

# Queer Pedagogy

What IS Queer Pedagogy and How Do We Do It?

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# Welcome Back!

Please edit your display name on Zoom:  
“Participants” > Your name in the list >  
“More” > “Rename”

- Add your **pronouns** at the end of your zoom name.

## REFLECT

- When you think about your time as a student of geometry in your K-12 education, what stands out to you?



Image Description: Street Art Mural “Fight for Street Art” by Kobra, Bedford Ave., Brooklyn, NY. Mural Depicts Jean Michel Basquiat & Andy Warhol wearing boxing gloves over a backdrop of multicolor geometric shapes.

Image Source: [Eduardo Kobra Street Art](https://www.eduardokobra.com/)

# Chat Waterfall

**Type!** But don't hit send until we ask you to!

*Does your memory stand out because it was normative (something typical of geometry) or does it stand out because it was different from what was typically done?*



Image Description: A 1985 protest march in support of striking Welsh miners, with protesters holding a banner that reads "Lesbians & Gays Support the Miners"

Image Source: [The Guardian: When Miners and Gay Activists United](#)



Image Description: Image of a child wearing a shirt that says "love who you are." The child is striking a "superman" pose and is looking up.

Image Source: [Unsplash: Sharon McCutcheon](#)

# This Is A Brave (Not Safe) Space

- *Controversy with civility*, where varying opinions are expected with a group commitment to understand the source of disagreement & work together toward a common solution.
- *Owning intentions & impact*, in which we acknowledge & discuss instances where dialogue has affected the emotional well-being of another person
- *Challenge by choice*, where we have an option to step in & out of challenging conversations
- *Respect*, where we show respect for one another's basic personhood
- *No attacks*, where members agree not to intentionally inflict harm.

Source: ["From Safe Spaces to Brave Spaces" by Brian Arao & Kristi Clemens](#)

Link: <https://tinyurl.com/QueerMfA>

# What **exactly** makes a pedagogy a *Queer* pedagogy?

From Sara Ahmed's [Queer Phenomenology](#) (p. 66):

*... normativity can be considered an effect of the repetition of bodily actions over time...*

*The normative dimension can be redescribed in terms of the straight body, a body that appears "in line." Things seems "straight" (on the vertical axis), when they are "in line," which means when they are aligned with other lines.*

...

*The vertical is hence normative; it is shaped by the repetition of bodily and social actions over time.*

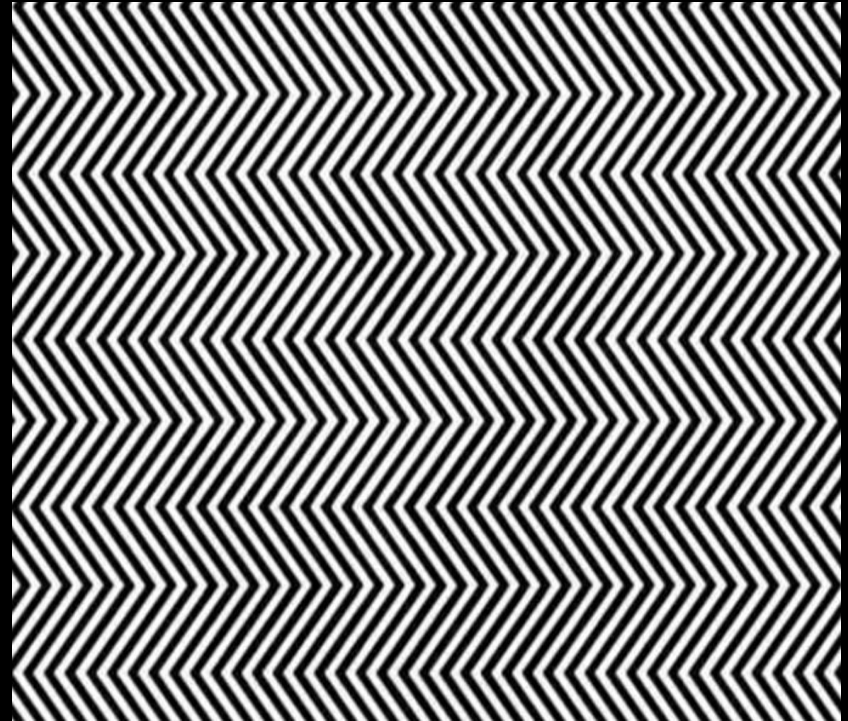


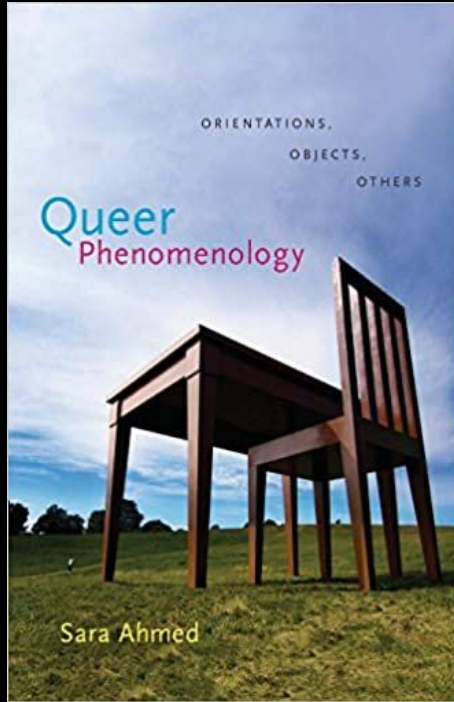
Image Description: *Optical illusion image of a zigzag pattern in black and white that conceals a panda*

Image Source: [My Modern Met: Optical Illusion](#)

# What **exactly** makes a pedagogy a *Queer* pedagogy?

Image Description: Book cover of Sara Ahmed's "**Queer Phenomenology**" with a desk and chair on a green field and under blue skies, and with the subtitle "Orientations, Objects, Others"

Image Source: [Amazon](#)



From Sara Ahmed's [Queer Phenomenology](#) (p. 66):

*... the queer moment, in which objects appear slantwise and the vertical and horizontal axes appear "out of line," must be overcome not because such moments contradict laws that govern objective space, but because they block bodily action: they inhibit the body ...*

A queer pedagogy intentionally seeks to recognize the normative/vertical axes of the classroom space, and then works on actively deviating from this norm to expand educational possibilities.

**Mathematical inqu[ee]ry** is “...questioning the tasks, the strategies, the very ways of thinking and doing mathematics, as well as the way mathematics is used to interpret and act in the world.” (p. 186)

*Mathematical Inqu[ee]ry goes beyond mere inclusion of queer students, families, and issues into extant frameworks and allows elementary teachers and students to deconstruct and disrupt educational norms as well as imagine new possibilities in mathematics and in the world.* (p.183)

# A (Very) Brief History of Proof

## Days of Yore

“...could include appeals to physical intuition (e.g, about continuity and real numbers), authority (e.g., ‘Euler did this so it must be OK’), and casual establishment of alternatives (‘these must be all the possibilities because I can’t imagine any others)” (p. 63).

## Today

Must include thorough justification of each step



# Reframing How We Think about Proof

## Perspective 1

This makes proof more rigid!

## Perspective 2:

“This shift in what ‘counts’ as proof allows for the critique of common sense assumptions - as does queer theory” (p. 63)

E.g., In old proofs people could make claims such as “**these** must be all the possibilities because I can’t imagine any others” (p. 63)



“**heterosexual people** must be all the possibilities because I can’t imagine any others” (p. 63)

Today’s expectations of proof allows (even encourages?) us to critique this heteronormative assumption

# Another Shift: Axioms

## Days of Yore

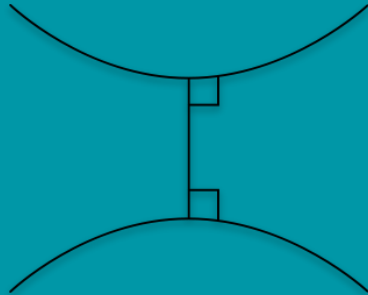
Axioms were seen as “truths that were ‘self evident’” (p. 63)

## Today

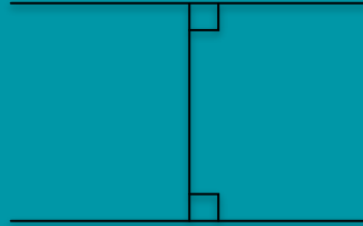
“A set of axioms is any collection of formally stated assertions from which other formally stated assertions follow by the application of certain well-defined rules” (p. 63)

“This subtle shift...allowed mathematicians to challenge assumptions that had previously been taken as ‘self evident’ or as accepted common sense” (pp. 63-64)

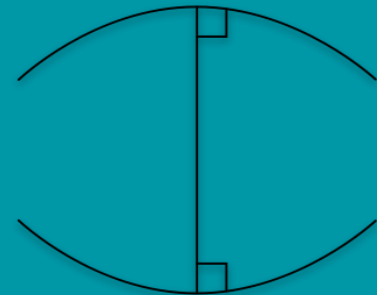
# How the “Revolution” Made Way for Other Geometries



Hyperbolic



Euclidean



Elliptic

Image Source:

By derivative work: Pbroks13 (talk)Noneuclid.png: Original uploader was Joshuabowman at en.wikipedia - Noneuclid.png, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=4373343>

# Reframing How We Think about Proof

## Perspective 2:

“This shift in what ‘counts’ as proof allows for the critique of common sense assumptions - as does queer theory”

## **In our break-out rooms:**

Does the geometry of your K-12 education live up to its queer possibilities?

# Room 1

## Notes:

- Our experiences: NYS Regents prepped course; So dry... boring; Textbook driven instruction
- What is queer?? Maybe it's the disruption of the patriarchal view ... like Euclid = "the father" of geometry... .. against the teacher being the "father" of the class.. the "leader" of the class.
- Queering ..... Students owning the ideas themselves - not just handed knowledge... Like the teacher is not the "father" just handing down knowledge.
-

## Room 2

Notes: If one stays focused on 2-column proof for a long period of time, does that keep the curriculum rigid?

There are other proofs one can consider, coordinate geo proofs which are less structured and give way to creativity.

How much do we hold on to a proof as one specific thing?? (2-col/ flow/ paragraph)

The queerness of the curriculum depends on what we stress.

Flexibility/creativity/multiple paths vs. rigid/single solutions/ one path.

## Room 3 Does the geometry of your K-12 education live up to its queer possibilities?

No! It was like it was ONE RIGHT WAY to do stuff. Like 2 column proof was it. And the quickest way to prove was celebrated instead of all the ways to do it.

There was THE Geometry teacher who taught 5 classes of it for decades in the same way  
College Geometry was better - it was narrative-all the lessons led into Euclid's 5th postulate and then other geometries could be discussed from there!

Some of our ideas/thoughts for the future

- Idea of learning the recipe and then developing own style/flavor
  - In terms of classroom management how to you manage all the flavors?!
- Give puzzles and ask for an oral proof of the puzzle solution
- What about proofs NOT in geometry? Like in other math classes (why does adding 2 integers get you an integer?) or other classes?
- Geometry has startling discoveries and it's exciting and theatrical to find them - get the Math Heart Pumping!!!

# Gallery Walk!

Read other groups' notes and leave a thought or two as a comment!



Image Description: *Image of South Asian LGBTQ+ activist Sonal Giani in a pride-themed saree with her filmmaker partner Upasana Naithani looking at each other as Upasana drapes Sonal's saree over herself.*

Image Source: [South Asian Lesbian History](https://southasianlesbianhistory.com/)





Image Description: Image of a street art mural "You are Loved" in NYC from 2019 World Pride. Mural depicts black and white cartoonish renderings of four trans people. Between each pair of people is a word: "You" "are" and "Loved" in , in pink and boxes w/black writing and outline. There are pink, white, and blue raindrops coming from each of the boxes as well.

Image Source: [QueerStreetArt.com](https://www.queerstreetart.com)

# Take a Break!

Take a bathroom break, stand up, dance around to the music, get water & a snack, but come back!

## Return time: 6:35

# Example of Inqu[ee]ry & Rehumanization: Queering Space



# Boudoir Babylon - Part 1



Image Description (from source): *Installation designed by Adam Nathaniel Furman. Called Boudoir Babylon, the project celebrates queer aesthetics through a series of painted plywood volumes in NGV's Gallery Kitchen, which create different spaces for gathering and socialising. Although the design incorporates stereotypically gendered colours such as baby blue and pink, these are recontextualised and subverted to challenge traditional notions of what is male or female. An installation of geometric forms piled high on top of a circular podium, like decorations on a many-tiered wedding cake, strategically divides the space to create areas for togetherness and solitude, for watching and being watched. In this way, it pays homage to three distinct spatial typologies – boudoirs, salons and clubs – which toe the line between public and private and have historically acted as safe spaces for marginalised groups in society.*

Image Source: [Dezeen](#)

Using the image to the left and your designated “scratch work” google drawing on the next slide, consider the following prompt independently. Record your questions on your scratch work document as well.

*What mathematics do you “see” in this image? What mathematical questions/wonderings might you ask in relation to this image? Come up with as many questions as possible.*

# Scratch Work Documents

Tyler

Courtney

Kaitlin

Rebecca

James

Juliana

Daniel

Tyrone

Kate

## Boudoir Babylon - Part 2

In your breakout rooms, share the questions you came up with, then discuss the following:

*How might these questions lead to rich mathematical conversations? What mathematics is involved?*

Record notes from your discussion in the space provided in your scratchwork document.

# Share out!



Image Description: Street art mural in Newark NJ by Zovechild. The mural depicts how the artist “sees the rainbow” of pride. To the left of the mural is a feminine person with blue hair and a gold dress. To the right of the person is a pride flag. Next to that is a group of diverse young people, many of whom are wearing rainbow colors or holding queer pride flags. The mural says Pride 21.

Image Source: [Muse by Clio](#)

# Student Noticings



Image Description: *Boudoir Babylon* designed by Adam Nathaniel Furman.

Image Source [Dezeen](#)

- Reminds us of a carousel or candy shop, resembling childhood and brought joy. Was sweet and bubbly
- Noticing more geometric shapes, rather than organic
- From different perspectives the arched lines look like that are concaving into one another ; the windows may serve this purpose
- Windows emphasize looking out onto others - not sure if we like because for some of us being queer is very internal...I just am
- Thinking of sweets b/c of the color.
- To the cis het eye, it would just look like a very unique design, but to queers, it would look very queer.
- The sectioning is also giving me the quiet, introvert queer and loud, extravert queer trope vibes.

# Student Wonderings

- Can we predict how many of each of the queer-oglyphs appear (thinking of the distinct columns as well as individual queer-oglyphs on the base circle, as well as others)?
- What makes this space queer?
- Is the mirror wall curved? No b/c the pillar would be curved.
- Is the Georgia O'keefe reference intentional? → How do we go about constructing the structure from the butterfly/hearts and circles?
- Are the walls cylinders? Can we use the other photos to find this out?
- Why do humans like symmetry? How does it connect to ratios/proportions and beauty? Symmetry as simplifying calculations and/or helping us to feel like we can see forward to see where a pattern is going
- How did the artist determine how large to draw the Queer-oglyphs so there were no two consecutive images?
- What's the difference in arc between the spaces made for introverts and those for extroverts?



Image Description: *Boudoir Babylon* designed by Adam Nathaniel Furman.

Image Source [Dezeen](#)





How does students' engaging in an activity like this help us to shift the thinking about what geometry is? How do we connect this to the idea of "proof" and "proving"?

Image Description: Image of a street art murals in Dehli's Lodhi Art District. Both murals depict feminine presenting people made of rainbow colored triangular shapes.



## Debrief

What are we thinking/feeling in relation to what we discussed today?

Image Description: Image of a street art mural "The Love I Vibrate" in Boystown Chicago. Mural depicts a queer, Black, masculine presenting person on a multicolored backdrop.

Image Source: [CODAwork](https://www.codawork.com/)

# Closing Items

- Take 2 minutes to share your [feedback](#) with us
- **Next Week: BYO Geometry Conundrum!**
  - We'll come together to discuss ways of queering our pedagogy in the geometry classroom.
  - Questions about...
    - Introducing/teaching a particular topic
    - Establishing norms in the geometry classroom
    - Expanding the possibilities of proof-writing in K-12 Geometry