From the very beginning De Cari easily filled up the center stage with her dynamic presence and clear voice. Within the first few minutes of the play, I lost all concern about misrepresentation or over-characterization of the MIT math department as a sexist enclave. For certain, De Cari describes instances of overt sexism while a student in the late 80s: while a regular participant in a weekly seminar, a senior faculty member asked her to provide cookies. Nonetheless, with lighthearted impersonation and humor, De Cari portrayed her mentors, faculty and fellow students sensitively. Surprisingly, this sensitivity could be felt both when they were intentionally sexist or when they were just bewildered at finding among them a woman who, in addition to enjoying other delights such as fashion and acting, was as passionate and dedicated to mathematics as they were.

De Cari's experience of the MIT Graduate Math program developed her mathematically, but one gets the sense that it may have also sustained or supported her through a family tragedy and her growing awareness of musical and theatrical talents. De Cari's solo performance gave voice to the struggles of a young, very talented woman who loved mathematics and theater; who proved to herself and others her capabilities as a mathematician, while making a choice for a different life path. *Truth Values* as such is testimony: funny, sad, intense and real.

The narrative's scope and lightness made way for relaxed and engaging post-production discussion with Gioia and guests, entitled *Talk in the Box!* tackling "the ongoing debate about gender equality." While much has changed at MIT and elsewhere since the late 80s, it was, however, in 2005 that Lawrence Summers delivered his famous comments about women in science as President of Harvard University. It was those comments in fact that prompted De Cari to finish earlier drafts of the play and bring it to production. It was quite inspiring therefore to see the production's affects on students and faculty, women and men alike, talking about sexism and diversity in math and science today, while commenting on the play's artistic aspects.

It was then not a surprise that word-of-mouth quickly spread of the production's quality and community draw, bringing in more faculty, students and deans at MIT and those from area math and science departments. Sold out engagements extended it by seven days (the maximum possible).

This entire experience made me think back to when I first joined the MIT mathematics faculty in 2002, as one of the only two senior women faculty members in the department. In spite of this, I never experienced gender discrimination or differential treatment from my colleagues at MIT. I could imagine, however, that matters could have been quite different only a short while ago for a woman graduate student doing mathematics.

Having been educated in Italy through undergraduate study, I experienced no sense that girls couldn't compete with boys in math and science. In fact, it was assumed that girls would excel in these areas because of better study habits. When I came to the U.S. in 1990, I was amazed to find in a variety of settings the implicit presumption that women did not have the same talent for mathematics as men.

These perceptions have since improved in the U.S., but more remains to be done as we strive for even wider diversity. *Truth Values* is a thought provoking reflection on where math communities have been and where we should go from here.

In the press releases for the play De Cari referred to herself as a "recovering mathematician." It is fair to say that De Cari not only contributed to mathematics through her graduate research in logic, but returned to the community her development as an artist. If ever she were to wonder whether her graduate school experience in the MIT mathematics department was worthwhile, I for one can attest to the value of what she has given back—to us all. (*continued*)

Following the production, we asked our women graduate students and faculty for their reactions. Below is a sampling of their responses:

Gioia's story is engaging, entertaining, and personal—one woman's path to find herself and her passions while pursuing a doctorate in MIT's math department. The depiction of the wacky mathematicians is both frank and sometimes timeless, helping us to laugh at ourselves and our little community, glad that we can now wear pink sweaters and short skirts without anyone taking offense.

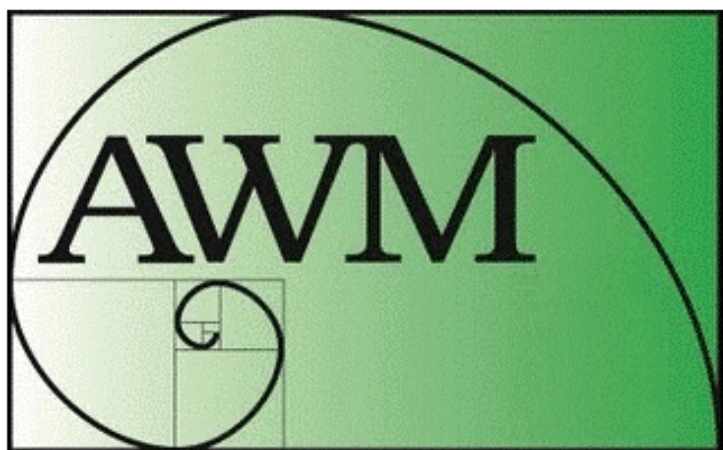
—Jennifer French (MIT math graduate student)

The play explores the joy of being a mathematician, the pains of graduate school, and the path of discovering that research isn't the same as taking classes. Some of the topics she talks about are specific for women, some are specific for mathematicians, but I think everyone who ever had a hard time in their career and thought about changing it will find something of their own reflected in her play.

—Martina Balagovic (MIT math graduate student)

Over the years I have gotten quite sick of having to explain to people what horrendous effects even a little playful sexism can have. Now I can just send them to the play to experience the pain quite vividly. As a wonderful side effect, the non-mathematician will also get a feel for the joy and excitement in maths.

—Karin Wehrheim (MIT math assistant professor)



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