Container Collapse and the Burmese Python:

A conversation about how students discern identity and determine credibility of digital resources

http://tinyurl.com/CILcontainercollapse

A work in progress

Made possible in part by the Institute of Museum and Library Services, grant number LG-81-15-015
my blog:
http://blog.schoollibraryjournal.com/neverendingsearch/

my tweets:
@joycevalenza

my deets:
http://aboutme.com/jvalenza
my email:
abuhler@ufl.edu
my website:
Inigo Montoya
(You killed my father. Prepare to die.)
Savignano di Romagna


Zavallone, Attilio, 1875-1911 in Berlin. So. gehörte

Zavoïe, Ivan, 1875-1911 in Berlin. So. gehörte

Zavora, Natalia, große deutsche Schriftstellerin, geboren in Deutschland.
How to Spot Fake News

By Lori Robertson and Eugene Kiely    Posted on November 18, 2016

Fake news is nothing new. But bogus stories can reach more people more quickly via social media than what good old-fashioned viral emails could accomplish in years past.

Concern about the phenomenon led Facebook and Google to announce that they'll crack down on fake news sites, restricting their ability to garner ad revenue. Perhaps that could dissipate the amount of malarkey online, though news consumers themselves are the best defense against the spread of misinformation.

Not all of the misinformation being passed along online is complete fiction, though some of it is. Snopes.com has been exposing false viral claims since the mid 1990s, whether that's fabricated messages, distortions containing bits of truth and everything in between. Founder David Mikkelson warned in a Nov. 17 article not to lump everything into the "fake news" category. "The fictions and fabrications that comprise fake news are but a subset of the larger bad news phenomenon, which also encompasses many forms of shoddy, unresearched, error-filled, and deliberately misleading reporting that do a disservice to everyone," he wrote.

A lot of these viral claims aren't "news" at all, but fiction, satire and efforts to fool readers into thinking they're for real.

We've long encouraged readers to be skeptical of viral claims, and make good use of the delete key when a chain email hits their inboxes. In December 2007, we launched our Ask FactCheck feature, where we answer readers' questions, the vast majority of which concern
PMiCH: Pivotal Moments in Credibility History!
a young healthy child well nursed, is, at a year old, a most delicious nourishing and wholesome food, whether stewed, roasted, baked, or boiled; and I make no doubt that it will equally serve in a fricasie, or a ragoust.

Swift’s satire
Alexander Gardner prolifically documented the American Civil War, which raged from 1861 to 1865. *Home of a Rebel Sharpshooter, Gettysburg* is from his *Photographic Sketchbook of the War* (1865), a collection of 100 photographs of the conflict. The image represents the tragic aftermath of the Battle of Gettysburg (which caused the largest number of casualties of the entire war) by focusing on a single dead soldier lying inside what Gardner called a “sharpshooter’s den.” Later analysis revealed that he had staged the image to intensify its emotional effect. Though this practice was not uncommon at the time, its discovery made the photograph the subject of controversy. Gardner moved the soldier’s corpse and propped up his head so that it faced the camera. He then placed his own rifle next to the body, emphasizing the soldier’s horizontality and the cause of his death.
The exhibition is in two parts:

**PART 1**

- Man the Guns!
- It’s a Woman’s War Too!
- United We Win
- Use It Up, Wear It Out
- Four Freedoms

**PART 2**

- Warning! Our Homes Are in Danger Now!
- This is Nazi Brutality
- He’s Watching You
- He Knew the Meaning of Sacrifice!
- Stamp ‘Em Out!

In these posters, pictures of fists, muscles, tools, and artillery convey American strength. Patriotic colors of red, white, and blue predominate as national symbols and heroes appeal to patriotism.

**Wanted! For Murder**

by Victor Keppler, 1944

A woman—someone who could resemble the viewer’s neighbor, sister, wife, or daughter—was shown on a “wanted” poster as an unwitting murderess.

At least one viewer objected to the choice of a female model. A letter from a resident of Hawaii to the Office of War Information reads, in part, “American women who are knitting, rolling bandages, working long hours at war jobs and then carrying on with ‘women’s work’ at home—in short, taking over the countless drab duties to which no salary and no glory are attached, resent these unwarranted and presumptuous accusations which have no basis in fact, but from the time-worn gags of newspaper funny men.”
2012: Hurricane Sandy

Sorting the Real Sandy Photos From the Fakes

ALEXIS C. MADRIGAL  | OCT 29, 2012  | TECHNOLOGY

2012: Hurricane Sandy

How journalists can avoid getting fooled by fake Hurricane Sandy photos

By Craig Silverman  •  October 29, 2012

There’s already fully on display with Sandy, as evidenced by an old shot taken at the Tomb of the Unknowns that’s circulating today, along with several other fake or old images that have taken flight on Twitter and Instagram.

A new site called “Is Twitter Wrong?” is listing fake images. BuzzFeed has also built a list of fake images, as well as a quiz you can take to test your skills at spotting fakes. Similarly, The Atlantic has started sorting out the fake Sandy photos from the real ones.

Earlier today, journalist Andrew Katz tweeted this observation: “Half of Twitter is debunking #sandy photos posted by the other half.” Second hand fake images so everyone can focus on or ignore.

With Hurricane Sandy approaching the New York metro area, the nation’s eyes are turning to its largest city. Photos of storms and flooding are popping up all over Twitter, and while many are real, some are -- especially the really eye-popping ones -- are fake.

This post, which will be updated over the next couple of days, will help you sort the real from the unreal. It’s a photographic verification service from Poynter’s iReport verification bureau. If you see a picture that looks fake, please send it to alexis.madrigal@alts.com.

The fakes come in three categories:

1. Straight up fake: a photo being trotted out as real
2. Sandy related fakes: photos that are Sandy related, but related in a shallow or misleading way
3. Photos that are not Sandy related at all

The Atlantic

Like The Atlantic? Subscribe to The Atlantic Daily, our free weekday email newsletter.

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SIGN UP

2012: Hurricane Sandy

Inside NeverEnding Search

NeverEnding Search

Sandy and media literacy

NOVEMBER 4, 2012  BY JAYNE VALLENZA  | 2 COMMENTS (SOFT)

... one of the things that’s now becoming clear is the major role that social media played during and after the storm. Sites like Twitter and Facebook were, for some, incredibly useful tools. They were ways to keep up with friends and neighbors in a stressful time, but they were also vehicles for spreading false information and, sometimes, this was done deliberately.

NYC, hosted by Mikhail Martin, Why Some Scared Mainstream in Disasters

On my way back from Dunkin’ Donuts this morning, this story played in my car. My grad student, Maureen Schlosser, also shared a few resources over our class forum this morning--we’re discussing credibility.

We can approach this storm, and other major news stories, in terms of the media and information literacy opportunities they present.

In my mind, truth is usually negotiable. Text is weirdly neutral. And even since I studied the work of Civil War photographers Mathew Brady and Alexander Gardner, I’ve understood that photography usually involves the point of view of the person behind the lens.

It now also involves the point of view and motives and ethics of the person behind the image editor.

Social or citizen journalism is both exciting and complicated.

The tweets and images posted, emerging from the official and unofficial coverage of this past hurricane, as well as their levels of acceptance, present opportunities for serious discussion about credibility and ethics.

Here’s a playlist of new and old content for beginning classrooms and library conversations:

- Bonding the Real Sandy Photos From the Fakes, Alexis C. Madrigal (The Atlantic)
- Tweet Photos Not of Hurricane Sandy (BuzzFeed) and its real take (up) (tweet this thing)
- Is Twitter Wrong? a public service podish that helps to distinguish and curate fake images
- Fake Hurricane Sandy Photos Spread On Internet As Storm Barrels Toward Northeast (Huffington Post)
- 7 Fake Hurricane Sandy Photos That You’re Sharing on Social Media (Mashable)
- 11 False Photos of Hurricane Sandy (The Week)
- Why Some Scared Mainstream in Disasters (NYT)
- Superstorm Sandy Inspired Ives (Harms), Wahts Business (NYT)
- The Strong Tweet Posing Hurricane Sandy Manipulation (CNET)

Some advice relating to credibility:

- How journalism can avoid getting fooled by fake Hurricane Sandy Photos (Craig Silverman, Poynter)
- Three Ways to Spot if an Image Has Been Manipulated (Craig Silverman, Poynter)
- Seeing Belief: Resources for Teaching About the Manipulation of Photographic Images (Frank Baker)
- Challenging Fake Hurricane Photos (Frank Baker)
- Neuman Report: The Process of Verification
Retraction Watch

Headline-grabbing Science paper questioned by critics
without comments

When zoologists at the University of Oxford published findings in Science last year suggesting ducklings can learn to identify shapes and colors without training (unlike other animals), the news media was entranced.

However, critics of the study have published a pair of papers questioning the findings, saying the data likely came from chance alone. Still, the critics told us they don’t believe the findings should be retracted.

If a duckling is shown an image, can it pick out another from a set that has the same shape or color? Antunez, Matthias; and Alex Karatzas say yes. In one experiment, 32 out of 47 ducklings preferred pairs of shapes they were originally shown. In the second experiment, 45 out of 66 ducklings preferred the original color. The findings caught the attention of many media outlets, including the New York Times, The Atlantic, and Reuters.

Martinho told us:
Read the rest of this entry »

Share this:

Written by innovaleskey
March 15th, 2013 at 11:39 am

Huh? Cancer paper gets retracted because of its correction
with 2 comments

Here’s a rather odd case: When readers raised issues about some of the images in a 2008 cancer paper, the authors issued a correction last year. But when readers asked additional questions about the corrected images, the authors decided to retract the paper entirely, along with its correction.

Both the original and corrected versions were questioned on PubPeer.

Here’s the retraction notice for the 2008 article "BMP15 induces mitochondrial apoptosis through activation of p53 and Puma" published in Oncogene, which includes a link to the July 2016 correction. Read the rest of this entry »

Share this:

Written by Poisonous9
March 15th, 2013 at 9:30 am

Weekend reads: A publisher sends the wrong message on data sharing; jail for scientific fraud; pigs fly
with 12 comments

The week at Retraction Watch featured three new mass companies are trying to scam authors, and a look at why one journal is publishing a rushing batch of their retractions.

Here’s what was happening elsewhere. Read the rest of this entry »
GIGO
Garbage in, garbage out

Garbage in, garbage out (GIGO) in the field of computer science or information and communications technology refers to the fact that computers, since they operate by logical processes, will unquestioningly process unintended, even nonsensical, input data ("garbage in") and produce undesired, often nonsensical, output ("garbage out"). The principle applies to other fields as well.
PMiHIBH: Pivotal Moments in Human Information Behavior History!
Principle of Least Effort (George Zipf, 1949)

Human Behaviour and the Principle of Least Effort: An Introduction to Human Ecology:

Distribution of word use due to tendency to communicate efficiently with least effort and this theory is known as Zipf's Law.

Application to search: Each individual will adopt a course of action that will involve the expenditure of the probable least average work. They will use the most convenient search method and stop as soon as minimally accepted results are found.
Evidently, organisms adapt well enough to *satisfice*; they do not, in general, *optimize*.

Herbert A. Simon (1956) in “Rational Choice and the Structure of the Environment”, Psychological Review 63(2), p. 129,

*Cognitive psychologist, political scientist, computer scientist*

“The imposed query model provides a new way of thinking about whom the user is . . . by making a distinction between questions that are self-generated (internally motivated by personal context) and those that are imposed (thought up by one person then given to someone else to resolve).”

Reasons why . . .

Learners:

- Limit themselves... on purpose!
- Lack patience for more complex information needs (prefer quick answers)
- Underestimate the information landscape
- Try to make Google fit all of their needs
- Use skills from high school and seldom make changes
- Overestimate their info fluency skills
- Struggle to understand research assignments and “process of intellectual discovery” (Head & Eisenberg, 2010, p. 36)

Sources:


Taken together, our findings suggest the Google-centric search skills that freshmen bring from high school only get them so far with finding and using trusted sources they need for fulfilling college research assignments. Moreover, many freshmen appeared to be unfamiliar with how academic libraries—and the vast array of digital resources they provide—can best meet their needs. Included are recommendations for how campus-wide stakeholders—librarians, faculty, and administrators—can work together when instructing freshmen to be better researchers.
7. Search engines—especially the ubiquitous Google—were the go-to source for quickly connecting graduates to individual pages on social sources like Facebook, YouTube, or Pinterest, especially for information in their personal lives (88%), the workplace (83%), and to a lesser extent, their community (38%).

8. Almost three-fifths of the graduates (56%) relied on blogs for guidance and how-to specifics they could put to use in their personal lives. Blogs were a good source of low-cost information (71%), current and up-to-date information (69%), and provided good summaries of the topics (61%) of interest to many graduates, according to respondents who had used blogs in the past year.

12. Graduates found it difficult to stay informed in the rapidly changing digital age. A majority said it was hard to find the time for continued learning (88%), locate affordable sources (73%), and stay current, given the volume of information “out there,” (70%), and stay motivated to keep learning (62%).

13. Half of the sample (50%) reported being frustrated by no longer having access to their former instructors and lectures as well their campus library’s databases, such as ProQuest, JSTOR, or EBSCO. Far fewer had accessed open access government databases (13%), like ERIC or PubMed, in the workplace (27%) or in their personal lives (13%).

Only 25% of high school students were able to identify an accurate news story when also given a fake one. Students could not distinguish between real and fake photographs, authentic and staged videos, or investigate the authority of a tweet.
EXECUTIVE SUMMARY

Evaluating Information: The Cornerstone of Civics and Reasoning
November 22, 2016

THE BIG PICTURE

When thousands of students respond to dozens of tasks there are endless variations. That was certainly the case in our experience. However, at each level—middle school, high school, and college—these variations paled in comparison to a stunning and dismaying consistency. Overall, young people’s ability to reason about the information on the Internet can be summed up in one word: bleak.

Our “digital natives” may be able to flit between Facebook and Twitter while simultaneously uploading a selfie to Instagram and texting a friend. But when it comes to evaluating information that flows through social media channels, they are easily duped. We did not design our exercises to shake out a grade or make hairsplitting distinctions between a “good” and a “better” answer. Rather, we sought to establish a reasonable bar, a level of performance we hoped was within reach of most middle school, high school, and college students. For example, we measured using digital content. We used screen shots of Slotz’s landing page to assess students’ ability to distinguish between a news item and an ad. Similarly, we used screen shots of tweets, Facebook posts, and a reproduction of CNN’s website in crafting other exercises. We are mindful of the criticism of using paper-and-pencil measures to assess students’ ability to judge online sources. At the same time, there is evidence from the OECD that important abilities for evaluating online sources can be measured offline.

Even more crucial in our decision, however, was the hope that our assessments would be used in under-resourced schools where online assessment often remains a remote possibility. Our middle school assessments provide easy-to-use measures that teachers and others can use to gauge students’ basic skills. At the high school level, we designed more complex tasks that asked students to reason about multiple sources; at the college level, the exercises were administered online. When students were working at advanced levels, there is nothing to prevent the high school exercises from being used with middle school students, or the college exercises from being used with high school students.

Summaries of each of our exercises are below. The exercises in bold appear in the following pages.

Middle School

1) News on Twitter: Students consider tweets and determine which is the most trustworthy.
2) Article Analysis: Students read a sponsored post and explain why it might not be reliable.
3) Comment Section: Students examine a post from a newspaper comment section and explain whether they would use it in a research report.

High School

1) Argument Analysis: Students compare and evaluate two posts from a newspaper’s comment section.
2) News on Facebook: Students identify the blue checkmark that distinguishes a verified Facebook account from a fake one.
3) Facebook Argument: Students consider the relative strength of evidence that two users present in a Facebook exchange.

College

1) Article Evaluation: In an open web search, students decide if a website can be trusted.
2) Research a Claim: Students search online to verify a claim about a controversial topic.
3) Website Reliability: Students determine whether a partisan site is trustworthy.
4) Social Media Video: Students watch an online video and identify its strengths and weaknesses.
5) Claims on Social Media: Students read a tweet and explain why it might or might not be a useful source of information.
1. This is / is not (circle one) an advertisement because

2. This is / is not (circle one) an advertisement because

3. This is / is not (circle one) an advertisement because

Here is the home page of Slate.com. Some of the things that appear on Slate.com are news stories, and others are advertisements.

The following tweet appears in your Twitter feed:

Why might this tweet not be a useful source about NRA members' opinions on background checks? List any sources you used to make your decision.

Your answer:

The image shows a tweet with a picture of a gun and a text that questions the NRA's stance on gun background checks. The tweet is asking why the NRA is out of touch with gun owners and their own members. The tweet is accompanied by a link to a website that discusses the topic further.

The tweet mentions a new polling showing that the NRA is out of touch with gun owners. The link provided is to an article discussing the poll results and the concerns raised by gun owners about the NRA's policies.

To answer the question, the sources used are:

1. The Twitter post and the linked article
2. The polling results mentioned in the tweet
3. A general understanding of the political landscape and the role of the NRA in the gun control debate.

These sources provide strong evidence about the conditions now and the public's views on the NRA's stance on gun background checks.
Where do students look for background research?

- **Google search**: 35%
- **Research databases**: (Credo, GVRL, Oxford, Other) 22%
- **No background, straight to journals and primary sources**: 17%
- **Print encyclopedias**: 9%

Students are more likely to start their search with the open web, but faculty overestimate just how much.

Students are **13% less likely** to start background research with resources like Wikipedia in 2016 than they were in 2014.
Authority is constructed and contextual.

ACRL Framework for Information Literacy for Higher Education
Knowledge Practices

Learners who are developing their information literate abilities

- define different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event);
- use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility;
- understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered “standard,” and yet, even in those situations, some scholars would challenge the authority of those sources;
- recognize that authoritative content may be packaged formally or informally and may include sources of all media types;
- acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice;
- understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time.

Dispositions

Learners who are developing their information literate abilities

- develop and maintain an open mind when encountering varied and sometimes conflicting perspectives;
- motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways;
- develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview;
- question traditional notions of granting authority and recognize the value of diverse ideas and worldviews;
- are conscious that maintaining these attitudes and actions requires frequent self-evaluation.
The Transition
LET’S PLAY: NAME THE CONTAINERS!
Decanted information

https://commons.wikimedia.org/wiki/File%3ADecanter_with_Stopper_LACMA_M.78.104.57a-b.jpg
Container Collapse Confessions

https://padlet.com/joycevalenza/containercollapse
“The imposed query model provides a new way of thinking about whom the user is . . . by making a distinction between questions that are self-generated (internally motivated by personal context) and those that are imposed (thought up by one person then given to someone else to resolve).”

Researching Students’ Information Choices

1. When embarking on an in-depth research project, do late primary, secondary, community college, undergraduate, and graduate STEM students differentiate among different types of digital resources during “point of selection”?
   - The What
   - The How
   - The Why

2. How do late primary, secondary, community college, undergraduate, and graduate STEM students determine the credibility of digital resources for in-depth research projects (those that require more than searching the Web for a brief answer to a question)?
The Advisory Panel

K-12
- Adam Fournier
  Middle School Science Teacher
- Alix Freck
  Public Librarian
- Jennifer Kuntz
  School Librarian
- Megan Sorenson
  Elementary School Science Lab Teacher

Adult
- Emilio Bruna
  University Professor
- Matthew Carrigan
  College Professor
- Jenna Miller
  College Librarian

Gayle Evans
Science Master Teacher
Our cohorts (180 participants)

Grades 4-5
Community College Students

Grades 6-8
Undergraduate Students

Grades 9-12
Graduate Students
The Survey

• Choose simulation participants
• Seek general diversity
• Gather demographics
Adult Survey Respondents

How do they compare?

College Students

Undergrad Students

Graduate Students
Adult Survey Respondents & Internet Access

- 71% Access by age 10
- 85% Use at home
- 78% Home access always
Adult Survey Respondents & Participant Selection

25% First Generation College Students

28% Received help from a librarian in the last 2 years
Why a simulation?

https://commons.wikimedia.org/wiki/File:Neutral_Buoyancy_Simulator_cutaway.jpg
Why a python?
LS4.D: Biodiversity and Humans

What is biodiversity, how do humans affect it, and how does it affect humans?

Introduction to LS4.D


Human beings are part of and depend on the natural world. Biodiversity—the multiplicity of genes, species, and ecosystems—provides humans with renewable resources, such as food, medicines, and clean water. Humans also benefit from "ecosystem services," such as climate stabilization, decomposition of wastes, and pollination that are provided by healthy (i.e., diverse and resilient) ecosystems. The resources of biological communities can be used within sustainable limits, but in many cases humans affect those ecosystems in ways—including habitat destruction, pollution of air and water, overexploitation of resources, and introduction of invasive species—that prevent the sustainable use of resources and lead to ecosystem degradation, species extinction, and the loss of valuable ecosystem services.

K-12 Progressions

from NGSS Appendix E: Disciplinary Core Idea Progressions

<table>
<thead>
<tr>
<th>K-2</th>
<th>3-5</th>
<th>6-8</th>
<th>9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS4.D Biodiversity and Humans</td>
<td>A range of different organisms lives in different places. LS4.D</td>
<td>Particular organisms can only survive in particular environments. Populations of organisms live in a variety of habitats. Change in those habitats affects the organisms living there. LS4.D</td>
<td>Changes in biodiversity can influence humans' resources and ecosystem services they rely on. LS4.D</td>
</tr>
</tbody>
</table>

LS4.D Biodiversity and Humans
The Simulation

Explore
Choose
Cite?
Evaluate - Credibility
Identify - Container
The Simulation - A Brief Tour
It’s a process
Next steps

Adults

● Collect data via simulations
● Develop codebook
● Code simulation data

K-12

● Clean and analyze survey data
● Pilot and conduct simulations
● Develop codebook
● Code simulation data
Questions for you - What do you think?

● How can this research inform your practice?

● What would you like to learn from the results?

● Are there things you would change about the methodology?
Questions for us?
Learn More About Our Project & Follow Our Progress

http://guides.uflib.ufl.edu/RSIC

@UF_RSIC

#containercollapse

RSIC@uflib.ufl.edu
Container Collapse and the Burmese Python:

A conversation about how students discern identity and determine credibility of digital resources

http://tinyurl.com/CILcontainercollapse

Made possible in part by the Institute of Museum and Library Services, grant number LG-81-15-015