



**Social & Online Media Virtual Learning**

# **HS/Introduction to Social and Online Media**

**April 13, 2020**



Lesson: [Media Literacy Part 4 (4/13/20)]

**Objective/Learning Target:**

**Understand why false narratives wind up in our history,  
Analyze why allowing false information to remain could  
ultimately hurt our future, and analyze possible solutions  
to the problems with information.**

## Video Option

Link: <https://youtu.be/t1sZZ66nWUo>

# Bell Ringer

What is reality? And how do you determine if something is real?



# Historical Records

- History is often open to interpretation due to the quality or lack of quality of information available from certain eras.
- In some eras we have very little information, so we have to make educated guesses about history.
- Sometimes popular misconceptions get embedded in the historical record and when historians research they find the myth and struggle to determine the reality.

# False Narratives

- Van Gogh: Many people think he cut his whole ear off. It was actually just a slice of his lobe. And there's some evidence his roommate at the time actually cut it in an argument. His roommate, Paul Gauguin, was an expert fencer and often argued with Van Gogh.
- Einstein: He wasn't a bad student. The historical records show he had good grades. It was his penchant for questioning teachers that gave him this undeserved reputation.
- Paul Revere: During his midnight ride he did not shout "the British are coming!" The ride itself is a bit fabricated as it wasn't just him. It was more than 40 people riding out to warn of invasion. And it was done covertly as the British troops were in hiding in the countryside. Also many colonists considered themselves British at the time. They more likely used the term "Regulars" or something similar.

# The Napoleon Complex

To this day we refer to the "Napoleon Complex" as people who are short and develop an inferiority complex from it that often shows itself through anger. This comes from Napoleon being called the "little corporal" affectionately by his troops. He was actually 5'6 by US standards which was an inch taller than the average Frenchman at the time.

# Story about Infocalypse

Written out link:

[https://docs.google.com/document/d/1Pw501Nhxp50Dsc0qXWU\\_Pdb1fZgDUz0tsXa9Ai6d55s/edit?usp=sharing](https://docs.google.com/document/d/1Pw501Nhxp50Dsc0qXWU_Pdb1fZgDUz0tsXa9Ai6d55s/edit?usp=sharing)

# First step towards the infocalypse

Technology continues to advance at a rapid rate



# Technology improvements

- Stanford technologists have built machines capable of matching audio and video.
- The University of Washington has created a program that can sync audio clips to realistic video clips.
- They both made videos of world leaders as proof of concept.



Source Actor



Real-time Reenactment



Reenactment Result



Target Actor



Is this new technology dangerous  
or is it good that something like this  
exists? Can it be both?

A close-up, slightly blurred photograph of a stack of newspapers. The top newspaper is the primary focus, with the word 'BUSINESS' printed in large, bold, black letters. Above it, the word 'WORLD' is visible. To the right of 'BUSINESS', the page number 'B3' is printed. Below 'BUSINESS', there is a headline that reads '...countries have' and '...Gen. Tha'. The background shows other newspapers in the stack, creating a sense of depth. A light blue grid is overlaid on the entire image, with the text 'Machine learning is improving faster than ever before.' positioned on the left side.

Machine learning is  
improving faster  
than ever before.

# A PICTURE IS WORTH A THOUSAND WORDS

The images on the right are 100% created by an Nvidia chip that is in development that will create hyperrealistic images and photos by scouring data from thousands of images. None of these images are "real".



Figure 5:  $1024 \times 1024$  images generated using the CELEBA-HQ dataset. See Appendix F for a larger set of results, and the accompanying video for latent space interpolations.



Mao et al. (2016b) ( $128 \times 128$ )

Gulrajani et al. (2017) ( $128 \times 128$ )

Our ( $256 \times 256$ )

Figure 6: Visual quality comparison in LSUN BEDROOM; pictures copied from the cited articles.



# Voco

This is a new tool that Adobe is working on with Princeton. It allows users to create new audio built off of pre-recorded audio. In essence this is a tool that will allow people to put words into other people's mouths in a very literal sense.

preview use my voice Mix reset

Context T AY1 TIME M 3E1 AND N D

Mute EHT MEN N B, LAH0 L BELIEVE IY1

Mute CH IY1 CHIEFS F S AE1 AND N D

Context AA1 LAW ID IP

templates Hide Phoneme Next Save:

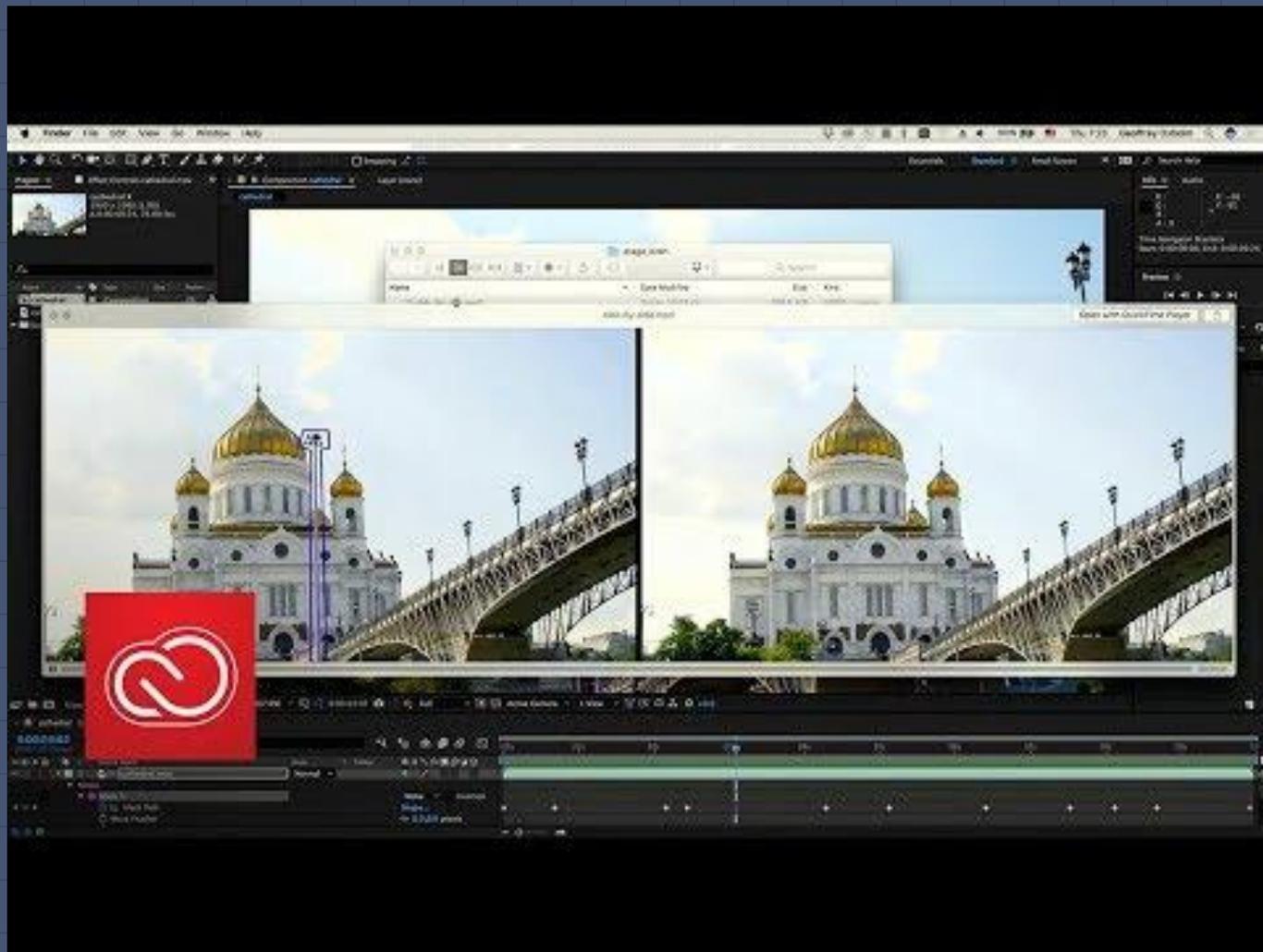
play no word copied



Do you feel this technology does  
more harm than good?

# Project Cloak

This is another Adobe technology piece that could make faking videos much easier. It allows users to simply highlight and remove things entirely from the video.



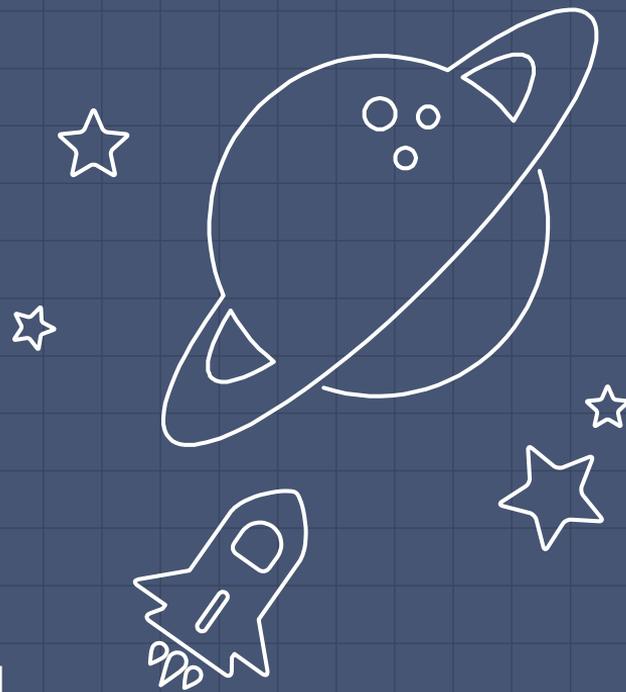
## Discussion

Over the past few weeks we've talked about the plethora of bad actors who have used fake news in a variety of ways to trick the population into believing things that are not true.

With a partner, discuss briefly (3-4 minutes) what this new technology could mean to the world of fake news.

# Worst case scenario

These products used with bad intentions could lead to several big time problems.



# Possible Outcomes

## Diplomacy Manipulation

Malicious actor uses these tools to create the appearance that an act has occurred. What if they could perfectly recreate video or audio of Donald Trump or Kim Jong Un declaring nuclear war? Even if it's not perfect. It would just need to be good enough to provoke a knee-jerk reaction.

## Polity Simulation

Artificial intelligence bots become indistinguishable from real humans and begin to get legislators attention more than humans. Flooding email inboxes, jamming up switchboard with fake pleas and fake protests to create real change.

## Automated Laser Phishing

Using artificial intelligence to scan social media profiles and they have the ability to generate realistic messages from the user they scanned. This would allow them to create a usable fake of anyone with a social media profile or publicly available information.



# Reality Apathy

Why these scenarios become dangerous



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# Reality Apathy is a real threat

We could quickly reach a point where our email inboxes and direct messages on social media and our social media feed itself would be filled with so much fakeness that it's impossible to discern and we would simply stop checking them altogether. This actually occurs in dictatorships where information is poor. The people give up. They just allow the fakeness to be reality. If that happens here then democracy itself begins to unravel at a rapid rate as people stop looking for information and accept reality as it is.





Reality apathy creates dictators

# How this leads to the rise of dictators

## STEP 1

Reality apathy begins setting in and people stop looking for new information. They begin assuming everything is fake, but they simply don't care enough to fight it. They exist in a world where information is meaningless.

## STEP 2

Those in charge use this lack of information to begin increasing their power incrementally. They begin taking away various freedoms, and because the population isn't paying attention anymore they are able to do this almost unopposed.

## STEP 3

Those in charge roll back term limits and begin to take control of information distribution. A confused population is beaten down and succumbs to a new autocratic ruler without ever really attempting to stop it.



42%

Americans trust the media

63%

Americans can't tell difference between journalism and fake news

50%

Americans who consume news less than once per week...25% not at all

## Looking for solutions

- Even though this situation seems very difficult to combat there are always solutions.
- If technology can create these fakes then technology can create a way to verify fakes as well.
- The public at large can combat this by becoming more informed and learning to trust traditional media again.
- Creating harsher penalties for those who would undermine democracy with false news.

# Assignment #2

[This is a story](#) about all of the most recent studies involving fake news. Please read the story then answer the questions.

1. Which of the studies described in the story did you find the most interesting? Explain why.
  2. Do you ultimately believe it is the public's job, the government's job, or technology's job to police this problem? Explain your answer.
  3. Which university did the study that showed that lazy thinking led to people believing fake news?
  4. The last study that is discussed talks about fact-checking methods. What are some of the things they found most effective when it comes to fact-checking?
  5. Do you ultimately feel like we will be able to avoid an information apocalypse? What is your reasoning?
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