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On Demonstrative Evidence and Trial Graphics: What Works and What Doesn't

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ON DEMONSTRATIVE EVIDENCE AND TRIAL GRAPHICS: WHAT WORKS AND WHAT DOESN'T¹

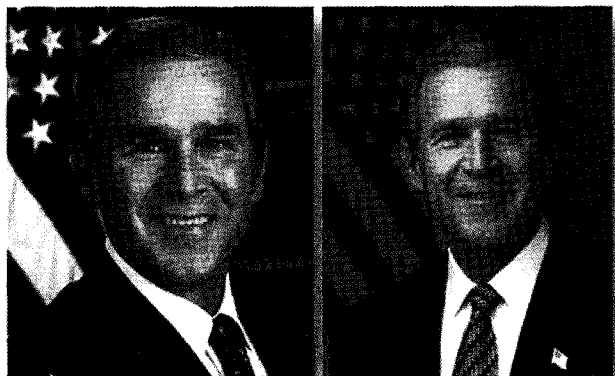
I. Litigation Graphics, Psychology and Color Meaning²

As a litigation consultant, one of my primary responsibilities is to help litigation teams develop and effectively use demonstrative evidence³ to support their trial presentation. The primary means of doing this is to create litigation graphics,⁴ which are most commonly used as PowerPoint slides that accompany oral argument and witness testimony, but could also include developing large-scale, permanent boards, 3D animations, scale models, or other visual aids for finders of fact.

A lot of what goes into creating effective litigation graphics relies on the evidence to be presented. If the evidence relies on a document and, specifically, on a particular part of that document, a document callout⁵ is standard fare. If damages are the issue, it is not uncommon to use a chart or table to illustrate to the jury how they should add up the money to arrive at the desired result. However, a lot more goes into designing and developing really effective litigation graphics than the clever

manipulation of evidence. Did you know that color plays a major role?

Litigation graphics are almost never black and white – they almost always involve the use of color. Most colors carry psychological (and even physiological), cultural, personal, emotional, and expressive implications that can impact how persuasive you are when using them. Here's an example:



Looking at the two photos of President Bush above, minus any personal political views you may have, which president is more trustworthy looking? I bet you said the one on the right.⁶ Do you know why?

In modern, holistic medicine, chromotherapy is used to heal with color. This form of treatment dates back millennia to ancient Egypt, China, and India. A more prominent use of color therapy occurs in environmental design, which considers the effect of color on health and behavior and develops interior design, architecture, and landscape design accordingly. An interesting example is use of the color Baker-Miller Pink (R:255, G:145, B:175),⁷ affectionately known as “drunk tank

⁶ See Walter Graff, *Color or Color: The Psychology of Color*, BLUESKY-WEB.COM, <http://www.bluesky-web.com/color.htm> (last visited Feb. 24, 2014).

⁷ See James Gilliam & David Unruh, *The Effects of Baker-Miller Pink on Biological, Physical and Cognitive Be-*

¹ The following article is a compilation of blog posts written by Ryan Flax, Managing Director and Litigation Consultant for A2L Consultants.

² Ryan Flax, *Litigation Graphics, Psychology, and Color Meaning*, A2L CONSULTING (Apr. 30, 2013, 5:00 AM), <http://www.a2lc.com/blog/bid/64599/Litigation-Graphics-Psychology-and-Color-Meaning>.

³ See A2L Consulting, *What is Demonstrative Evidence?*, A2L CONSULTING, <http://www.a2lc.com/demonstrative-evidence/#.UwxJ2l6Lg5D> (last visited Feb. 25, 2014).

⁴ See A2L Consulting, *Litigation Graphics, Trial Exhibits, Physical Models, PowerPoint Presentations and 2D and 3D Animation*, A2L CONSULTING, http://www.a2lc.com/services/litigation-graphics-consulting/#.UwxK_16Lg5A (last visited Feb. 25, 2014).

⁵ See Ken Lopez, *3 Styles of Document Call-outs Used at Trial*, A2L CONSULTING, (Apr. 13, 2012, 10:35 AM), <http://www.a2lc.com/blog/bid/55124/3-Styles-of-Document-Call-outs-Used-at-Trial>.

pink” because it is commonly used in jails to keep violent prisoners calm.⁸

Human responses to color are not just biological, but are also influenced by our culture (in China the color yellow symbolizes royalty, but in Europe it’s purple that plays this role). David McCandless⁹ created this amazing color wheel¹⁰ (right) to illustrate how different cultures interpret colors (or “colours,” as Mr. McCandless is an author and designer from the U.K.). People (and by people, I mean jurors and judges) also respond to colors in individual ways. Although research reveals variables that help explain human responses to color, it is also true that our own color preferences are important to us and partially dictate the effect color has on us.

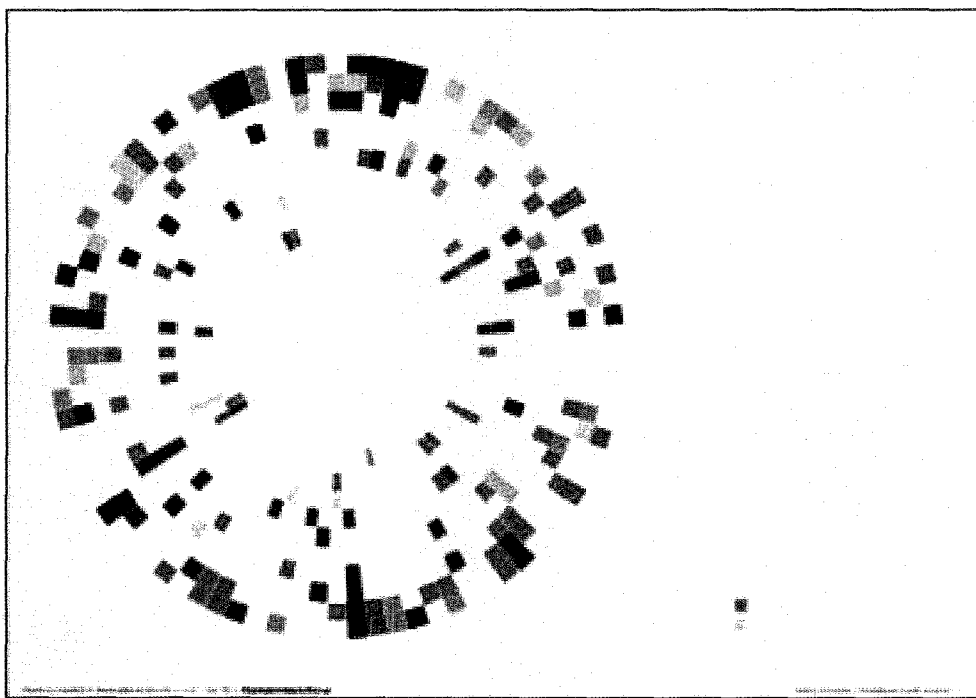
Color also causes emotional effects, which depend partly on the color’s surroundings and partly on the ideas expressed by the work as a whole. There are two opposing ways to use color in graphics (as in art): local and expressive color. At one extreme is local color, which is the color that something appears when viewed under average lighting conditions, e.g., a banana is yellow. At the other extreme is expressionistic color, where artists use color to

haviour, 3 J. of Orthomolecular Medicine 202, 202-206 (1988) (discussing the calming effects of the color Baker-Miller Pink).

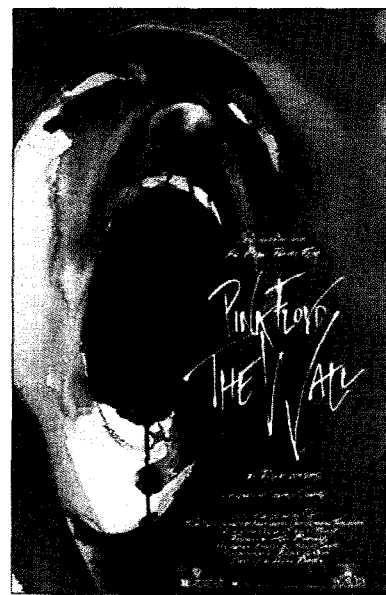
⁸ See *Drunk Tank Pink*, COLOR MATTERS <http://www.colormatters.com/color-and-the-body/drunk-tank-pink> (last visited March 3, 2014).

⁹ See David McCandless & AlwaysWithHonor.com, *Colours in Cultures*, INFORMATION IS BEAUTIFUL (Apr. 2009), <http://www.informationisbeautiful.net/visualizations/colours-in-cultures/>.

¹⁰ See *Colours In Culture*, INFORMATION IS BEAUTIFUL, <http://www.informationisbeautiful.net/visualizations/colours-in-cultures/> (last visited Feb. 25, 2014).



express an emotional rather than a visual truth. Just look at the famous art from Pink Floyd’s *The Wall*¹¹ here – the use of dark blue, gray and black in the background convey an intense feeling of sadness and depression, while the blacks and reds of the figure convey danger and anguish. Both of these color concepts affect a viewer’s emotions. The expressionistic use of color is very important in the field of litigation graphics.



¹¹ See Cover Art for Pink Floyd’s *The Wall*, PINK FLOYD | THE OFFICIAL SITE, <http://www.pinkfloyd.com/design/singles.php#nn> (click on thumbnail of the second album cover in the third row moving from left to right) (last visited Feb. 25, 2014).



Why?

Jurors (and judges to an extent, as human beings) make decisions at trial based on their emotions above all else (download and read this paper¹² on the subject by Todd E. Pettys, Associate Dean at the University of Iowa College of Law). Concepts such as confirmation bias and research on decision making support this.¹³ Two thousand years ago, Aristotle observed,¹⁴ that the most persuasive arguments are those that appeal, at least in part, to the audience's emotions.

Traditional artists have used color to evoke emotion in specific ways:¹⁵

Red – heat, passion, danger, optimism

– warmth, caution, fear, cowardice

Blue – responsibility, trustworthiness, compassion, honesty, integrity, morality, coolness, quality

Orange – confidence, creativity, fun, socialness

Green – natural, healthy, harmony, cheer, friendliness, immaturity

Purple – regality, intelligence, wealth, sophistication, rank, shock

Gray – neutrality, ambiguity, dullness, somber-

ness

Black – evil, unknown, treachery, depression, undesirability, danger, falsity

– innocence, purity, fairness, conservatism, harmlessness, transparency

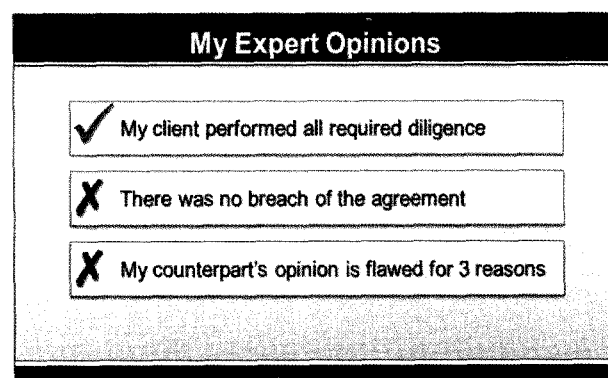
Pink – femininity, sweetness, liberalism

Brown – natural, solid, sadness

These same principles are applied today¹⁶ in information graphics and the graphic arts. For example, according to Mr. McCandless's color wheel (above),¹⁷ the color **black** represents and connotes authority, the color **blue** intelligence and rationality, and **purple** virtue – interestingly, he indicates no culturally based color in Western culture for wisdom or trust.

Did you ever notice how many law firm logos are **blue**? Why do you think that's the case?

Here's an exemplary litigation graphic that might be used by an expert witness using the above-discussed color principles to evoke a sense that the expert is honest, unbiased, and intelligent:



16 See Katherine Nolan, *Color it effective: How color influences the user*, OFFICE.COM (Jan. 2003), <http://office.microsoft.com/en-us/frontpage-help/color-it-effective-how-color-influences-the-user-HA001042937.aspx> (noting the focus of advertisers on the effect that certain colors have on consumers).

17 See David McCandless & AlwaysWithHonor.com, *Colours in Cultures*, INFORMATION IS BEAUTIFUL (Apr. 2009), <http://www.informationisbeautiful.net/visualizations/colours-in-cultures/>.

12 See Todd E. Pettys, *The Emotional Juror*, 76 FORDHAM L. REV. 1609 (2007).

13 See, e.g., George Lowenstein and Don A. Moore, *When Ignorance Is Bliss: Information Exchange and Inefficiency in Bargaining*, 33 J. LEGAL STUD. 37 (2004) (observing and documenting this bias in experimental settings involving litigants).

14 See Aristotle, ON RHETORIC: A THEORY OF CIVIC DISCOURSE 112-13 (George A. Kennedy trans., Oxford Univ. Press 2d ed. 2007) (noting "for it makes much difference in regard to persuasion (especially in deliberations but also in trials) that the speaker seem to be a certain kind of person and that his hearers suppose him to be disposed toward them in a certain way...").

15 See Douglas Kipperman & Melisa McKinstry, *Color Rules of Thumb*, WRITE DESIGN ONLINE, <http://www.writedesigntonline.com/resources/design/rules/color.html#psych> (last visited Feb. 23, 2014) (showing that artists have relied on the inherent emotions invoked by certain colors to influence viewers).



It may look simple, but a lot of thought went into its design. The overall color palate of **blue**, **purple**, and **gray** is intended to evoke trust and neutrality. Furthermore, the light **blue** color used in the text boxes is intended to again express that they are relaying true information. The accompanying icons (the check and x-marks) are similarly colored so as to relay that the top statement of opinion is trustworthy (**blue**) and that the second two are warnings (**red**) for jurors that they should not believe what they heard from the opposition's expert witness.

II. Don't Get Too Cute With Your Trial Graphics¹⁸

You must use trial graphics¹⁹ and other demonstrative evidence²⁰ to be as persuasive as possible and win at trial. But, if you use trial graphics incorrectly, you risk losing everything. Take a recent trial scenario that played out in Orange County, California as an exam-

question is: what does that really mean? The prosecutor wanted to make the point that the burden does not require absolute knowledge – not every fact must be supplied and not every fact supplied need be perfectly accurate to satisfy this burden.²¹

However, the prosecutor took it one step too far.

She used a trial graphic to demonstrate her point.²² It was similar to a combination of the graphics I have supplied above and below. Instead of showing an incomplete puzzle, it showed the state of California, without an identifying label and with some incorrect city locations and names.²³ She began explaining that she wanted to identify the name of a state that looked like the one in the image (the trial was in California, by the way) and even though there was some incorrect or incomplete information, she knew the state was California.²⁴ Well,



“IF YOU USE TRIAL GRAPHICS INCORRECTLY, YOU RISK LOSING EVERYTHING

closing argument, the prosecutor discussed the burden of proof in criminal cases, which, as we all know, is beyond a reasonable doubt. The

The court sustained the objection and instructed the trial graphic be taken down and not referred to again.²⁶ Then the judge further instructed the jury to disregard the trial graphic and the discussion thereof. The trial and closing arguments continued and ultimately, the jury found the defendant guilty.²⁷

18 Ryan Flax, *Don't Get Too Cute With Your Trial Graphics*, A2L CONSULTING (Nov. 5, 2012, 8:30 AM), <http://www.a2lc.com/blog/bid/60923/Don-t-Get-Too-Cute-With-Your-Trial-Graphics>.

19 See A2L Consulting, *Trial Graphics – A Critical Need for Any Courtroom*, A2L CONSULTING, <http://www.a2lc.com/trial-graphics/> (last visited Feb. 23, 2014) (noting that trial graphics are information display mediums designed to support presentation of the case).

20 See A2L Consulting, *Demonstrative Evidence Services Provider Since 1995-A2L Consulting Works Worldwide*, A2L CONSULTING, <http://www.a2lc.com/demonstrative-evidence/#.uwqibIXTpjL> (last visited Feb. 23, 2014) (describing various demonstrative evidence resources and types).

21 See *id.* at 869.

22 See *id.* at 870.

23 See *id.*

24 See *id.*

25 See *id.*

26 See *Otero*, 210 Cal. App. 4th at 870.

27 See *id.*



On appeal, the defense argued that the prosecutor's little stunt with the map of California amounted to misconduct warranting reversal of the conviction.²⁸ The Court of Appeals agreed that the trial graphic and argument was misconduct, but that it was harmless because it was taken down so quickly and because of the strong evidence for conviction in the case.²⁹

The court explained the problem: the prosecutor was misstating the law relating to its burden of proof.³⁰ The beyond a reasonable doubt burden is not quantitative – it is not based on a certain number of puzzle pieces of evidence fitting together.³¹ So, it is misconduct for the attorney to present it that way. It is misconduct to tell the jury that if they have “X” number of puzzle pieces they should convict. So, although it is always very tempting to make a graphic like this because the subject matter simply lends itself to visuals, you need to take a step back and decide just how to make this point visually and appropriately.

I do not know for sure, but I imagine that the prosecutor's path to this misconduct went something like this: “Hey, I've got a great idea!” And, if the law did not matter, she certainly did have a good idea. Make your case using trial graphics. Explain to the jurors that it is okay to convict this guy even though you do not feel 100% positive of his guilt (he *admitted* to the crime by the way). What this attorney was missing was someone by her side to say, “hold on a minute, you cannot do that” or “let's rethink this before committing to this strategy.”

This is where a litigation consultant³²

is invaluable. No matter how many trials you have been through as an attorney, we have seen more as consultants (we are attorneys, too, by the way). Our specialty is how to get your “persuasion on” and how to do it the right way. A good litigation consultant is someone to bounce these ideas off of and work through the way to graphically make your case and how to stay inside the lines.

III. Watch Out for Subliminal Messages in Trial Graphics³³

A recent study³⁴ by University of Arizona doctoral student, Jay Sanguinetti, found that people's brains perceive objects and images in everyday life of which we are not consciously aware. Even if you never actually know you see something, your brain can “see” it and process the related visual information. Below is an example from the University's study:



33 Ryan Flax, *Watch Out for Subliminal Messages in Trial Graphics*, A2L CONSULTING (Dec. 12, 2013, 1:30 PM), <http://www.a2lc.com/blog/bid/69053/Watch-Out-for-Subliminal-Messages-in-Trial-Graphics>.

34 Shelley Littin, *UA Study: Your Brain Sees Things You Don't*, UANews (Nov. 13, 2013) (citing Joseph Sanguinetti et al., *The Ground Side of an Object Perceived as Shapeless Yet Processed for Semantics*, 1 Psychol. Sci. 256 (2014)), <http://uanews.org/story/ua-study-your-brain-sees-things-you-don-t>.

28 *See id.*

29 *See id.* at 873.

30 *See id.* at 872 (alluding that the Prosecutor was giving the impression of a lesser burden of proof).

31 *See id.*

32 *See* A2L Consulting, *The Litigation Consultant – Key to Your Trial Team's Success*, A2L CONSULTING, <http://www.a2lc.com/litigation-consultant---your-trial-teams-best-support/> (last visited Feb. 23, 2014) (explaining the advantages provided by retaining a litigation consultant).

When test subjects (that means human beings) were asked to look at abstract black silhouettes, their brains also perceived the real-world objects hidden in the negative space at the image border. Here, your brain perceives two seahorses, just as the test subjects' brains did during the experiment, even though there are no seahorses in the graphic.

RESEARCH SHOWS THAT VISUALS ARE A KEY TO PRESENTING INFORMATION CLEARLY AND PERSUASIVELY

Now, how can this be applied or abused in the courtroom? Well, I cannot give you a definitive answer, but I believe that if your brain is seeing seahorses in the image to the right, and if your subconscious has associated a certain **emotion** with seahorses, then **that emotion will likely be evoked** when you see the image above, even without you realizing it. So, at trial, such a phenomenon might be applied or abused when designing trial graphics to evoke a specific emotion from jurors (or judges).



What emotions might help one win at trial? Well, for example, if the argument is that your client should not be punished for a simple mistake, it would make sense to evoke sympathy in jurors when making this argument. If reason alone is not enough to do this, one could appeal to jurors' subconscious. What do you see in the image below?

In my extension of the University's experiment, what you might consciously perceive here (below to the left) as a simple and abstract design choice and message: "Don't Punish My Client," your brain likely perceives as two babies bookending the message. The question then becomes, did you recognize any emotional response in yourself when looking at the graphic? If you felt inclined toward sympathy for my hypothetical client, why? There is nothing really persuasive in the graphic other than my simple request in text.

If the baby bookends did not persuade you, how about the graphic to the right? Do the unseen, yet subconsciously perceived puppies make your heart melt for my imaginary client? It is hard to say.



What other emotions might help a litigator persuade jurors? What about evoking anger against the opposing party? How about evoking incredulity in relation to the opposition's damages demands? If the emotion fits, it can help you win because most jurors make their decisions based on emotions rather than reason or even evidence.

I imagine it would take more than these simple subliminal inputs to get the result I am going for here, but I think we should all pay attention to this type of science. When the facts are tough, a client is starting with a sympathy deficit with a jury, or counsel is looking for some edge for their case, anything is possible. So, pay attention to your opponent's trial graphics because even abstract shapes might be an attempt to sway emotions. On the other hand, when designing your own trial graphics, realize there's more to it than making sure the right dates are on your timeline.



IV. Trial Timelines and the Psychology of Demonstrative Evidence³⁵

Research shows that visuals are a key to presenting information clearly and persuasively, be that presentation in a courtroom, an ITC hearing, the USPTO Trial and Appeal Board, a DOJ office, or in a pitch to a potential client. Because of what you can do with them and how your audience will psychologically react, if designed properly, trial timelines are one of the most important demonstrative aids you can use to be more persuasive.

Studies show that the vast majority of the public (what I'll call "normal" people – not us lawyers) learns visually – about 61% – which means that they prefer to learn by seeing. The majority of attorneys, on the other hand, do not prefer to learn this way, but are auditory and kinesthetic learners – about 53% – which means we typically prefer to learn by hearing and/or experiencing something – we are different than most people. This makes sense, when you think about it – we all learned this way in law school by sitting through class lectures and we continue to learn this way as practicing attorneys by having to learn litigation by experiencing it.

But, when you do this in an effort to persuade most "normal" people, you're not playing the game to win. It is not sufficient to just relay information because that's not how your typical audience wants to learn. You must bridge the gap between how you prefer to teach and how your audience prefers to learn, and demonstrative evidence, including graphics, models, boards, animations, and **trial timelines** are the way to bridge this gap, make your audience feel **better prepared** on the subject matter, feel it's **more important**, pay **more attention**, **comprehend** better, and **retain** more information.

Besides simplifying the complex, providing an opportunity to strategically use familiar, well-understood pop culture templates, and satisfying your audience's expectations of a multimedia presentation, trial timelines are a key component of your persuasion because they enable you to emulate generic fictions to produce a truth to be accepted by your audience. These are the four rules of thumb for effective visual information.

**SOCIAL PSYCHOLOGY STUDIES SHOW
THAT DIFFERENT SOURCES OF INFORMATION
ARE NOT NEATLY SEPARATED IN JURORS' MINDS.**

No matter how smart you are, you typically teach the same way you prefer to learn, unless you carefully plan to do otherwise. Visual learners teach by illustrating. Auditory learners teach by explaining. Kinesthetic learners teach by performing. So, left to our own devices, we attorneys will usually teach by giving a lecture (consider your last opening statement, for example).

Social psychology studies show that different sources of information are not neatly separated in juror's minds. Trial timelines are one of the most effective ways to exploit this reality to be more persuasive at trial.

Visual meaning is malleable, so design your timelines to show a generic fiction you want the facts to fit: e.g., *there was a reasonable cause for your client's behavior or the opposing party's actions directly led to the injuries we're here about*. The essential generic fiction for

³⁵ Ryan Flax, *Trial Timelines and the Psychology of Demonstrative Evidence*, A2L CONSULTING (Dec. 4, 2013, 9:45 AM), <http://www.a2lc.com/blog/bid/68893/Trial-Timelines-and-the-Psychology-of-Demonstrative-Evidence>.

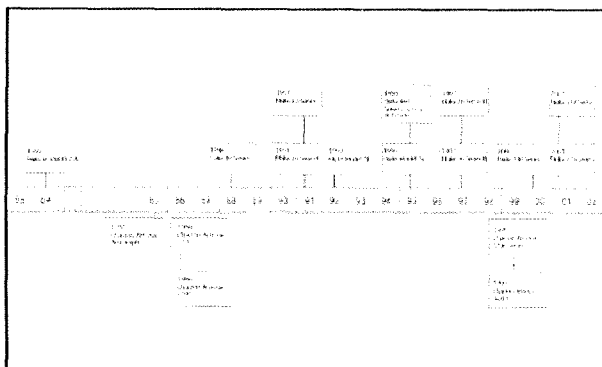
litigation (and all other circumstances, really) is that of **cause and effect** – people are intensely hungry for a cause and effect relationship to provide a basis, or perceived basis, in logic and reason for their emotional beliefs.

A trial timeline is the key visual aid for establishing a **perception of causation** relating to any set of facts. Once you **induce such a perception of causation** in jurors, they can **adopt this perception as the truth**. This is the result you want in litigation. If you can set the factual stage for why your view of things makes more sense than your opposition's version, you've won (unless the facts are devastating, in which case you should have settled).

So, what **perception of causation** is being established by the first timeline (below) in this article? This timeline relates to a trade dress case where the design at issue was a yellow casing for an electrical device. What you're seeing is how long our client used this yellow casing design (since 1969 and through the trial) at top, when the defendant changed its product to have a yellow casing (1999), and how similar their accused design is to our client's product line.

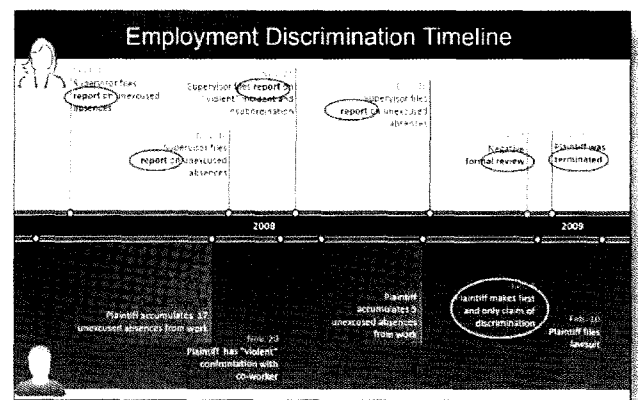
You get all this information visually from a single trial timeline – it doesn't just relay information, it tells a story. Imagine having the timeline at the top of this article on a large board and available to show the jury over and over again.

Here's an alternative way of showing the very same information that is far less effective:



The same information is there, but there's no self-evident story. There's no cause and effect established. This is just no good as a persuasion tool, but this is what most attorneys think of when they consider developing a timeline (unless they envision the flags-on-a-stick conveying a series of events).

Here is a pretty standard, if attractive, trial timeline. It shows two series of related events. The series on top, as you might guess, relates to stuff our client did and the stuff in the shadows there on the bottom is what the opposing party did over the same period.



This rather simply, but clearly shows important interrelated events and *very* clearly establishes the key facts to **induce the perception of cause and effect** in the jurors. What do you learn from the timeline above? You learn that while the plaintiff claims that he was fired as retaliation for his claim of discrimination against his employer (and if you only knew that he made the claim and was then fired just days later you might believe him), the timeline shows that he had a terrible and well-documented history of unexcused absences from work and even a violent confrontation with a co-worker. This history is the real cause of the effect (his termination) and it's all conveyed in this graphic.

You must feed a jury what it needs to find for you. The more a jury feels they understand where you're coming from, the more you emulate generic fictions to establish a truth, and the better you induce the perception of



cause and effect in your audience using the facts you know matter, the better your chances of winning.

About the AUTHOR



Ryan Flax is the Managing Director for Litigation Consulting and the General Counsel for A2L Consulting, a national litigation consulting firm headquartered in Alexandria, VA. Mr. Flax joined A2L Consulting on the heels of practicing Intellectual Property (IP) law as part of the IP group at Dickstein Shapiro LLP, a national law firm based in Washington, DC. Over the course of his career, Ryan has obtained jury verdicts totaling well over \$1 billion in damages on behalf of his clients and has helped clients navigate the turbulent waters of their competitors' patents. He has leveraged his significant experience in cases related to a wide array of technologies, including medical devices and systems, semiconductors, biotechnology, chemical engineering, mechanical engineering, software, and more.

Mr. Flax is also an adjunct professor, teaching advanced litigation practice at American University's Washington College of Law in Washington, DC.

Mr. Flax earned his Bachelor of Science degree in Biology from Wake Forest University and his Juris Doctor degree from Southern Methodist University Dedman School of Law. Between his undergraduate studies and law school, Mr. Flax was a Laboratory Scientist conducting DNA research at the R.J. Reynolds Tobacco Company.



APPROXIMATELY 24.5 MILLION PEOPLE IN THE UNITED STATES SPEAK ENGLISH LESS THAN "VERY WELL," AN INCREASE OF ROUGHLY 6.5 MILLION PEOPLE SINCE 2000.