



Evaluating Photos & Videos: Crash Course Navigating Digital Information #7

Crash Course: Navigating Digital Information

<https://youtube.com/watch?v=p7uvqb8fcdA>

<https://nerdfighteria.info/v/p7uvqb8fcdA>

Hi, I'm John Green, and this is Crash Course Navigating Digital Information.

So, images are incredibly powerful to human brains. Like, I read and loved the first four Harry Potter books before seeing a Harry Potter movie. And, I really liked the movie, but after watching it, I could never see my Harry Potter or Hermoine ever again. I saw only Daniel Radcliffe and Emma Watson. Also, I learned that Hermione is pronounced "her-my-oh-nee" and not "her-mee-own."

They say a picture is worth a thousand words, and by "they," I mean the advertiser who supposedly coined that idiom in the 1940s. Photographs, in particular, feel real and objective to us, because they seem to capture a moment of reality. More than 150 years ago, Matthew Brady's iconic Civil War photographs were often staged, for instance. His assistants would move corpses and change their postures to maximize the images' visual power.

But, while images have never been as reliable as they seem, this is especially true in the era of Photoshop. In fact, consider the image you're looking at right now. That flower is not actually here.

If you spend as much time online as I do, you spend a lot of it looking at images. Sometimes those images are unedited, although even then choices are made, how to frame the image, what to photograph, when and how to share it. Other times, the images are obviously altered with bunny ear filters or meme text. And, sometimes, the images are altered in ways meant to fool us.

So, how can we decipher what's real and what's not? Well, it's easy! You can tell by look at the pixels. Meredith says that meme is so old that nobody is going to get the joke. Alright. Roll the intro.

[Intro]

So far during this series, we've talked about how important it is to find out who's behind information we learn online, why they're posting it, and whether the evidence is reliable. And, thanks to their power, images are a very common form of online evidence. But, just like data or text, image-based evidence can be relevant and reliable or irrelevant and unreliable.

In order to make sense of our online surroundings, it is critical to think carefully about whether image-based evidence is trustworthy, because we're used to think that "seeing is believing." I mean, special effects-laden movies are popular in part because they are so visually thrilling. Even though we know they aren't real, they look real or, at least, adjacent to real. That is why, for instance, I found all five Transformers movies completely watchable, despite their lack of, you know, plot, character, comprehensible worldbuilding, etcetera. They also have that Shia LaBeouf in them; he's a fascinating character. Don't do it, Stan. Don't! Oh... Hello, Shia.

[Wilhelm scream]

So, in movies, filmmakers depend partly on our ability to get lost in images. When we watch a conversation between two people in a film, for instance, we rarely consider that 45 minutes elapsed between this shot and this one, because the camera and lights had to be moved.

The willingness of the human brain to assume that images are real is consistently manipulated by filmmakers, but also by other people. Consider, for instance, this manipulated picture of mass shooting survivor and activist, Emma Gonzalez. It's doctored to make her look like she was tearing up the U.S. Constitution instead of the real picture she took with a gun-range target. Or, this one of President Trump supporter whose shirts were digitally altered to read "Make

America White Again" instead of their actual "Make America Great Again" shirts.

But, images don't have to be altered to fool us. Like, sometimes bad actors use real, untouched photos, but falsify their context, and that can have really serious consequences. For instance, this image of an election in Mexico in 2017 circulated online as a meme claiming undocumented immigrants were voting in the nonexistent town of Battsville, Arizona. Or, this image of children sleeping in what looks like a cage at a detention facility for undocumented children in 2014. It was circulated widely in 2018 as controversy grew over policies for separating undocumented migrant children and parents at the U.S. border. Although the conditions were similar for many of the children being held in 2018, when the photo went viral, it was unaccompanied by its original context, the date. And then, once the mistake was revealed, it was used by many to dismiss the entire controversy as "fake news."

A study by the Stanford History Education Group has shown just how easy it can be for people to let images and their context go unchallenged. So, as you know from previous episodes, the Stanford History Education Group is affiliated with this series; they developed MediaWise, which is what this series is based on.

Anyway, during the Stanford History Education Group study, they showed 170 high school students a photo from Imgur of these weird looking flowers. The photo's caption claimed that the flowers had, quote, "nuclear birth defects." Fukushima was in the photo title, implying they were from the Fukushima nuclear disaster in Japan.

Despite no evidence that the photo actually showed these effects, or that radiation caused the mutations, over 80% of the students did not question the source of the photo. There wasn't even any evidence to show the photo was taken in Japan. In reality, these daisies are most likely the victims of a genetic mutation called fasciation, that isn't related to nuclear radiation in any way. Bottom line: nature is super wild all by herself. I mean, do I really need to bring back that picture of the star-nosed mole? I do, I do.

Because it's so easy to turn images into manipulation machines, when you encounter a suspicious image online, it's crucial to investigate who is behind it and whether they are a reliable source. We also must look for context to be sure an image supports the claim being made. Like, does the story, blog, or social media post where you encountered the image provide a link? Great! Click it. If you can get a reliable explanation of that photo and where it came from, that can help you understand if the image is reliable. Is a caption provided? Use your lateral reading skills to determine whether the context surrounding the image is accurate.

But, if the source sharing the photo doesn't provide any context, or they provide a caption but no other reason to find that information credible, then maybe you can't trust it. But, there are online tools you can use to hunt down an image's origin story. Let's go to the thought bubble.

Ok, so, it's raining hard in your hometown, and you just got one of those startling flash flood warnings on your phone. So, you hop online to find the latest weather report, and a friend has re-posted this in your news feed: "Just saw this on the highway. Be careful out there, friends."

Oh my god, there's a shark swimming around the floodwaters in your town. That is certainly terrifying, if it's true. Before sharing it with anyone else, you want to be sure that it is. Your friend hasn't provided any other context or tagged the photo's location or anything. She hasn't said whether she took it or someone else did, and isn't responding to your texts. So, it's time to do a Google reverse image search.



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Quick reminder: Google is one of the sponsors for this series, but we also think they have the strongest reverse image search engine. If you're looking for an alternative, TinEye is another popular one.

Right, so, if you're using their Chrome browser, you can click right on an image and select "Search Google for image." If you're using a different browser, you can right click on an image and copy its URL. Then, you paste the URL into the search window at images.google.com.

Whoa there! Search results for this shark photo are full of fact-checking sites saying that this photo is a viral hoax. It seems this photoshopped image makes the rounds every time there is a hurricane or huge flood. The shark has been spotted in Puerto Rico during Hurricane Irene, Florida during Hurricane Irma, in Texas during Hurricane Harvey, New Jersey during Hurricane Sandy, and in North Carolina during floods in 2015. What a shark!

The original photo of this shark was captured in its natural habitat, off the coast of South Africa. But, after someone photoshopped it into a highway setting, plenty of social media posts have cited the image as evidence over the years.

Thanks, thought bubble.

So, you can use reverse image searches to check in on all kinds of photos. Using what you know finding reliable sources, you can then track down whether an image originated with a trustworthy source or whether it's only been distributed on unreliable sites. And, you can also turn to fact checking organizations like Snopes and Politifact, which are really great at hunting down these hoaxes.

And then there's videos, which can be just as powerful as images when it comes to providing evidence. Unfortunately, they can also be used to mislead. For instance, a carefully edited clip can misrepresent how an event actually happened or what someone actually said. At least according to every villain on every reality TV show ever, that's the entire genre of reality TV. It's just that the editing made it look like you were awkwardly breaking up with your fiancée on national television, Arie.

But also, unedited videos can be posted alongside inaccurate information that claims footage depicts one event when it really shows something completely different. Like this clip of me saying "I have messed it up a lot in the past, hence, part of my aforementioned nervousness." Now, as it happens, that was about communicating news to fans about my books being adapted into movies, but it could be applied and adapted to other things. If, for instance, someone said I was talking about writing my books or my taste in polo shirts, which is excellent by the way. You'd only understand what I was taking about if you saw the whole clip, but in another context, it could be almost anything you want it to be. There is no text without context.

And, videos can also be dramatically altered. Like, we don't always think of video that way, maybe by skilled filmmakers, but not in the same way we can easily use filters to alter our Instagrams. But, if you've ever seen an episode of Bad Lip Reading, you'll know that it's getting easier and easier to considerably alter a video or even fabricate one from scratch.

And uploading and posting videos has never been easier. Almost anyone with an internet connection can do it. That's why it's important to know where a video came from, and who created it, and whether it's been altered before you believe what you see.

But, the type of manipulated video that freaks me out, personally, the most is the deepfake. Deepfake uses deep learning and artificial intelligence to create video images that can be combined

and superimposed onto existing videos. So, for example, Nicholas Cage's face can be grafted onto other actors' faces to create some really funny movie mashups. Or, an impersonator can have their voice and facial movements convincingly woven into the video of a president. BuzzFeed, for instance, once made a video of President Obama saying things like, "Killmonger was right" to illustrate how deepfakes work.

And, this is happening more and more. The Belgian Socialist Party once created a video of President Trump saying "climate change is fake." They said they weren't trying to dupe anyone, but lots of commenters on the party's Facebook page did not know it wasn't real.

Now, you can certainly gain clues about a video's validity by checking the source; is it an anonymous YouTube channel, a stranger on Facebook, or a news source you trust? But, to determine for sure whether videos like these are real or fake, we need to read laterally. Or, watch laterally, I suppose.

Either way, open up a new tab and try to find where the video originally came from. You might be able to do this by using a keyword search based on the content of the video to see where it surfaces. Like, in the case of the videos I just mentioned, we could've searched "Obama and Killmonger," or "Trump, Belgium, and climate change." And, if the video you're searching depicts an important event of some kind, you might find it posted on several news sites. Or, if it's a known hoax, it may show up on fact-checking sites. And, if the only place you can find the video is on dubious sites or random social media posts, it's probably bogus.

But, look, as technology advances and changing photos and videos gets easier and easier, there will be more and more deepfakes, and it will be much harder to tell them apart from reality. That freaks me out, and it's a reminder of how critical it is, especially for young people, to learn how to evaluate the quality of information they encounter online. Because, without using our lateral reading skills, and looking for additional context for images we encounter, we risk being duped by bad actors and spreading misinformation.

And, as I've talk about before, when the quality and reliability of our information decreases, the quality and reliability of our decisions also decreases. So, that's why we're going to continue learning how to interrogate different types of evidence next time. I'll see you then.

[Outro]

Thank you for watching Crash Course, which is filmed here in Indianapolis, Indiana with the help of all of these nice people.

For this series, Crash Course has teamed up with MediaWise, a project out of the Poynter Institute that was created with support from Google. The Poynter Institute is a non-profit journalism school. The goal of MediaWise is to teach students how to assess the accuracy of information they encounter online. The MediaWise curriculum was developed by the Stanford History Education Group based on civic online reasoning research they began in 2015.

If you're interested in learning more about MediaWise and fact checking, you can visit [@MediaWise](https://www.mediawise.org) on Instagram.

Thanks again for watching, and thanks to MediaWise and the Stanford History Education Group for working with us on this project.