gende #flo #hw #reading

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1 | x + y, Eugenia Cheng

- def of ”woman” is constructed, arbitrary
  - and they hurt! but mathematical thinking can help
- mathematics is not just about numbers and equations, even tho it starts with them
  - at the heart of mathematics is the **framework for making arguments**
    - which had abstraction and logic
- def abstraction: seeing past surface details in a situation to find it’s core
  - hmm… i don;t agree with this. it’s less about seeing ”past” to find a core than it is about zooming out until the details are irrelevant, and seeing the patterns
  - does abstraction get to the core? ig it does in the sense that it distils..
- **two cultures of mathematics**
  - problem solving
  - theory building
    - but what does this mean? ## theories
- descriptive, not prescriptive
  - hmm… what about axioms?
- works at higher levels of abstraction
- the right abstraction hold great power in explanability
- she is proposing one such abstraction / reframing, but for gender!

1.1 | the problem

what is it? divisivness of arguments around gender equality.

- society get’s distracted by the argument of how men and women are different
  - this is a detraction! not the right argument
  - because it draws us into a meta-argument
    - this argument about what we should be arguing about only maintains the status quo
    - but, mathematics is v good at sorting this stuff out!

1.2 | math time

- mathematical deduction is not about averages on a large sample set
  - instead, they use logic, not evidence
    - reductionist? assumes our logic is good enough
- individual experiences do not generalize to large groups
  - **the reverse is also true**
- we can get around this with a case study, and then trying to generalize
- yooo she does KBxSystemsofSystemsinNatureandDeepLearning#category theory
  - says that a similar type of seemingly small abstraction is possibly what she has now
- not mathematics of gender, but a mathematical approach to gender
  - ie. a redefining
- continual abstractions is the process of math
- statisical link is not enough! math looks for causality
- set theory asserts that math is fundementally about membership, whereas category theory asserts that it is fundementally about relasionships
- she hopes to focus on relationships instead of intrinsic characteristics
- abstractions can be temporary! you can details back in later

1.2.1 | dimensions

- because dimensions are by definiton indipendent, it's hard to define new ones
  - as you can't describe them w/ the existing dims
- looking at too low of a dimensions messes things up
  - eg. a shadow instead of an object

lmao aight

1.3 | inclass

abstractions can be applied cyclicy (ie. vec to matrix to tensor) "category theory is the science of metaphor" - ted