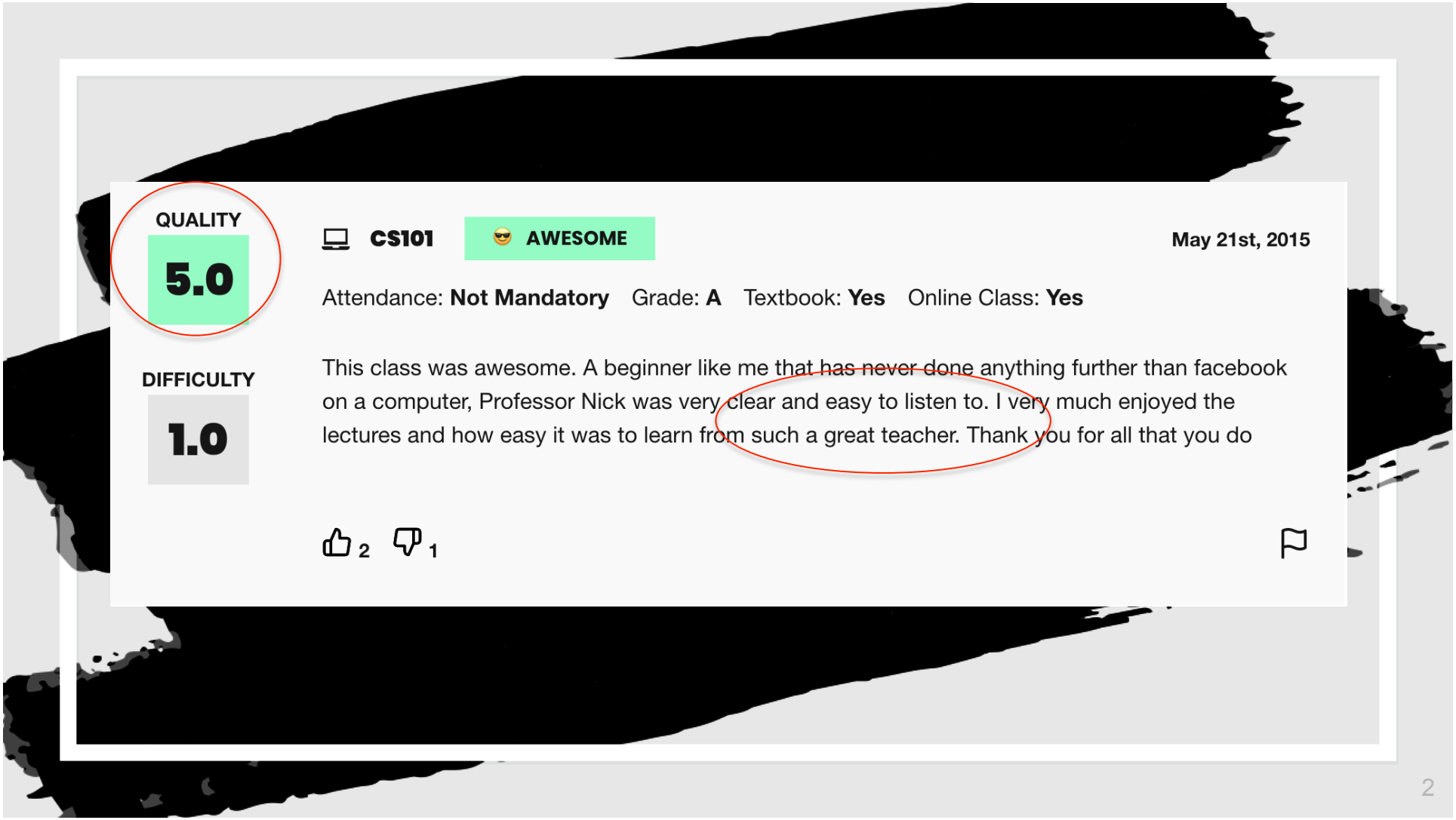
Ethics:
Choices and Values


QUALITY
5.0
DIFFICULTY
1.0
CS101
AWESOME
May 21st, 2015
Attendance: Not Mandatory Grade: A Textbook: Yes Online Class: Yes
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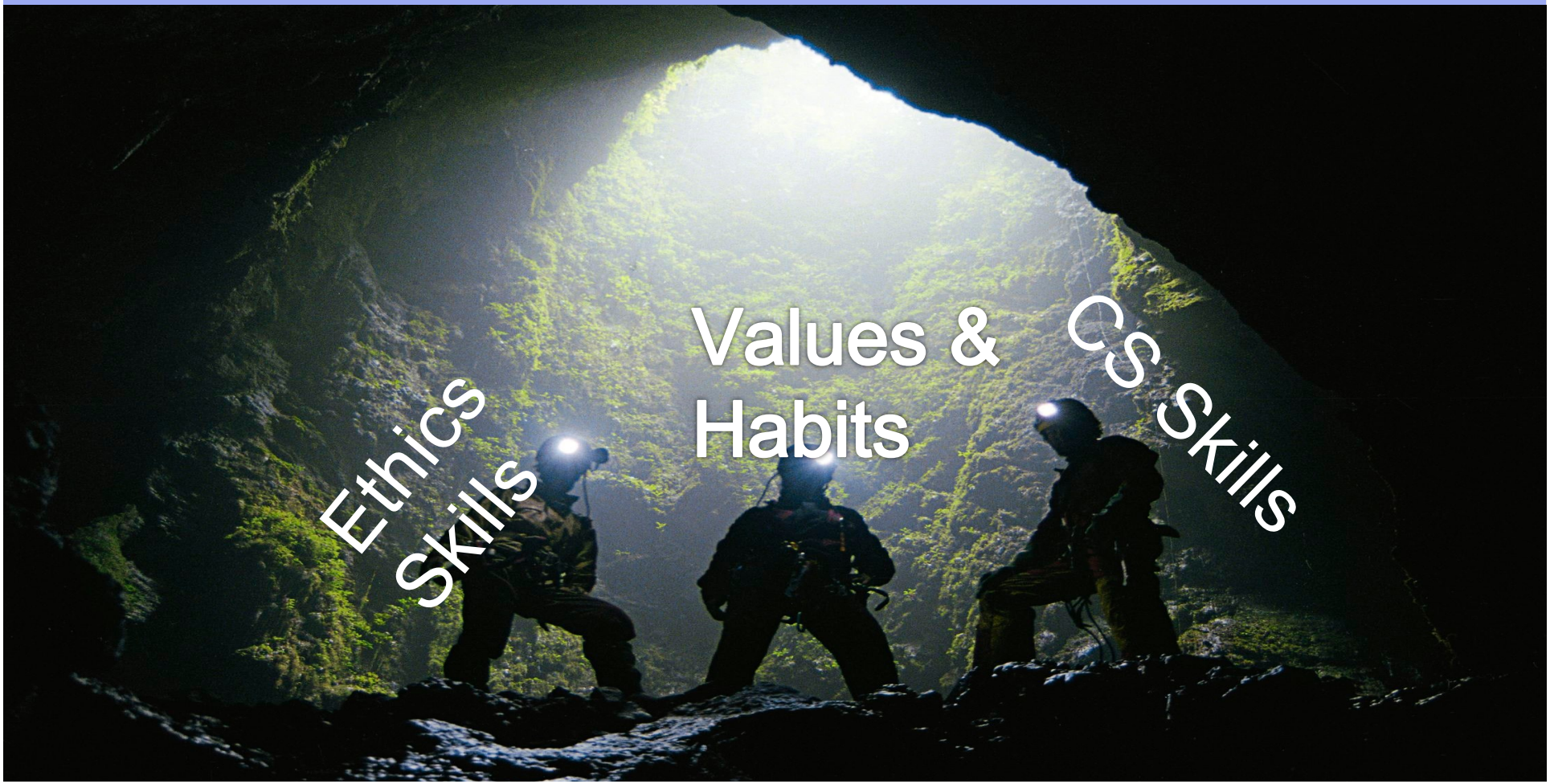
2
1

You Have The Power to Find Out!



What is Bias?

Difference between measured results and “true” value

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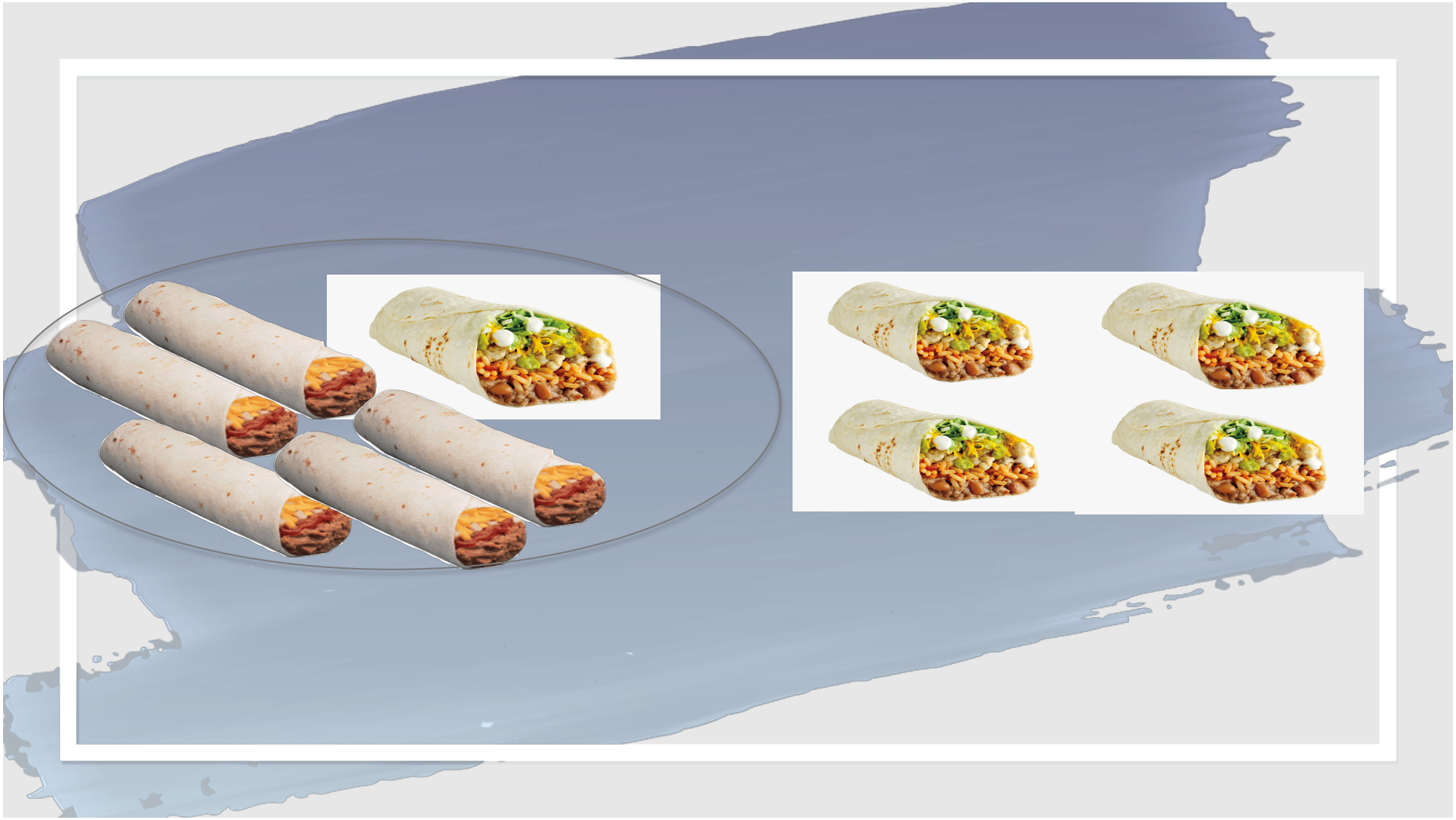
Difference between measured results and “true” value



Sampling Bias: Learn More in Future CS Classes!

What Kinds of Bias Raise Ethical Concerns?

Biased Measurement or Classification

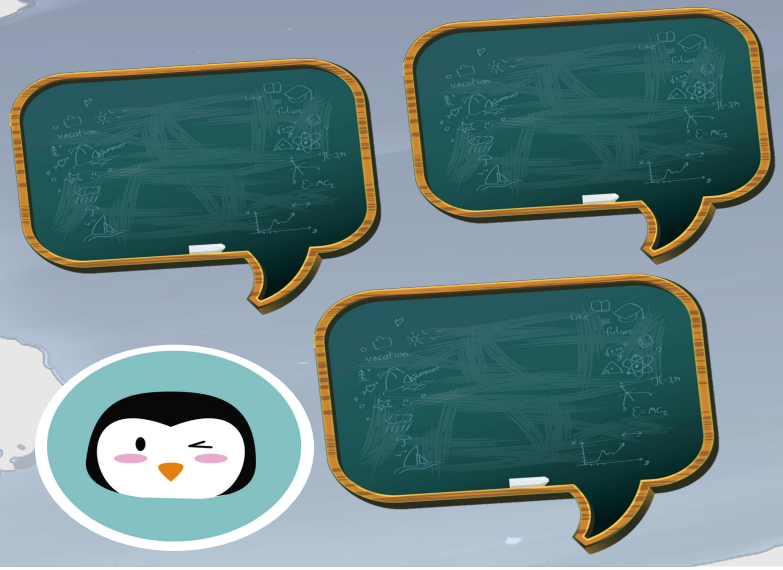
+ use of that bias to compound existing injustice or fail to treat all as having equal moral worth

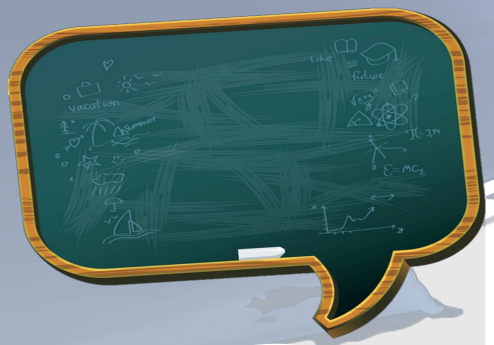
=> Unfair Bias

How might this definition
of bias help us
understand ratings?

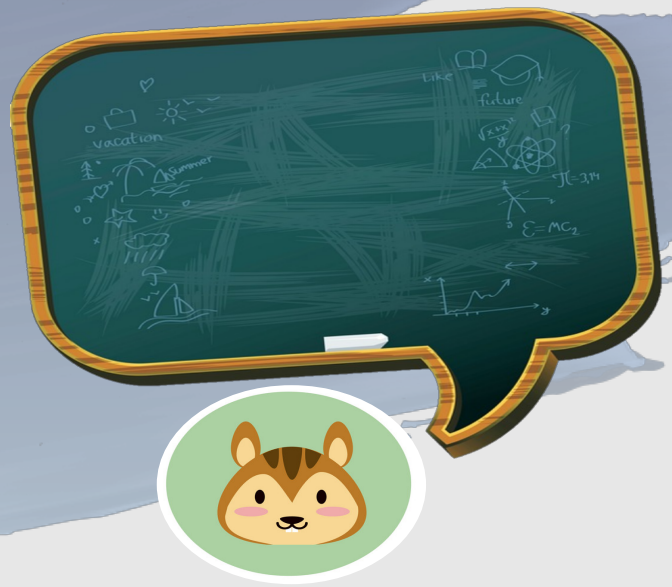
Equality of Opportunity:

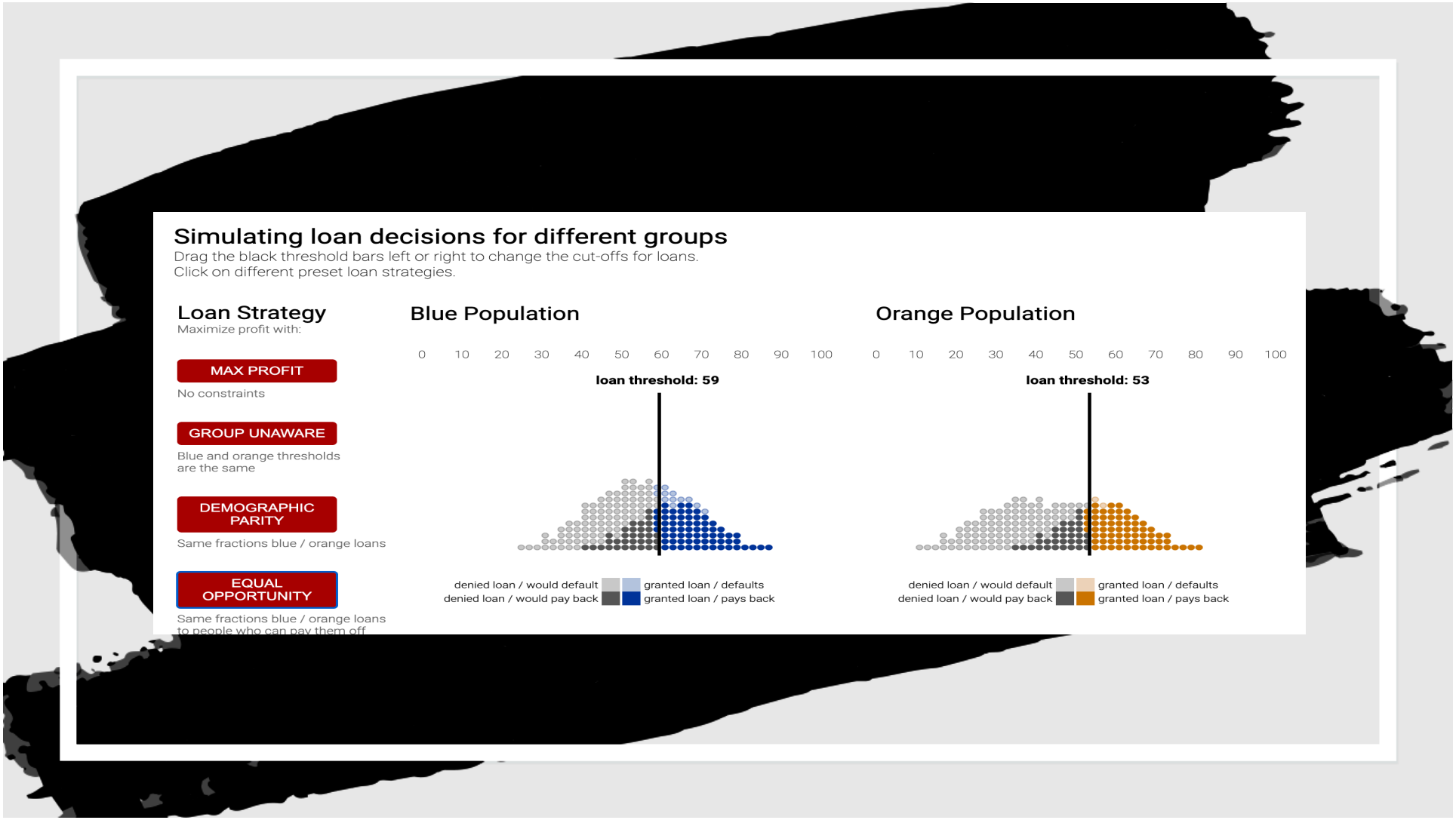
everyone has same opportunity to develop skills needed for the job, apply for the job, and get promoted.

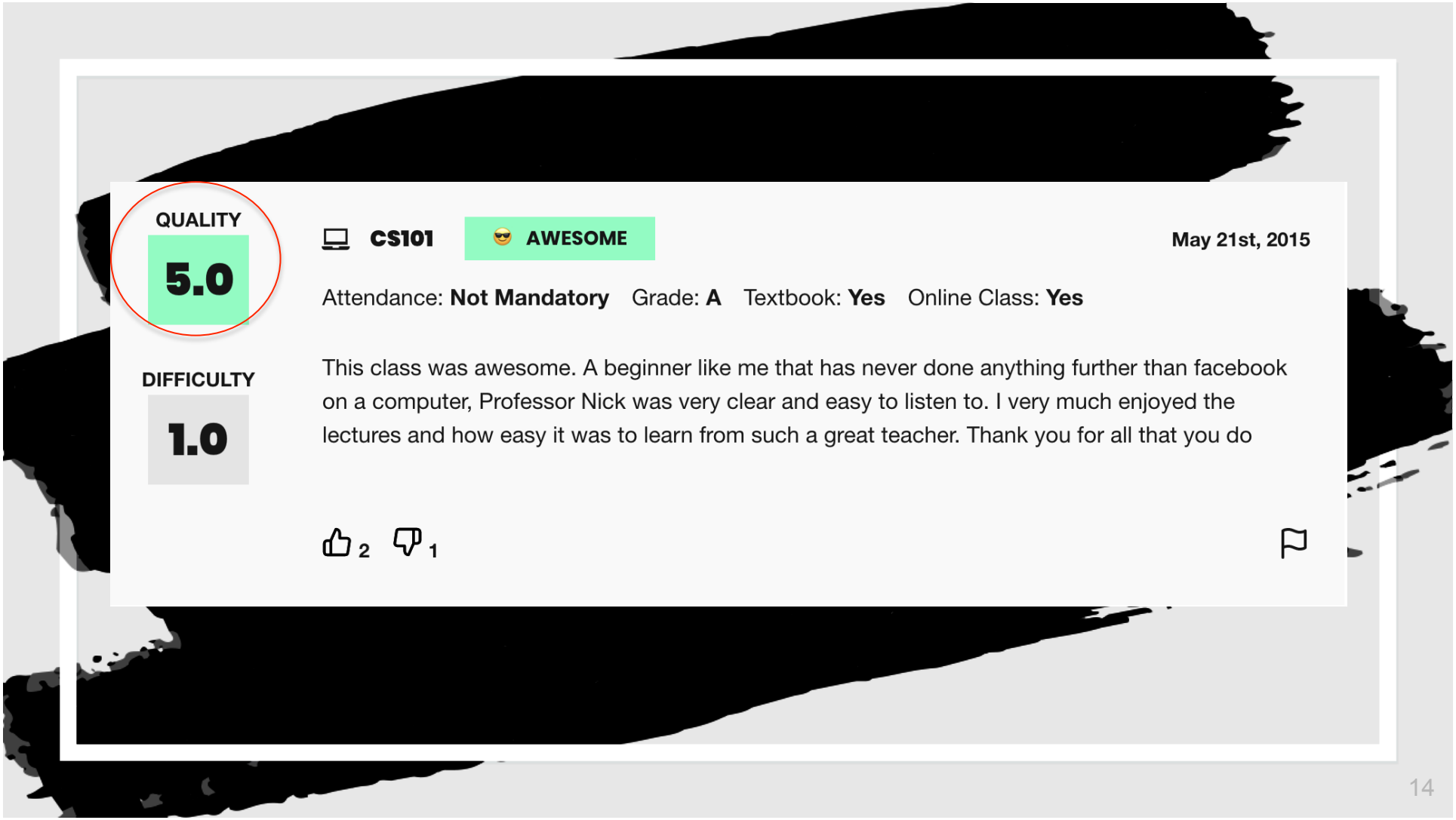




Parity: Everyone is equally likely to be a good teacher, so we should expect to end up with number of good teachers (and high rankings) proportionate to population.




Simulating loan decisions for different groups
Drag the black threshold bars left or right to change the cut-offs for loans.
Click on different preset loan strategies.
Loan Strategy
Maximize profit with:
MAX PROFIT
No constraints
GROUP UNAWARE
Blue and orange thresholds are the same
DEMOGRAPHIC PARITY
Same fractions blue / orange loans
EQUAL OPPORTUNITY
Same fractions blue / orange loans to people who can pay them off
Blue Population
0 10 20 30 40 50 60 70 80 90 100
loan threshold: 59
denied loan / would default
denied loan / would pay back
granted loan / defaults
granted loan / pays back
Orange Population
0 10 20 30 40 50 60 70 80 90 100
loan threshold: 53
denied loan / would default
denied loan / would pay back
granted loan / defaults
granted loan / pays back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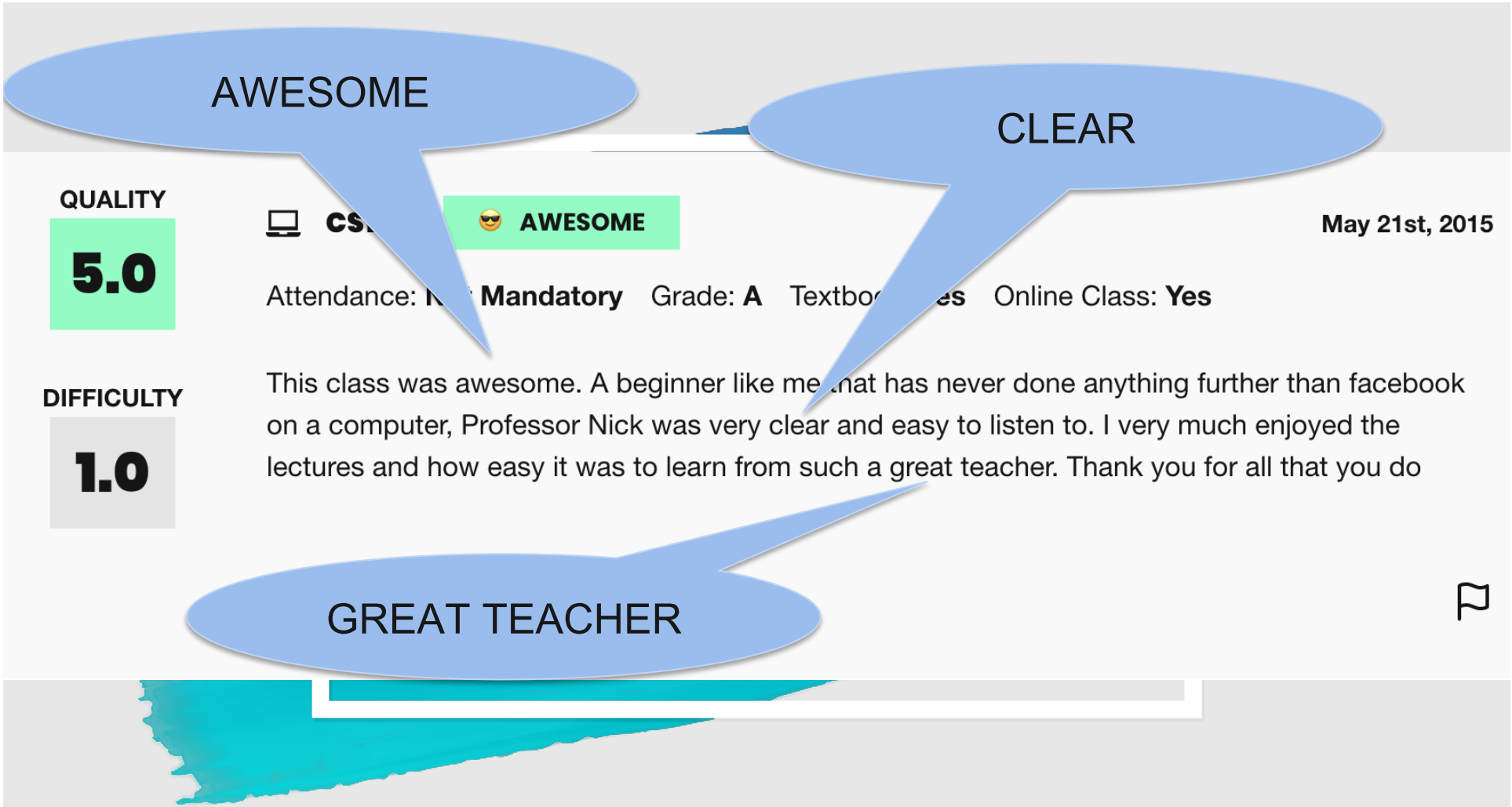
FAIRNESS BEYOND
THE NUMBERS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GREAT TEACHER

Descriptive vs Normative Language

Descriptive Language:

- is
- was
- what happened
- what people did

Normative Language:

- right
- Wrong
- Good
- Bad
- Should
- Should not

Descriptive or Normative?

QUALITY

5.0

DIFFICULTY

1.0

CS101 😎 **AWESOME** May 21st, 2015

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CLEAR

GREAT TEACHER

Descriptive
Normative

Thick Normative Terms

“Thick” normative terms are both descriptive and normative

Examples:

- Cowardly : cautious
- Polite : (?)
- Rude : (?)
- Chill
- Kind
- etc

Thick Normative Terms & Fairness

- We compare people in many ways, not just numerically
- Thick normative terms express “loaded” judgments

Mark Zuckerberg on whether Facebook would fact-check false claims about election suppression:

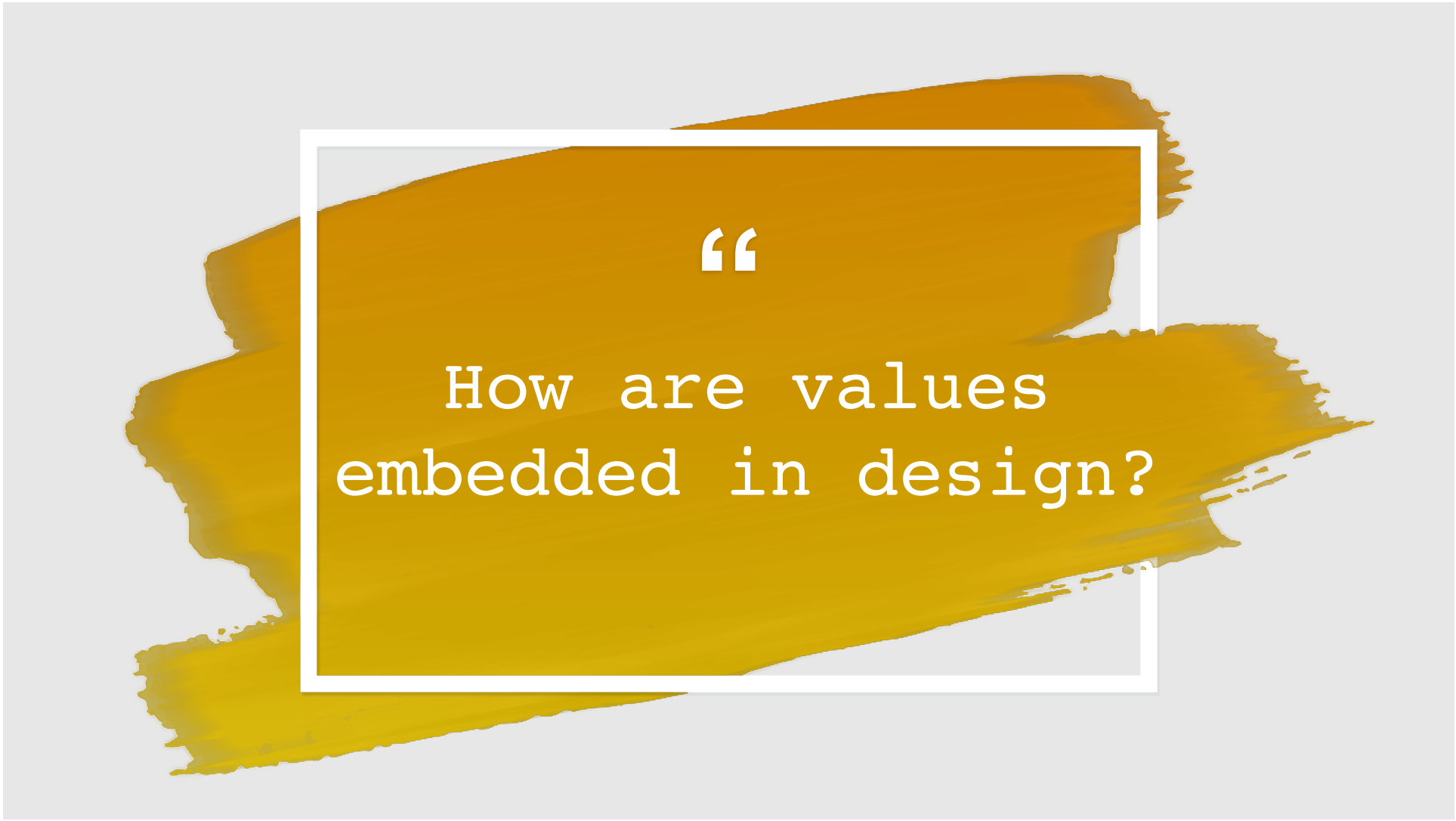
1. “We have a different policy, I think, than Twitter on this.”
2. “You know, I just believe strongly that Facebook shouldn’t be the arbiter of truth of everything that people say online.”
3. “I think in general private companies probably shouldn’t be—or, especially these platform companies—shouldn’t be in the position of doing that.

Descriptive or Normative?

Not surprising that statements setting the policy for platforms would be normative.

What about the programs behind the platforms themselves?

Do programs like the ones you are writing contain normative claims or values?


“
How are values embedded in design?

1. Problem Formulation Embeds Values

Formulating a problem means describing the desired solution as good or worthy of being done.

Problem Formulation Statements are Normative

- Formulating a problem means describing the desired solution as good or worthy of being done.
- What is the problem to be solved?
- For whom is this a problem? Who would benefit from its solution?
- Who can agree that this is a problem worth solving?

What is the Problem to be Solved?

“Homeless people are sleeping here and we (who is we?) want them to stop”

What is the Problem to be Solved?

"Homeless people are sleeping here and we (who is we?) want them to stop"

"Some people in our community don't have a place to sleep and we (who is we?) think they should"

Problem Formulation: Ratings & Search

Formulating a Ratings Problem

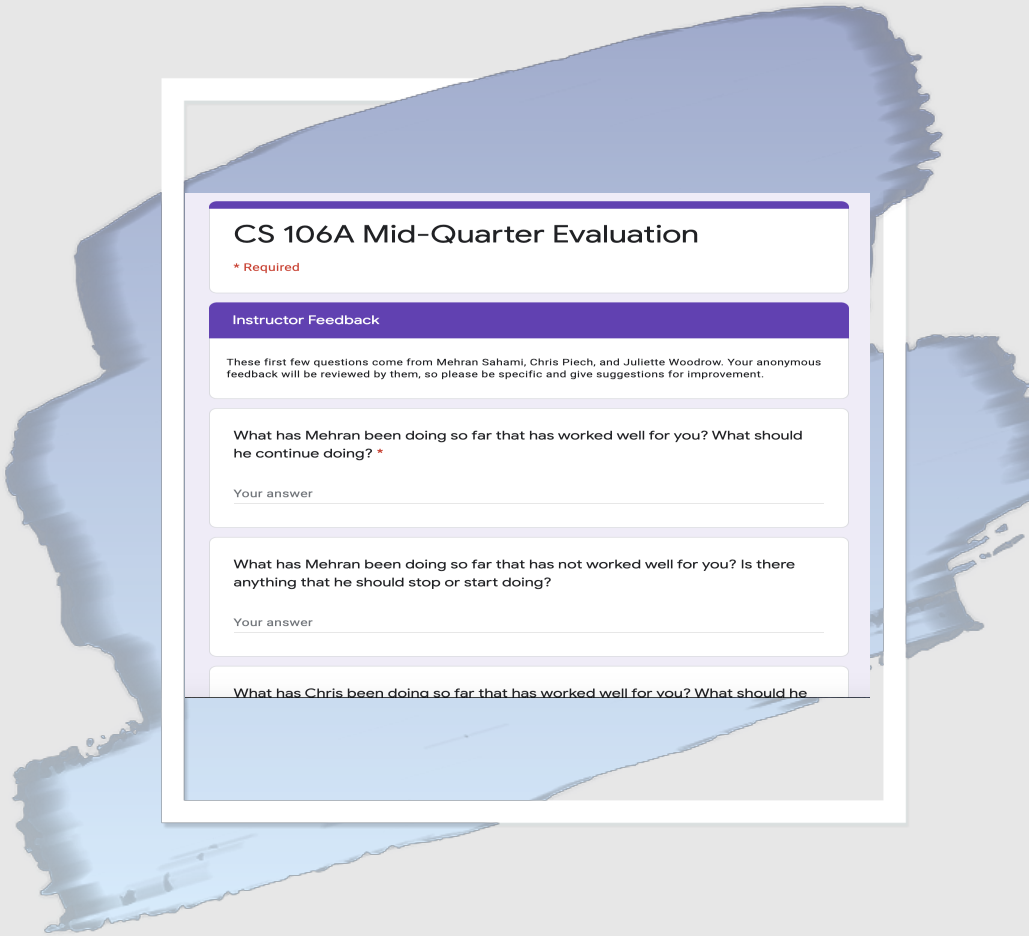
- What are the problem(s) to be solved?
- For whom are these problems? Who would benefit from their solution(s)?
- For each problem, who can agree that the problem is worth solving?

Formulating a Search Problem

- What are the problem(s) to be solved?
- For whom are these problems? Who would benefit from their solution(s)?
- For each problem, who can agree that the problem is worth solving?

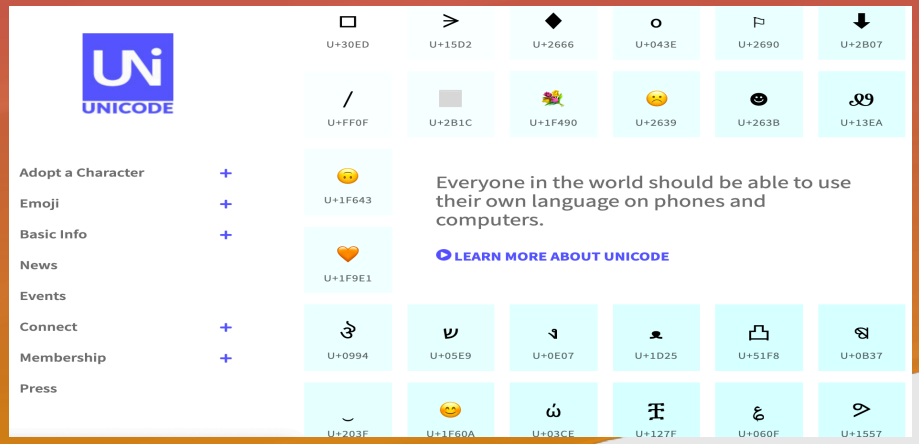
2. Choice of Data Embeds Values

- Surveys are cheap to run
- They measure opinions
- What are other ways to measure quality of professors?

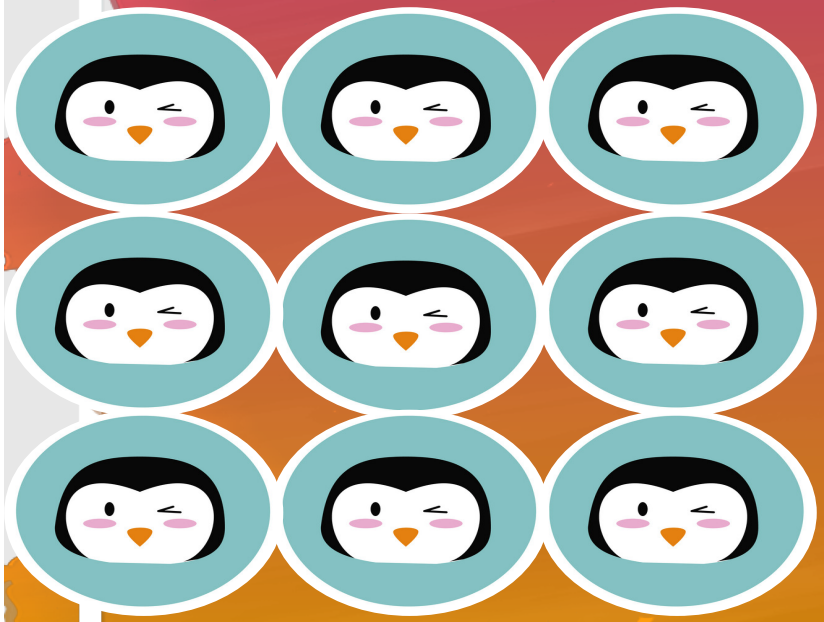


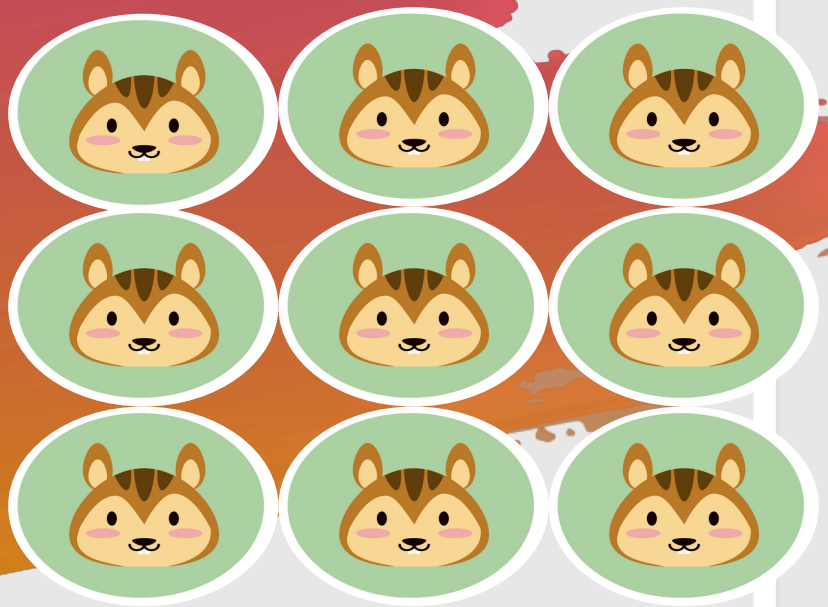
Under-representation and the Long Tail

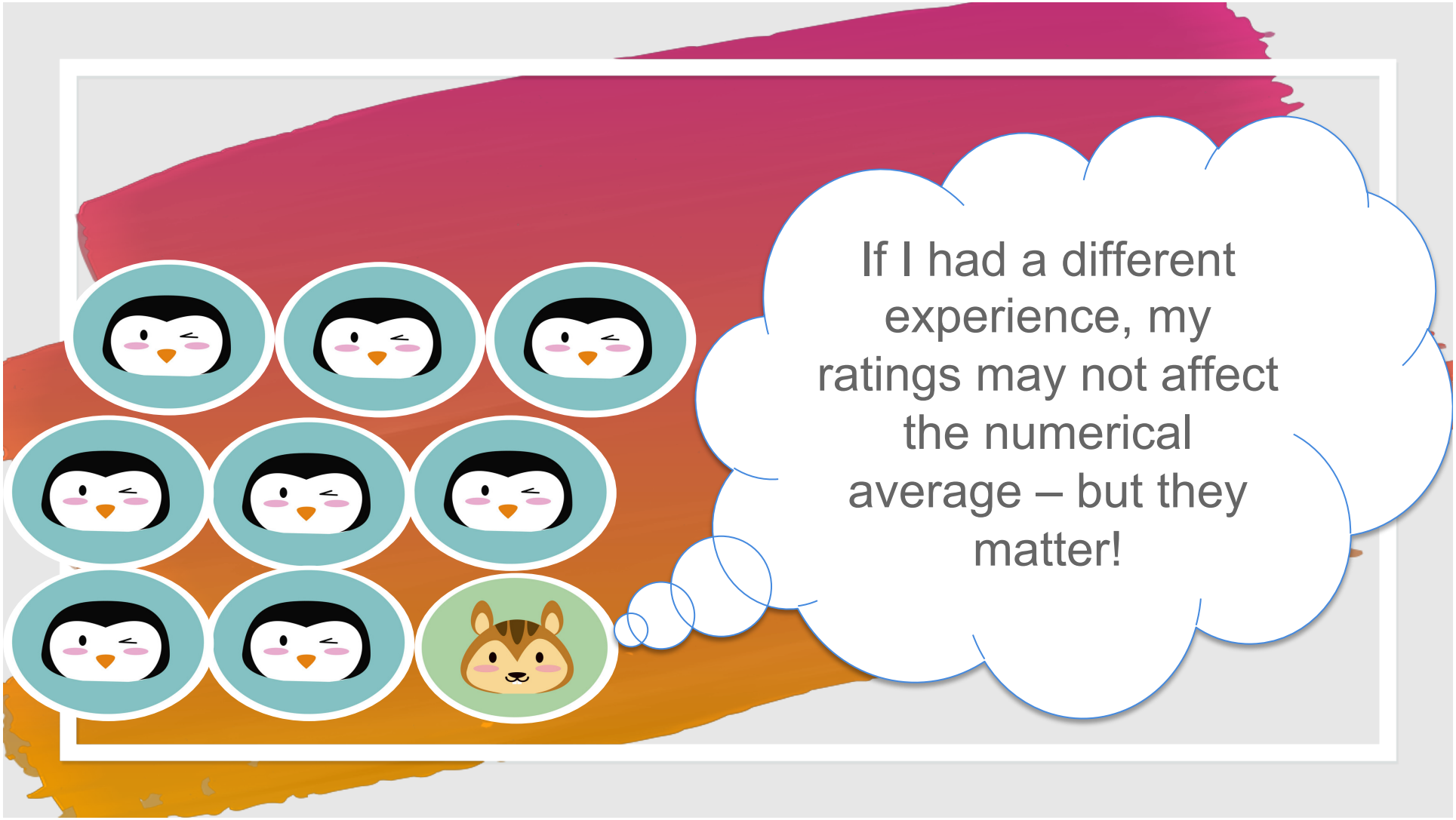
Unicode covers over 1 million symbols, Full coverage of 90 languages, basic coverage for 200 languages

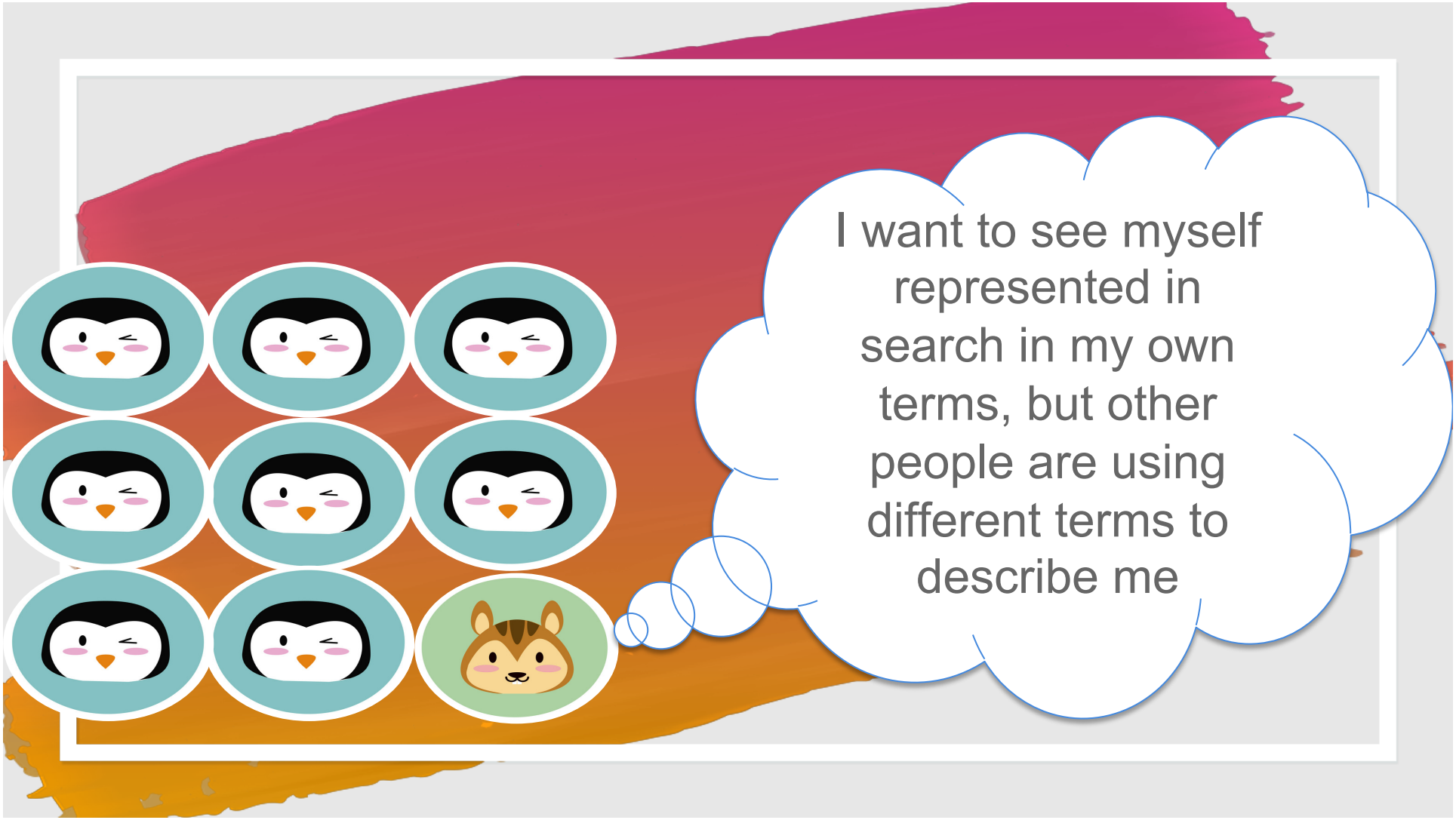


Representation & Surveys

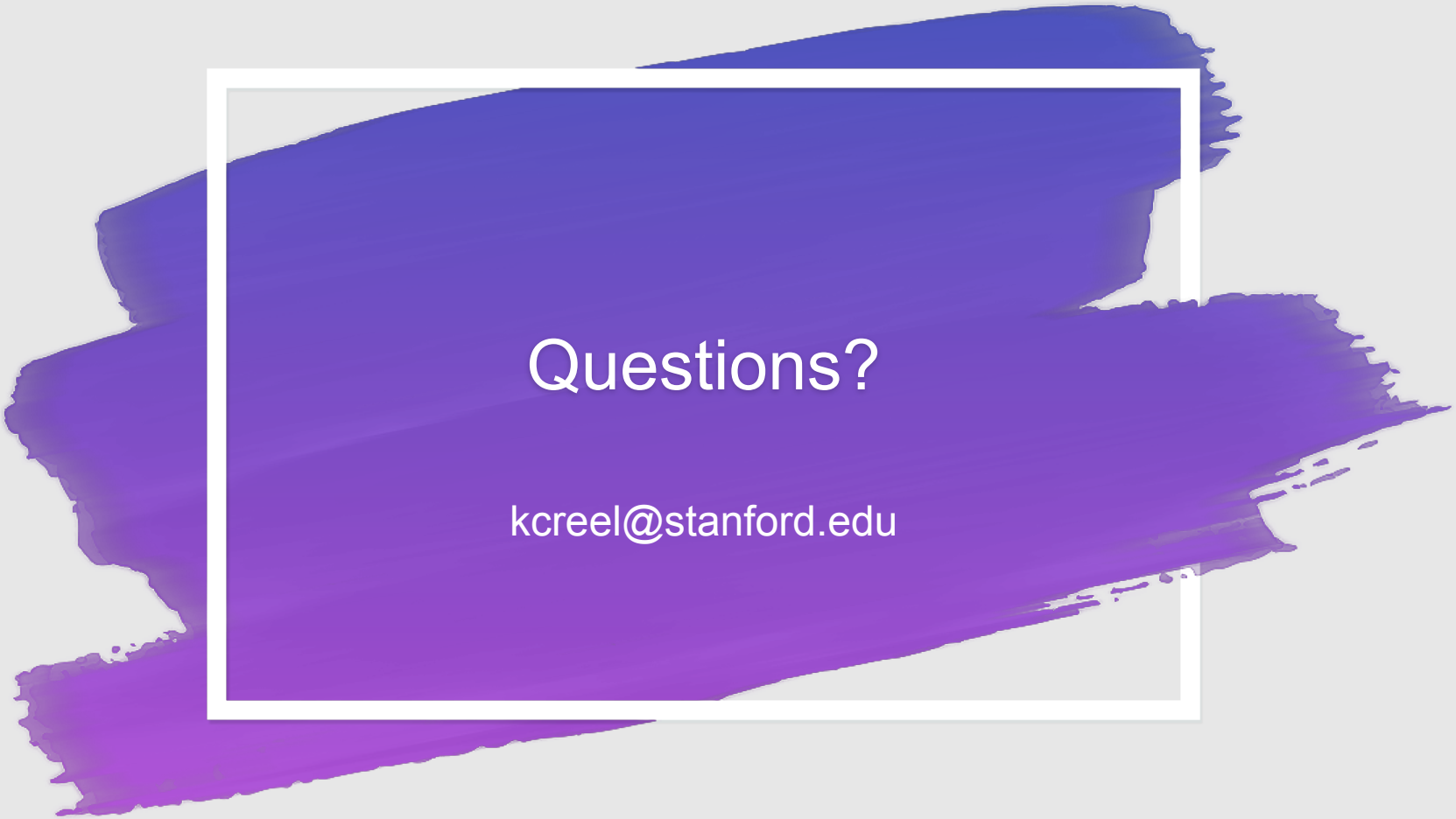





If I had a different experience, my ratings may not affect the numerical average – but they matter!


I want to see myself represented in search in my own terms, but other people are using different terms to describe me

1. Choices embed values
2. Definitions of Bias & Fairness
3. Normative vs. Descriptive
4. Problem Formulation
5. Representation & The Long Tail


Questions?
kcreel@stanford.edu