Ethics of Image Manipulation

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Learning Goals

1. Understanding image idealization
2. Understanding image manipulation
How do we learn (about cookies)?

Perception: Hearing, Sight, Touch, Smell, Taste

Mmmmm, cookies!
How do we learn (about cookies)?

**Perception: Hearing, Sight, Touch, Smell, Taste**

Mmmmm, cookies!

**Testimony: Information from Others**

“I saw that it was Mehran who brought the cookies!”
How do we learn (about cookies)?

Perception: Hearing, Sight, Touch, Smell, Taste

Testimony: Information from Others

Mathematical Reasoning and other transformations of existing beliefs

Mmmmm, cookies!

“I saw that it was Mehran who brought the cookies!”

Let’s count the cookies!

Piech + Sahami, CS106A, Stanford University
How do we learn from photographs?

Perception: Hearing, Sight, Touch, Smell, Taste

Testimony: Information from Others

Mathematical Reasoning and other transformations of existing beliefs

- Senses
  - Photographer
  - Mmmmm, cookies!
  - Let’s count the cookies!

- Testimony
  - “I saw that it was Mehran who brought the cookies!”

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Are photographs more like perception or testimony?
Evidence from Testimony

"I saw that it was Mehran who brought the cookies!"
Evidence from Testimony

"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

Should still be sincere and competent

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

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.
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.
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.
Is the manipulation of this image “hidden influence”?

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

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Sept. 22, 2020
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.

I steal cookies from little kids in strollers and run away.

--Willis
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?
Meetings:
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