

to generate a set of recommendations for the department on how to be more inclusive and supportive of groups that are historically underrepresented in STEM fields. We are working closely with the department to implement these changes, and we plan to continue this work next semester.

In January, we had our first AWM speaker, Professor Annalisa Crannell of Franklin and Marshall College, give a talk, “Math & Art: The Good, the Bad, and the Pretty,” on perspective and mapping a three-dimensional world onto a two-dimensional canvas. It was a huge success, and we had a great turnout! Crannell’s talk engaged math majors and non-majors alike, and she taught audience members how

to draw a perfect cube and how to fully appreciate art in a museum. Afterward, a group of students went out to dinner with her and got the chance to hear about her experiences as a woman in a traditionally male-dominated field, particularly in college and graduate school. Based on the success of this event, we hope to invite more AWM speakers in the future.

Our student chapter has provided a lot of students with a comfortable space to discuss their experiences and build community among women and minorities in math, both through informal social gatherings and through more formal events and discussions. We have had a great first few months, and we look forward to the coming semester!

---

## MEDIA COLUMN

*In addition to longer reviews for the Media Column, we invite you to watch for and submit short snippets of instances of women in mathematics in the media (WIMM Watch). Please submit to the Media Column Editors: Sarah J. Greenwald, Appalachian State University, greenwaldsj@appstate.edu and Alice Silverberg, University of California, Irvine, asilverb@math.uci.edu.*

### Project $Mc^2$ : Whose Project?

*Sushmita Chatterjee and Sarah J. Greenwald, Appalachian State University*

*Project  $Mc^2$*  was released on Netflix in August 2015 with a tagline of “smart is the new cool” [5]. The show was reportedly created to encourage more girls to study STEM [2, 3, 4, 7]. The first season is approximately ninety minutes long and was broken up into three segments that follow a single story line. An additional three-minute countdown clip was released on New Year’s Eve.

The show focuses on the adventures of four girls, Adrienne Attoms, Bryden Bandweth, Camryn Coyle and McKeyla McAlister. The girls are recruited to save a prince so that he can venture into space. The first three girls each have a talent connected to their last name: chemistry, technology, and mechanical expertise. In referring to the repeating letters in their first and last names ( $A^2$ ,  $B^2$ ,  $C^2$ ) “we’re like a super-cute live version of the Pythagorean theorem!” This is one example where science is feminized, and there are many others in the show. For instance, codebreaking isn’t referred to as codebreaking: “I love number games” says Bryden

Bandweth. A random number generator was useful in that scenario, so scientific terms haven’t been completely removed from the show. Other mathematical items in the show include cylinders, physical notions like the connection of angle to velocity, and numerous equations on boards. Each of these is feminized by the use of the color pink or a cutesy context. Everything is cool, fun and silly for the first three girls, and these girls are very giggly. The fourth girl, McKeyla McAlister, has a last name that is more ambiguous. This meshes with her portrayal. She is more of a generalist in terms of her talents, and also is more serious and somewhat less feminine. The show’s title *Project  $Mc^2$*  is named for the repeating Mc in her first and last names.

It was heartening to watch a show meant for young girls and tweens that paid attention to the transnational reality of our lives. There were characters from different countries and cultures as well as a racial diversity to the cast. They showcased a youth style unique to the show, with a mix of patterns and colors. While they each dressed to match their own personalities, such as Adrienne Attoms’ pink glasses, there was a certain generalizable focus on high heels and makeup. In addition, shirts often had affirmational messages on them, such as “I am the sharpest pencil in the box.” We think this was an attempt at branding to tie into the character dolls one can purchase. Sadly the transnational message is somewhat diffused under the homogenizing sameness of the look. However, isn’t that also inescapable in the marketing logic of branding and promoting goods? The show’s promotion continues on websites and social media outlets [6], which highlight STEM facts, silly jokes, science experiments, contests, and of course those dolls. Which came first, we wonder, the dolls or the show?

There were irrefutable tensions in many aspects of the

*continued on page 26*

show such as an interplay between difference and sameness. The show highlighted an upside-down world. Here women rule the world and the girls save the prince. The men are not very intelligent. Girls love math and science and make no qualms about incessantly repeating that they are as smart as one can ever be. So, should we see this show as a feminist vision of empowerment and liberation? Or, a parody of equality? Can both these possibilities serve as a useful catalyst to help us question our stereotypes about girls and science, women more generally, and help create a vision for a more equitable world?

We enlisted the help of a member of the target audience, Sarah's 11-year old niece (who has had a love-hate relationship with math). After watching the first episode, *Project Mc<sup>2</sup>* could not compete with the lure of yet another round of Harry Potter movies, but the next day she requested we get back to the series. In her words: "Adrienne Attoms was my favorite. She was really cute, smart, and I loooooooved her accent. I really liked the show, and I hope they make another season! They're all great actresses, and the plot was very good!"

We want to come back to the issue of feminization of science as it relates to careers. Science and math careers in the show are framed as girl-friendly, like Bryden Bandweth, who spends much of her time tweeting. Her website profile lists "I'm a 24/7 #DigitalDarling" [6]. These careers are not limited to the teenage characters—Danica McKellar plays the chief intelligence agent. She has helped publicize the show's STEM goals: "you don't have to choose between being the smart girl and being fun and fashionable" [1]. There are also a variety of real-life applications on the show and a focus on the importance of teamwork. One example mentioned many times throughout the series was Adrienne Attoms' self-described talent—she is a culinary chemist. Cooking food is typically seen as a woman's domain and an expertise that contributes greatly to her "properly" feminine virtues. The show does not negate this assumption. Instead it creates a new category: "culinary chemist." We could interpret this overture as a broadening and democratization of the stringent association of women with cooking, especially baking cookies and cakes. On the other hand, is this simply a justification of what is expected of women, and life goes on as usual with the added legitimacy of cooking being portrayed as scientific? A broadening of paradigms doesn't necessarily correlate with progress for gender roles.

Ostensibly, this season of *Project Mc<sup>2</sup>* wouldn't really pass the Bechdel test as the protagonists are singularly

focused on saving the prince, so they discuss a boy most of the time. However, we do need to temper this critique as the prince is portrayed in many ways as the damsel in distress. Thus, a quiet subversive tenor infiltrates this aspect of the show. In fact, many stereotypes are turned topsy-turvy. And many are left untouched. For instance, the show is primarily heterosexual and frames imaginations through a stereotypical view of body type. The girls are skinny and always look fabulous whether doing their science or running in high heels to save the prince. Does this project fuel an alternative imagination of STEM and the world, a different project? Or, is it simply the same old project wearing different clothes? Whose project? Time will tell.

### Further Reading

- [1] Clements, Erin. "Danica McKellar: Netflix show to help tween girls find 'inner confidence.'" *TODAY* August 6, 2015.  
<http://www.today.com/parents/danica-mckellar-netflix-show-help-tween-girls-find-inner-confidence-t37151>
- [2] Click-A-Brick Toys. "Educational Building Toy Company Click-A-Brick Praises New Netflix STEM Series Aimed At Girls." *MarketersMedia* September 21, 2015.  
<http://marketersmedia.com/educational-building-toy-company-click-a-brick-praises-new-netflix-stem-series-aimed-at-girls/90453>
- [3] Elber, Lynn. "Tween series 'Project Mc2' puts smart girls in the spotlight." *AP* August 4, 2015.  
<http://bigstory.ap.org/article/2871bb352cec47cf96657447954a20e9/tween-series-project-mc2-puts-smart-girls-spotlight>
- [4] Moran, Gwen. "Can these dolls—who star in their own Netflix show—make STEM cool?" *Fortune* August 8, 2015.  
<http://fortune.com/2015/08/08/stem-dolls-netflix-show/>
- [5] Netflix. "Watch *Project Mc<sup>2</sup>* Online."  
<http://www.netflix.com/title/80058852>
- [6] *Project Mc<sup>2</sup>*. "Learning Activities, Quizzes and Games for Girls."  
<http://www.projectmc2.com/>  
<https://www.facebook.com/ProjectMC2/>
- [7] Wilbur, Hayley. "Each of these empowering dolls comes with a fun STEM experiment." *Mashable* August 7, 2015.  
<http://mashable.com/2015/08/07/project-mc-stem-dolls/>