

Ethics of Image Manipulation

Katie Creel

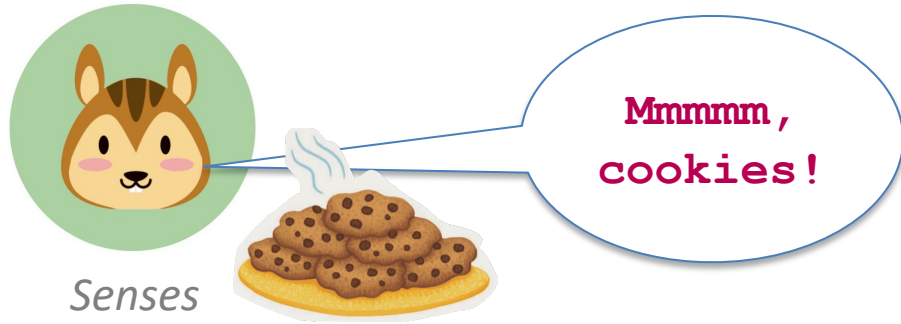
CS106A, Stanford University

Learning Goals

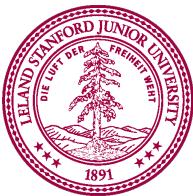
1. Understanding image idealization
2. Understanding image manipulation



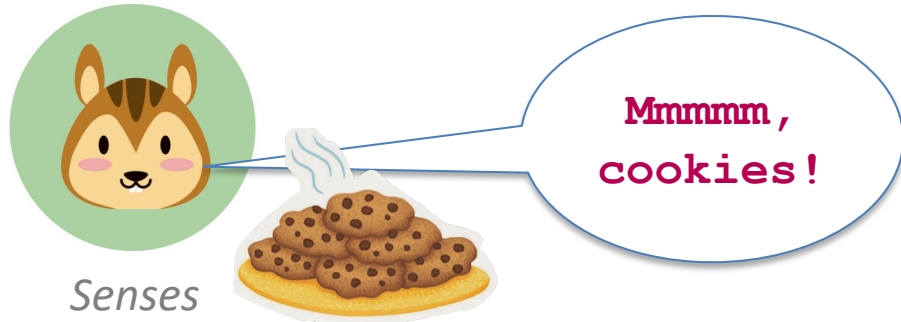
How do we learn (about cookies)?



Perception: Hearing,
Sight, Touch, Smell,
Taste

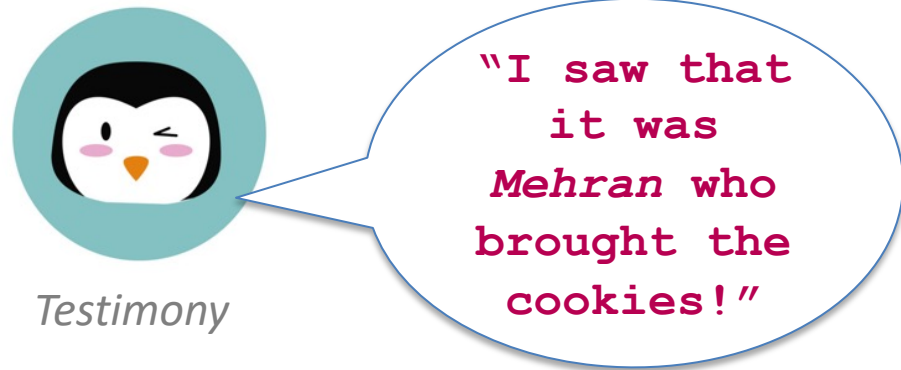


How do we learn (about cookies)?



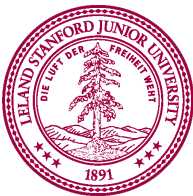
Senses

Perception: Hearing,
Sight, Touch, Smell,
Taste

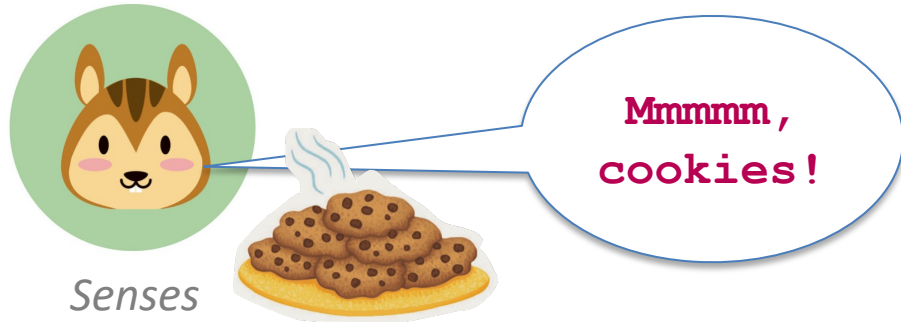


Testimony

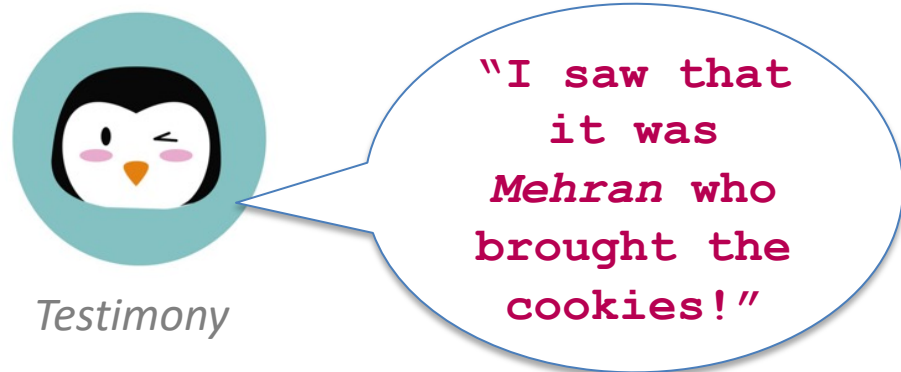
Testimony: Information
from Others



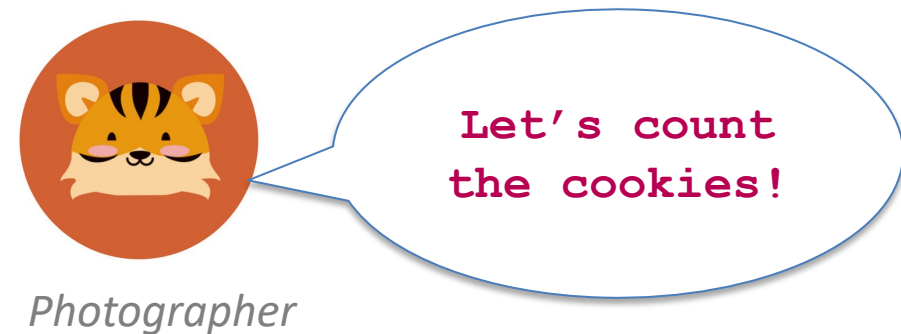
How do we learn (about cookies)?



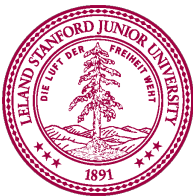
Perception: Hearing,
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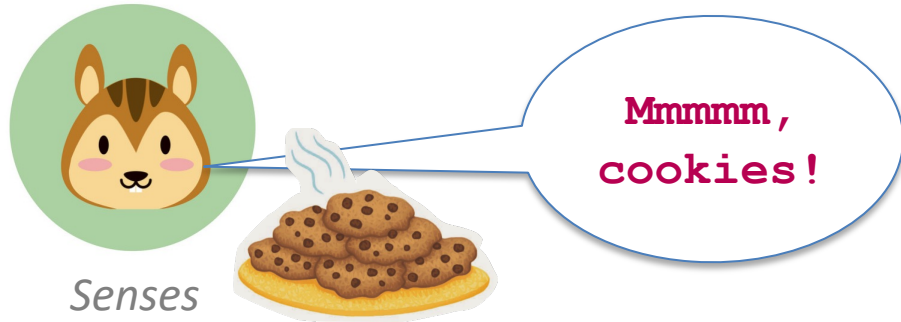
Testimony: Information
from Others



Mathematical Reasoning
and other
transformations of
existing beliefs

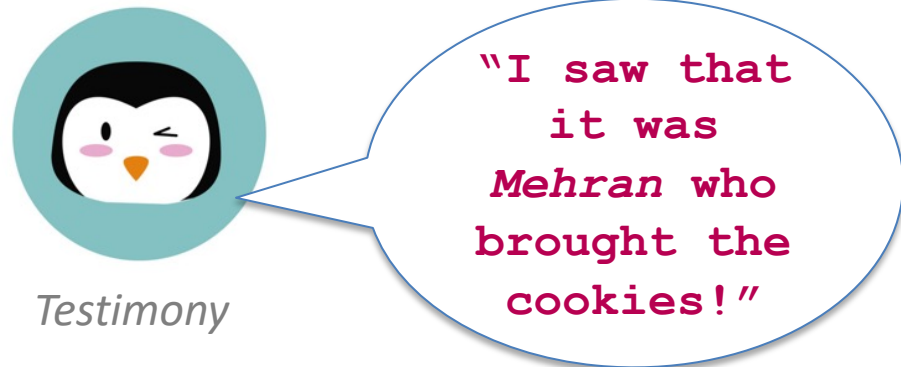


How do we learn from photographs?



Senses

Perception: Hearing,
Sight, Touch, Smell,
Taste



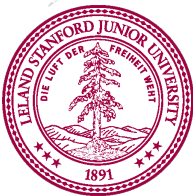
Testimony

Testimony: Information
from Others



Photographer

Mathematical Reasoning
and other
transformations of
existing beliefs



Are photographs more like perception or testimony?

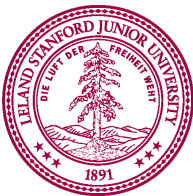


Evidence from Testimony



"I saw that it
was *Mehran* who
brought the
cookies!"

Witness



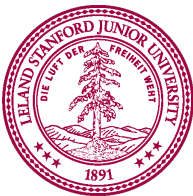
Evidence from Testimony



Witness

"I saw that it was *Mehran* who brought the cookies!"

Testimonial Evidence
should be
sincere and competent



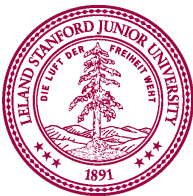
Evidence from Testimony

Norm for Testimonial Evidence:

Testimonial Evidence should be
sincere and competent



When does an image or recording provide testimony?



Courtroom Illustration as Idealized Testimony



Idealized Visual Testimony

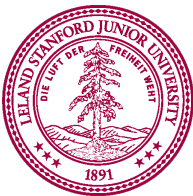


*Courtroom
Illustrator*



Should still be
sincere and competent

+ Okay to idealize by
highlighting important
features and
eliminating
unimportant ones



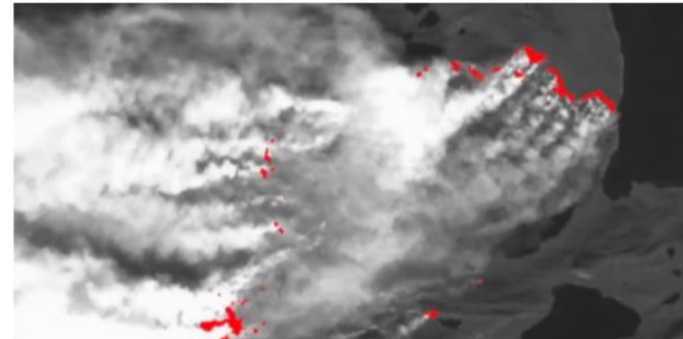
Idealized Visual Testimony



*Courtroom
Illustrator*



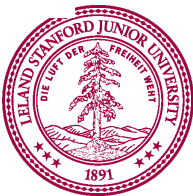
*Scientific
Modeler:
aka You!*



Should still be
sincere and competent

+ Okay to idealize by
highlighting important
features and
eliminating
unimportant ones

Figure 1: Original forest fire image on left, and highlighted version of image on right.

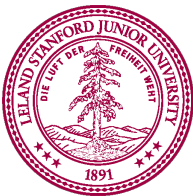


Idealized Visual Testimony



What makes an altered image trustworthy?

- + Modeler/illustrator should **explain which idealizations** have been made and **for what purpose**
- + This allows the user to evaluate whether the idealizations are **appropriate for the stated purpose** or whether they are **manipulative**.

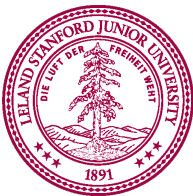


Harm #1: (bad) Manipulation

Manipulation is hidden influence that subverts another person's decision-making power (Nissenbaum).

"The manipulative person 'steers' the other as a driver steers an automobile. The automobile is already moving through its own internal combustion engine and momentum, but its direction is influenced by the one who steers it" (Wood).

Images can be powerful tools for manipulation.



Manipulation for Political Effect

The New York Times

Opinion

Vladimir Putin Thinks He Can Get Away With Anything

Why has the poisoning of Alexei Navalny been met with Western silence?

By The Editorial Board

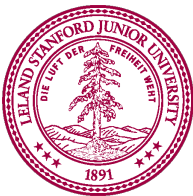
The editorial board is a group of opinion journalists whose views are informed by expertise, research, debate and certain longstanding values. It is separate from the newsroom.

Sept. 22, 2020



President Vladimir Putin's denials about the poisoning of a Russian politician aren't credible. Alexei Nikolsky/TASS, via Getty Images

Is the manipulation of this image "hidden influence"?



Manipulation for Political Effect

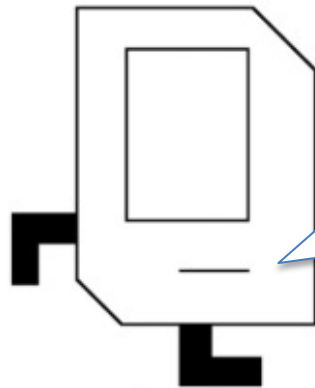


Chloe Evans
@ChloeEva12

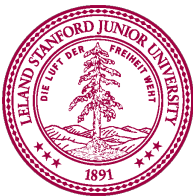
Student
Atlanta
Joined June 2014

196 Following 54 Followers

What about the production of "bots," fake social media profiles created for political influence?



Can you recognize my bad bot cousins?
Test your skills:
spotthetroll.org



Harm #2: Speaking for Others

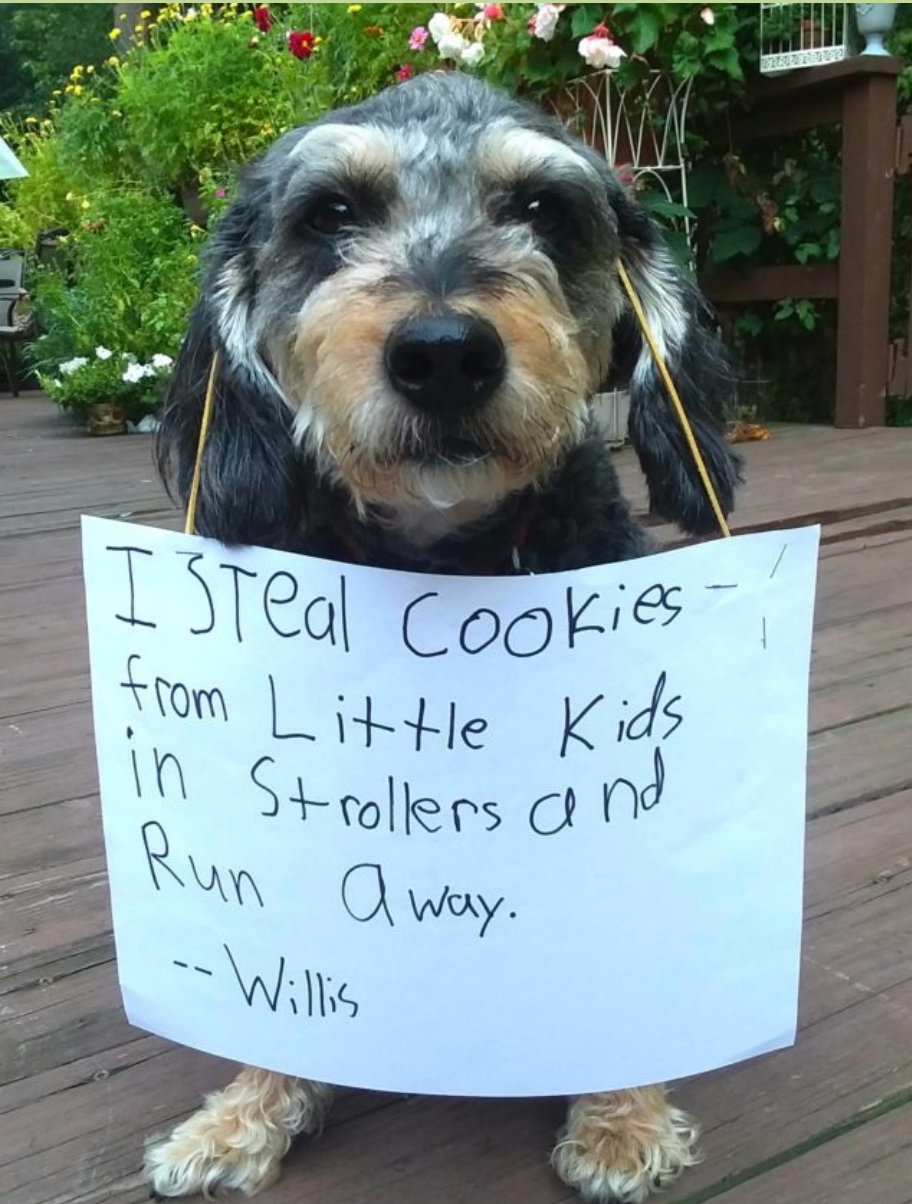
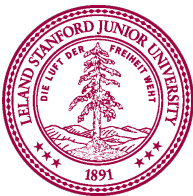



Image and audio manipulation can be used to make others appear to say or do things they did not say or do.

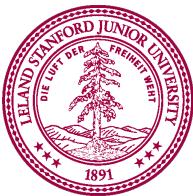


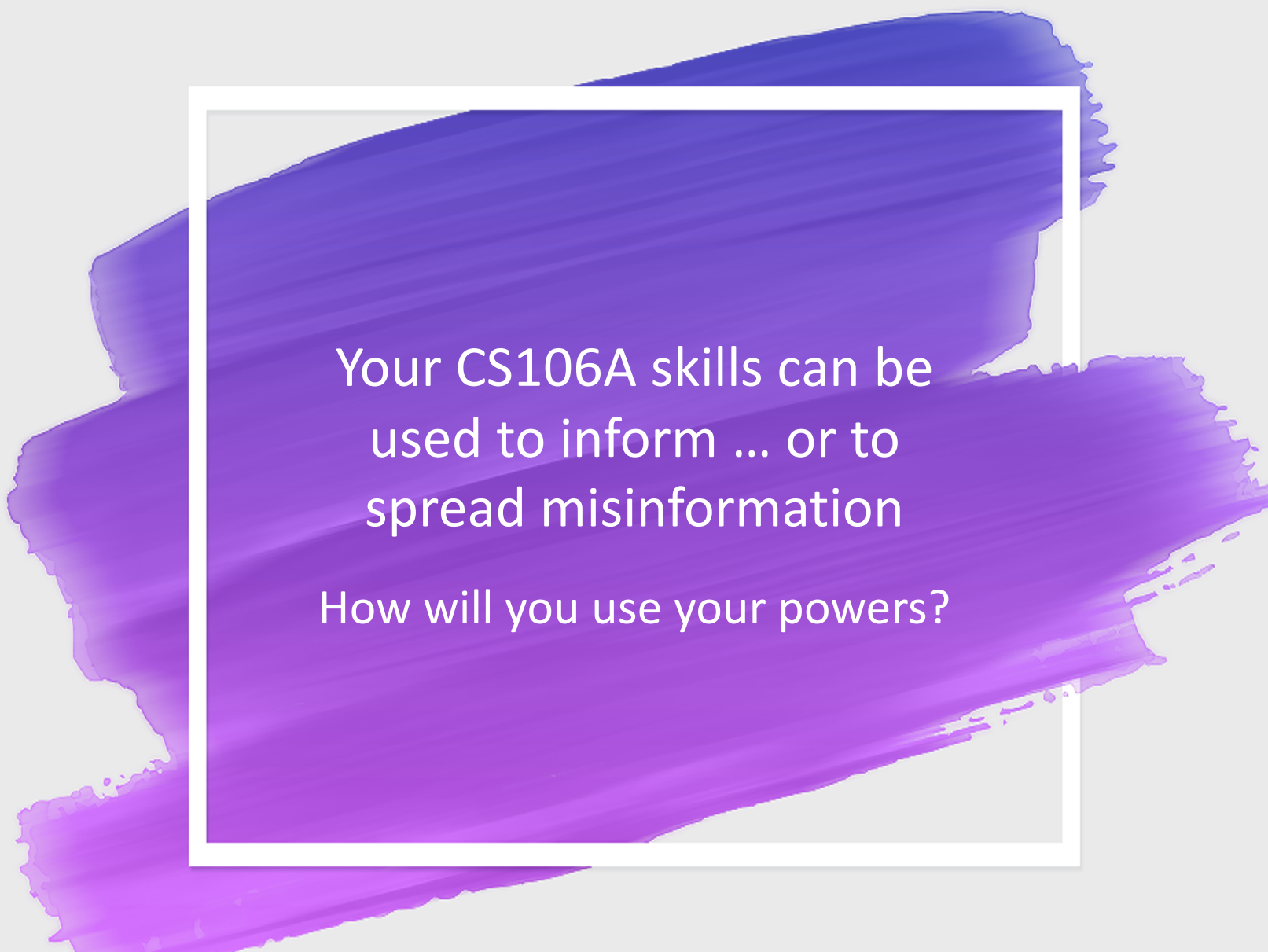
Harm #2: Speaking for Others



Contrary to the
claims of my
opponent,
I did NOT steal
cookies from
little kids in
strollers.

Even when the video or
image is not widely
believed to be true,
being forced to
publically deny a
false claim could
itself be a harm
(Rini)





Your CS106A skills can be
used to inform ... or to
spread misinformation

How will you use your powers?

THANKS!

Any questions?

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<https://calendly.com/kathleencreel>

Email: kcreel@stanford.edu

