

**Before we get started with the next talk:**

Grab a card at the front if you don't have one already.

Find the other people who have the same *symbol*  
(not *number*) as you on their card,  
sit together and introduce yourselves.

# Supporting Mathematics Students and Colleagues: Be An Active Bystander

Rosalie Bélanger-Rioux  
Preceptor and Assistant Director of Undergraduate Studies  
[scholar.harvard.edu/rbr](https://scholar.harvard.edu/rbr)

Harvard University  
Mathematics Department

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# Introduction and disclaimers

## Disclaimers:

- This is not my area of expertise!
- Active learning.
- Difficult topics, feel free to step out as needed.

## Definition of “mathematician”

Please find your group using the symbol on your card  
(grab a card at the front if you don't have one)  
and introduce yourself to your group.

**Then, list on a few post-it notes what first comes to mind  
when you hear the word “mathematician.”**

## Definitions influence... everything

Our mathematical theories are built on our definitions of the mathematical objects we want to study.

Our mathematical communities are built upon our definition of the word “mathematician.”

**Get in your groups again and find a few ways in which the post-it words from the previous activity influence our mathematical community. List them on an index card.**

## Alternate definitions? Alternate communities?

If there are some things we want to change about our mathematical communities, we need to start at the root: our definition of “mathematician.”

**Assign a note-taker and brainstorm with your group:  
what could be a new definition of “mathematician”?  
What would you like to come to mind when you hear the word  
“mathematician”?**

From the Cambridge Dictionary: “someone who studies, teaches, or is an expert in mathematics.”

The problem is all the subtext, the biases, the assumptions, the stereotypes.

## So how do we change this?

The **Four I's of Oppression**: Ideological, Institutional, **Interpersonal**, and Internalized.

(I did not come up with the concept, but I don't have a great reference for you, look it up and explore what you find.)

The rest of this talk will be on the **interpersonal** aspect of oppression in mathematics.

## Being an active bystander: benefits and barriers

Imagine an interpersonal situation (you and someone else, you overhearing a conversation others are having, you witnessing an interaction) that feels “yucky.”

If the number on your card is even, think (quietly by yourself) of a potential benefit if you were to intervene.

If the number on your card is odd, think (quietly by yourself) of a potential barrier to you intervening.



## Being an active bystander: five steps

Helpful as we think of these issues (Latane and Darleys (1970) model):

- 1 Stage 1: notice the event.
- 2 Stage 2: identify it as dangerous (or yucky).
- 3 Stage 3: take responsibility for intervening.\*
- 4 **Stage 4: know how to intervene.\***
- 5 Stage 5: take action.

\* Barriers to intervention related to these steps seem to be negatively correlated with intervention. See “College Students’ Perceptions of Barriers to Bystander Intervention”, Kristen Yule and John Grych, 2018.

## How to intervene

### **A study that evaluated a role-playing exercise to increase students' ability to generate effective responses to prejudiced comments:**

“Confronting Prejudiced Comments: Effectiveness of a Role-Playing Exercise” by Lawson, McDonough, Bodle.

Source of inspiration: Nicole Noll, Lecturer in Studies of Women, Gender, and Sexuality and Preceptor in Psychology, Harvard University.

- Don't shut down the person, invite them to think, foster in them a sense of responsibility.
- Inform them but don't attack them. Be respectful.
- Use “I feel” statements, these are harder to refute.
- Ask questions.
- Bring cognitive dissonance in speaker by priming them to think of themselves as a good person.

## Some practice

**The situation:** You (the bystander) overhear the following conversation on the first day of class.

Student 1: Nice to meet you. So what course are you headed to?

Student 2 (looks like a female student): Multivariable calculus! I might want to be a math major!

Student 1: You're a first-year? You're too far behind...

**Your task:** in your groups, you will role play the situation and a possible response. Feel free to change “female” to some other (visible) underrepresented identity.

- Each person should pick a role: student 1, student 2, bystander, coach.
- The coach observes and will give feedback to the bystander at the end of the role play, the others role play while trying to stay in character.

## Wrap-up

Why I wanted to do this talk (and this minisymposium):

- Introduce you to the idea that we are humans doing math, not just mathematical brains doing math.
- The impact this can have on us and our community, and those who are not part of our community.
- Some things we can try to adjust the culture, from bystander intervention to engaging students and faculty in critical conversations.

**What is one thing from today you will take back to your classroom, colleagues or department?**