



## The Truthiness of Visual Evidence

by Eryn Newman Ph.D. and  
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*Don't miss our trial consultant response at the end of this article from Jason Barnes.*

**V**ISUAL EVIDENCE can help us. Photographs and other pictures scaffold new information and connect it to prior knowledge, improving comprehension. Photos can also reduce the cognitive effort people exert to understand new information. In all of these ways, they make incoming information feel more fluent (Marcus, Cooper, & Sweller, 1996; Mayer, 2008 see also, Carney & Levin, 2002). And, by capturing people's attention, photos increase the chances that people will encode new information into memory (e.g. Sargent, 2007).

But visual evidence can be unhelpful to the viewer too. Photographs can systematically bias us to believe that things are true, whether they are true or not. For instance, in one study, seeing a doctored photo of Obama shaking hands with the former Iranian President, Mahmoud Ahmadinejad—a completely fabricated event—led people to remember having

witnessed that false event on the news (Frenda, Knowles, Saletan, & Loftus, 2013). In another study, seeing a doctored childhood photograph led people to remember taking a hot air balloon ride they had never taken (Wade, Garry, Read & Lindsay, 2002). That these altered photographs can sway people's judgments makes sense. We often take photographs as the best evidence that something actually happened. So if a photo depicts an event, we're inclined to believe that the event actually occurred. Moreover, once a photo helps people to picture an event in their minds, they may confuse information from the photo—colors, people, places—as being information from their own memories (for a review of these kinds of 'source monitoring errors' see Lindsay, 2008), reinforcing their belief that the event really happened.

But photos do not need to depict or otherwise offer evidence of an event or fact to affect our judgments (see Lindsay et al., 2004). Recent work shows that photos that relate to, but do not provide any evidence for, a claim can produce *truthiness*—that is, they can nudge people towards believing that the related claims are true, whether they are true or not. In one

study, when subjects saw trivia claims (such as “Macadamia nuts are in the same evolutionary family as peaches”) presented with a photo that related to the claim (a bowl of macadamia nuts), they were more likely to believe that the claim was true (Newman, Garry, Bernstein, Kantner & Lindsay, 2012). This truthiness effect, moreover, did not fade rapidly, within minutes or hours after seeing the photos; it persisted for up to two days (Fenn, Newman, Pezdek & Garry, 2013).

These sorts of photos shouldn't affect people's judgments about the truth or falsity of the related claims because they do not actually provide any evidence about whether the claims are true. They are *non-probative* images. So why does seeing these photos incline people to believe the claims that the photos are paired with? One possibility is that they help people to generate *pseudoevidence* that the claim is true. We know that people tend to evaluate new information by assuming that it's true (see Gilbert, 1991) and then to interpret subsequent related information through the lens of a confirmation bias (Nickerson, 1998). Thus, people might be inclined to interpret even non-probative information in the photos as bolstering their initial position that the claim is indeed true.

Macadamia nuts are in the same evolutionary family as peaches



For instance, someone might look at the photo of macadamia nuts and think, “Well, they are fuzzy like peaches (even though the ‘fuzz’ is probably salt) and they are a similar shape to a peach stone; therefore, the claim that the nuts are related to peaches evolutionarily is probably true,” even though these features of the nuts' appearance in the photo have no bearing on the truth of the claim. The photos may also simply make it easier for people to form mental images of the claim and help people to rapidly retrieve ideas and information relating to the claim. And decades of psychological research tell us that the easier it is for people to bring ideas or claims to mind, the likelier people are to conclude that those claims are credible and true (*processing fluency*; see Schwarz, 2010 and Alter & Oppenheimer, 2009 for a review).

### So How Might the Truthiness of Visual Evidence Play Out in the Courtroom?

We already know that some kinds of visual evidence can be persuasive in legal settings. Emotion-provoking images can lead jurors to award more damages to accident victims (e.g., Edelman, 2009; Oliver & Griffitt, 1976) or incline them to find a defendant guilty (e.g. Douglas, Lyon, & Ogloff, 1997; Bright & Goodman- Delahunty, 2006). And visual evidence such as animations that depict how an event happened can influence other legal judgments, such as liability (e.g. Dunn, Salovey, & Feigenson, 2006). The research on “truthiness” discussed above suggests that even images that are not emotional and do not depict or explain the event in question can systematically bias people's judgments. Although the effects of these sorts of non-probative photos on legal judgments have not yet been tested, possible effects can be readily imagined. For instance, experts or eyewitnesses describing complex or unfamiliar material may illustrate their testimony with images that do not themselves prove that the testimony is true but that help convey the material to jurors. Doing so makes sense—photos and images can facilitate comprehension and memory, especially when an idea is difficult to understand (Carney & Levin, 2002). But these are also the conditions under which people are most susceptible to truthiness: When people are evaluating an unfamiliar claim, seeing a non-probative photo is most likely to make them believe that the claim is true (Newman et al., 2012). This finding fits with other research in cognitive psychology—under conditions of uncertainty, when people do not know an answer, they are most likely to fall victim to cognitive biases and draw on tangentially related information to answer a question (Schwarz, 2010).


Non-probative photos used during a closing argument may also influence jurors' judgments. For example, in one case, a plaintiff's lawyer used a stock photo of an ATM machine to illustrate his theme that the new management of the defendant's company had treated the company like an ATM (Feigenson & Spiesel, 2009). The photo (like almost all of the other images with which the lawyer accompanied his closing) was purely illustrative; it did not provide any probative evidence that his claim was true. But it may have helped jurors to form and retain the desired sort of mental image (and/or to retrieve associated thoughts consistent with his theme), and thus made them likelier to believe his claim.

### So How Can We Protect Jurors from the Truthiness of Visual Evidence?

One way judges attempt to protect jurors from being influenced by images is to give them instructions on how they should treat those images. For instance, judges might tell jurors that a picture or photo is only illustrative – that it is intended to help the jurors understand testimony but is not to be taken as evidence that the testimony is true. The problem with this approach, and with limiting instructions more generally (see Sklansky, 2013 and Lieberman & Arndt, 2000 for a review), is that instructional interventions often do not protect people from cognitive biases. People often have little insight into their cognitive biases and are unaware of how information influences

their judgments (see Nisbett & Wilson, 1977; Tversky & Kahneman, 1974; see Pronin, 2006 for a review). For example, in our own studies we sometimes ask people how the photos influenced their decisions. Many people report that the photos help them to understand the claims, while others tell us that the photos do not influence their judgments of the claim's truth at all. Yet many of these same subjects who say that the photo just helped them understand, or that they are not swayed at all, nonetheless succumb to truthiness. That is, people have very little insight into how the photos are biasing their decisions. Another approach might be to warn people about the power of photos—even non-probative ones, only tangentially related to the claims they are paired with—to influence judgments about the truth of those claims. Warnings can work in other domains of judgment and protect people from external influences or suggestion (e.g. Oeberst & Blank, 2012). Whether warnings would reduce truthiness is an empirical question worthy of future research.

## Summary

Jurors are faced with conflicting claims to the truth. Pictures often help them decide where the truth lies. Photos and videos, for instance, can help persuade jurors that the events occurred as the images depict them. The legal system aims to protect jurors from images that are improperly persuasive, such as images with a veneer of science that might unjustifiably make an expert seem more credible, or overly emotional images that might arouse jurors' anger or disgust and lead them to judge the defendant using those emotions. The research we have reviewed here, however, suggests that even more innocent images, ones intended merely to illustrate or even decorate an idea, may also have powerful effects on legal decisions. People take photos as a cue to the truth of the statements they accompany, regardless of whether the photos actually make those statements more likely to be true. This research underscores the need for the legal system to remain vigilant about the use of visual images in court, and for further research to clarify the influences of these kinds of images and to suggest ways of limiting any improper effects. 

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***We asked trial consultant Jason Barnes to respond to this paper.***

Jason Barnes, a.k.a. “The Graphics Guy” is a graphic designer and trial consultant based in Dallas, Texas. He has been practicing visual advocacy since 1990 and has worked in venues across the country. He specializes in intellectual property and complex business litigation cases. You can read more about Mr. Barnes and how he can help you tell better stories in the courtroom at [his webpage](#) and on his blog, [www.igetlit.com](#).

**Jason Barnes responds:**

In my own experience, the authors’ conclusion, that non-probative images effect jurors’ assessment of claims, is true. The authors suggest that the judge might offer an instruction but admit that such instructions are of limited value in dealing with unconscious cognitive biases. On this point, we agree. Another approach, they suggest, would be “to warn people about the power of photos.” This idea has, in my opinion, merit.

The adversarial nature of trials is fundamentally different than the “truthiness” study. Unlike the Newman study cited by the authors (which claimed macadamia nuts were related to peaches) in which the researchers were free to make unchallenged claims supported by non-probative images, a trial is conducted against an opponent whose job is to identify and exploit weaknesses in



your argument. In the face of this danger, a party will use non-probative images at their own risk.

Suppose that we are in a dispute that alleges an oral contract made over the telephone. Let's take the assertion, "The defendant agreed to the proposed terms," as the basis for creating some graphics each of which uses a non-probative image as support of the statement. First, assume that we are defending against the claim and that we have been presented with these demonstratives in the plaintiff's opening statement. How can these seemingly innocuous demonstratives be turned against the plaintiff?

### The Defendant Agreed to the Proposed Terms



1

Since credibility is perhaps one's most important asset in a trial, we should attack our opponent's credibility for using a graphic that is, measuring against the assertion, useless at best and misleading at worst. You might object, but sometimes a little jujitsu is better. For example, in our own opening statement, we could call out the plaintiff's attorney:

"Ladies and gentlemen, the plaintiff's attorney just showed you this slide of two men shaking hands, presumably because they've agreed on something. Now, I don't know what two men are attached to those hands, maybe one of them is Mr. Jones, the plaintiff. But I know who the other one isn't. My client, Mr. Smith. There will be no evidence in this trial that there was any handshake. There was no meeting, no handshake and no agreement. This picture, like the plaintiff's claim, is not real."

Or, we could cross examine the plaintiff, who, like his attorney, must establish and maintain credibility:

Q. Mr. Able, did you see the slide your attorney used in opening statements, the one with the photograph of the hands shaking?

A. Yes.

Q. Is that a picture of you and of my client shaking hands?

A. No, it's just a picture.

Q. Were you trying to mislead this jury into believing that you and Mr. Charles actually shook hands on some deal?

A. No, of course not.

Q. Do you have any idea why your attorney would use a picture of two unknown men shaking hands for some unknown reason when that has nothing at all to do with this case?

A. I don't know why he did that.

If we had seen this in the plaintiff's closing argument, we could launch an attack similar to the one described above in our opening remarks - only with more argument about why the plaintiff's attorney wanted to use images of things that never happened and why that is a good reason to question his, and his client's, credibility.

Here are a couple more images that would face the same kind of attack:

### The Defendant Agreed to the Proposed Terms



2

### The Defendant Agreed to the Proposed Terms

- 1,000 Widgets
- \$25,000.00 Deposit
- Delivered May 15<sup>th</sup>
- \$75,000.00 Upon Receipt



3

But what about a slightly different graphic that uses a non-probative but "truthiness" inducing image?

## The Defendant Agreed to the Proposed Terms



- 1,000 Widgets
- \$25,000.00 Deposit
- Delivered May 15<sup>th</sup>
- \$75,000.00 Upon Receipt

4

Here we see an image of the defendant, Mr. Charles, alongside a checklist of the terms to which he allegedly agreed. Nothing about the list is probative of whether or not there was an agreement. However, having the picture and the terms checked off is subtly convincing. It suggests the defendant himself

actually checked off the terms - presumably in agreement. It is not as emotionally provocative as the handshake, but it provides few avenues of attack.

Leaving a graphic like this on screen for an extended period of time, for example, during the plaintiff's direct examination, might provide a subtle but consistent reinforcement of the plaintiff's claims, a truthiness. But is it objectionable? Can we attack the plaintiff or his attorney for using it? I suggest that the answer is that we cannot effectively turn it against the plaintiff, which tells me that this is exactly the kind of truthiness I'd like to have in my own demonstratives. If I were a plaintiff, I would use this graphic, not the ones that depict imaginary events, to support my claims where necessary.

"Truthiness" can work for you or against you. Remain vigilant. Identify when the technique is being employed against you and try to turn the weapon against your opponent in the battle for credibility. In your own demonstratives, employ the phenomenon with caution or be the victim of your opponent's jujitsu and wind up on the mat. 🍌