



images,  
lies,  
and 106a

katie creel

## HOW DO WE LEARN? (about otters)

1. **Perception:** touch,  
smell, hearing, sight, taste

“Hmm, Yotter smells pretty  
fishy ...”



## HOW DO WE LEARN? (about otters)

1. **Perception**
2. **Mathematical Reasoning (and other transformations of existing knowledge)**

“Let’s count the fish, Yotter”





## HOW DO WE LEARN? (about otters)

1. **Perception**
2. **Mathematical Reasoning**
3. **Testimony:** Information from Others

“I heard it was Yotter who stole the fish!”







# Norms for Evidence from Testimony

What makes testimonial evidence *good*?

Testimonial evidence should be  
*sincere and competent*



# How do we learn from images?

Are images more like perception or more like  
testimony?

## Scientific Images as Perceptual Evidence







## COURTROOM TESTIMONY AS (IDEALIZED) TESTIMONY

Courtroom illustration should still be *sincere* and *competent*, but it also *idealizes* by highlighting important features and eliminating unimportant ones



## Ghost & Idealization

In Ghost, you create an idealized image.

Is your image more like scientific photography (perceptual evidence) or courtroom illustration (testimony)?







## WHAT MAKES AN IDEALIZED IMAGE TRUSTWORTHY?

- Image creator 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: MANIPULATION

How can altered images cause harm?



## What is Manipulation?

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

**Images can be powerful tools  
for manipulation.**



“

*“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).*

# MANIPULATION FOR POLITICAL EFFECT: “HIDDEN INFLUENCE”?

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.

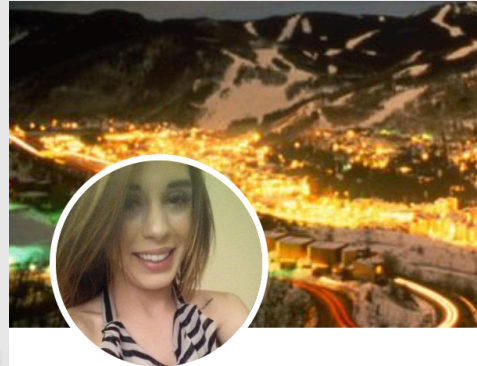
Sept. 22, 2020



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



# MANIPULATION FOR POLITICAL EFFECT: “HIDDEN INFLUENCE”?



**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?

Test your skills:  
[spotthetroll.org](http://spotthetroll.org)





## HARM #2: SPEAKING FOR OTHERS

## SPEAKING FOR OTHERS

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



## SPEAKING FOR OTHERS

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)





# DEEPPFAKES & BLUESCREEN





DID TOM CRUISE  
JOIN TIKTOK?  
( No - [https://www.tiktok.com/  
@deeptomcruise](https://www.tiktok.com/@deeptomcruise) )

NOT SURPRISING THAT A PROFESSIONAL IMPERSONATOR + A GRAPHICS TEAM COULD  
DECIEVE US!



The background of the slide is a light gray. Overlaid on this is a large, horizontal, green brushstroke that has a textured, painterly appearance. A white rectangular frame is centered on the slide, partially overlapping the green brushstroke. The text is contained within this frame.

# Why does this matter?

Like photographs, video alone may no longer serve as  
perceptual evidence

1920



A. FRANCES AND THE FAIRIES.

Photograph taken by Elsie. Bright sunny day in July 1917. The "Midg" camera. Distance, 4 ft. Time, 1/500<sup>th</sup> sec. The original negative is asserted by expert photographers to bear not the slightest trace of combination work, retouching, or anything whatever to mark it as other than a perfectly straight single-exposure photograph, taken in the open air under natural conditions. The negative is sufficiently, indeed somewhat over-exposed. The waterfall and rocks are about 20 ft. behind Frances, who is standing against the bank of the beck. A fifth fairy may be seen between and behind the two on the right. The colouring of the fairies is described by the girls as being of very pale pink, green, lavender, and mauve, most marked in the wings and fading to almost pure white in the limbs and drapery. Each fairy has its own special colour.

[Page 31



1938





## VIDEO AS AN “EPISTEMIC BACKSTOP”

“Video and audio recordings function as an *epistemic backstop*. The availability of recordings ... increases the incentive for testifiers to speak with *sincerity and competence*.

Our awareness of the possibility of being recorded provides a quasi-independent check on reckless testifying, thereby strengthening the reasonability of relying upon the words of others” (Rini)



# WHAT IF DEEPPFAKES ERODE THE BACKSTOP?

## **1. RELIABLE SOURCES OF TESTIMONY**

Newspapers, magazines, and trusted sources can vouch for information or for the sourcing of images and video.

## **2. TRACE PROVENANCE**

Trace the image or video back to its source.

## **3. CHECK WITH TECH**

Digitally sign images and videos to verify their provenance.



**THANKS!**

**Any questions?**

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