

# Math must be Beautiful

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## Abstract

I present here a video installation inspired by the famous performance of Marina Abramovic “Art must be Beautiful., Artist must be Beautiful” It addresses the theme of teaching as a performance art.

**1.1. The Art Work.** My video installation “Math must be Beautiful, Mathematician must be Beautiful” will be shown at the Core New Art Space Gallery in Denver from October 5 to October 21, 2006. This installation was inspired by Marina Abramovic’s 1975 famous performance “Art must be Beautiful, Artist must be Beautiful.”

**1.2. Marina Abramovic’s Work.** Marina Abramovic, born in Belgrade, Yugoslavia, in 1946, is one of the most influential contemporary artists of our time. She called herself, “Grandmother of Performance Art.” Often, her legendary performances continue “at infinity” until they reach a conclusive critical point, often involving audience’s participation, [2]. In mathematics, we could say that they continue until they reach a singular point of catastrophic nature.

**1.3. Teaching and Performing.** As all of us teachers know, teaching is in many senses a performing art. We not only need to try to make our students learn, but we also have to try to catch their attention, engage them in interactive learning processes, and groom them. Many times gendered behaviors are also a big component of classroom dynamics. We need to establish a rapport and dialog with our audience, and to present our teaching materials in an efficient, and perhaps entertaining way.. As BBC News reports, [1], the results of a recent Times Higher Education Supplement survey does nothing else than value our claim, “The responses from 648 students found many thought academics were "snooty" and had "objectionable facial hair." A comment from one of the students reads, "They try to be funny - I'm not at clown college."

**1.4. The Video.** This video is a parody of a mathematics lesson. At the same time, it is also a comment on how mathematicians communicate (or fail to communicate) among each other and with others. In this video, shot in my office, of which I am the lonely “star,” I continually repeat the phrase, “Math must be Beautiful, Mathematician must be Beautiful.” The first part of this sentence is paraphrasing some well-known quotations of the famous physicist Paul Dirac. For example, Dirac said, “If one is working from the point of view of getting beauty into one’s equation, one is on a sure line of progress,” [4], [5].

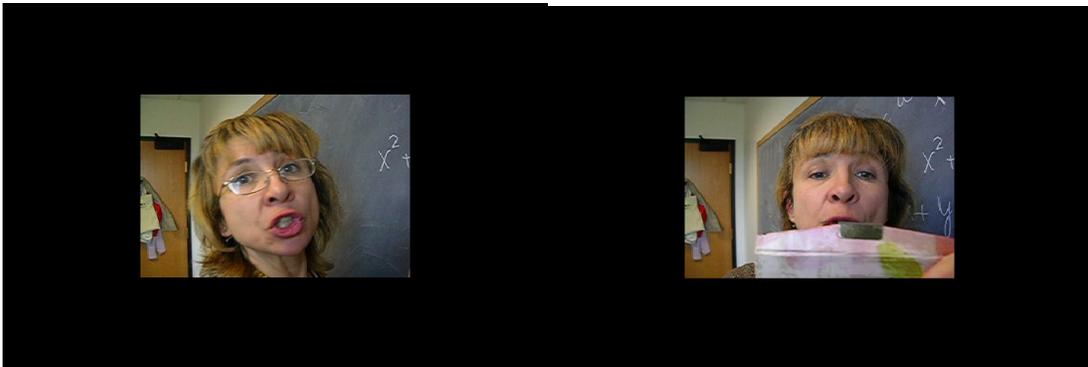
The formulas I am writing on the blackboard are either made up on the spot, or are famous mathematical equations such as the one that expresses energy in terms of the speed of light, which

I never use in my own work. Some other real-math formulas that can be seen in the background are left over from a real mathematical conversation I had with a colleague. In a sense, my work is a mathematically-slanted rehearsed and performed fantasy. “Math must be Beautiful, Mathematician must be Beautiful,” is my mantra, a formula-like phrase that becomes a prayer. Besides my voice, we can hear the clicking of my colleagues’ computers key-strokes. There is a feeling of distance introduced by the solo performance; it is perhaps reflected in real life by the isolation we mostly do mathematics in, or perhaps the introduction of the computer medium. Toward the end of the video, I add a feminine touch by putting on some lipstick in a hurried way, to hint at gender-related themes that so far, I believe, have only been addresses superficially. My performance simply ends as my voice becomes less and less audible, as it trails off gradually into the infinite (mathematical) land of repetitions.

**1.6. Technical Remarks.** I used Adobe Premiere 1.5 to edit my original video.

**1.7. Final Remarks.** I hope that this provocative video will help fuel the on-going discussion on our roles as professional educators.

## Images



**Figure 1:** An image from the first part of the clip  
**Figure 2:** An image from the second part of the clip

## References

- [1] BBC News, *Students Bemoan 'Unhip' Lecturers*, <http://news.bbc.co.uk/1/hi/education/4647766.stm>
- [2] Eyestorm Article, *Marina Abramovic*, [http://www.eyestorm.com/feature/ED2n\\_article.asp?article\\_id=38](http://www.eyestorm.com/feature/ED2n_article.asp?article_id=38)
- [3] Faculty Teaching Excellence Program Web Pages University of Colorado at Boulder, <http://www.colorado.edu/ftep/>
- [4] *Quotations by Paul Dirac*, <http://www-history.mcs.st-andrews.ac.uk/Quotations/Dirac.html>
- [5] P. Dirac, *The evolution of the Physicist's Picture of Nature*, *Scientific American* **208** (5) (1963)