

# Coffee, Placebo or Meth: Educational Storytelling From Phineas Gage to Paul Zak

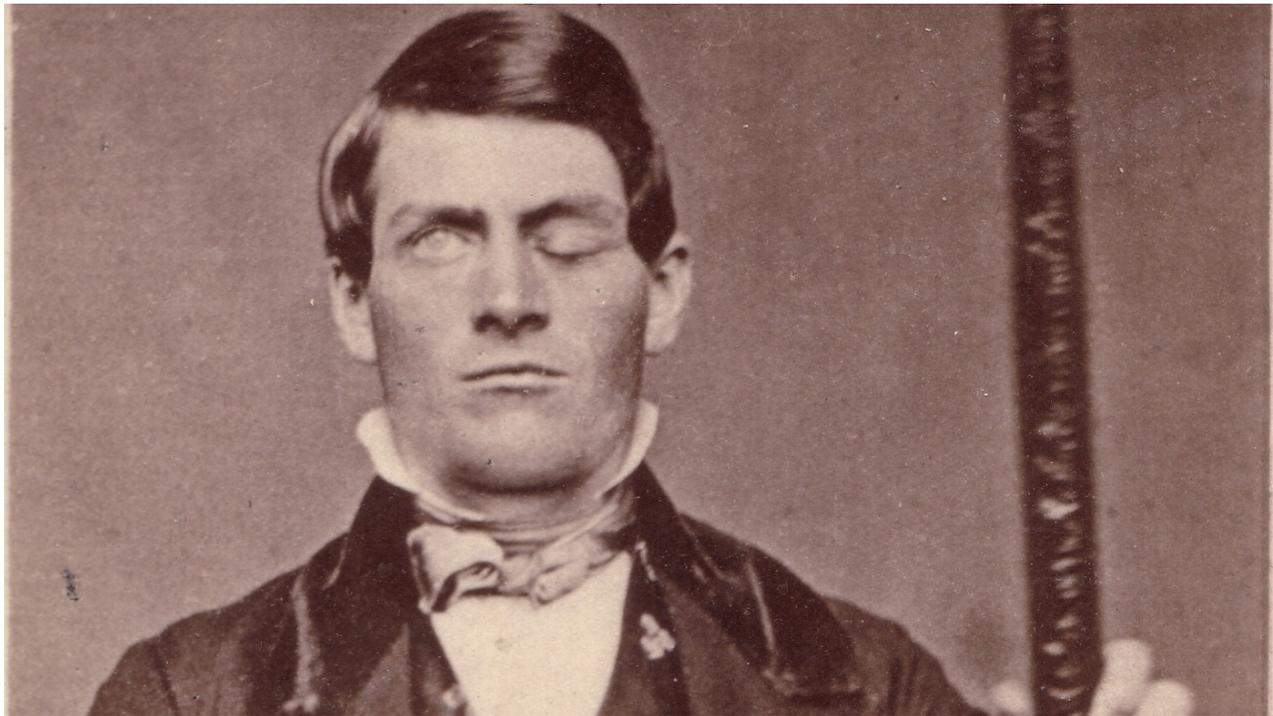
---

**M** [medium.com/caseworkx/coffee-placebo-or-meth-educational-storytelling-from-phineas-gage-to-paul-zak](https://medium.com/caseworkx/coffee-placebo-or-meth-educational-storytelling-from-phineas-gage-to-paul-zak)

acbb96869040  
Justin Wolske

March 8, 2019

---



Spike or no spike through the head, Phineas Gage was a dapper fellow who helped us understand how the brain works.

Telling stories is a thing we do, for many reasons. More importantly, it's a thing that's done *to us*. Stories *change* us, at the chemical level. Even though I've studied narrative for years, it was only recently that I understood this point. But by taking that circuitous path, it's been helpful in laying out *how* to use story, especially as an educational tool. If you're an educator, you're going to be a better storyteller after reading this.

I was introduced to these ideas by [Phineas Gage](#), the handsome-yet-infamous 19th-Century railroad worker who had an iron rod blown straight through his brain, yet lived to tell the tale. Gage was a miracle—his skull still resides at Harvard Medical School—yet the fact that he survived what should have been a death sentence is not the most amazing thing. While Gage physically recovered from his accident (for awhile), his life still fell apart. His personality radically changed due to a damaged prefrontal cortex. What's more, he just couldn't...*live*: couldn't hold a job, couldn't keep appointments, acted deeply inappropriate in public, couldn't remember things. His life zagged from the American Northeast to South America to San Francisco, leaving a trail of jobs, public embarrassments, former friends, and gawkers.

Gage died from severe epileptic seizures in his mid-30s. But his life had been going downhill for years since the accident. His ability to have emotions, make decisions, and conform to moral standards was shattered due to his brain injury, leading to a peripatetic life of isolation and chemical dependency. And he's not alone. In fact, as Antonio Damasio lays out in *Descartes' Error*, more prosaic prefrontal injuries have left many other patients untethered from their emotions—and therefore, their *ethics*—leaving them unequipped to make simple decisions needed to live in the world. Damasio's conclusion that there are parts of brain which help us to be *moral* was a major leap in understanding how the brain works.



NOT. COOL. (📷: [Scott Delloso](#))

All of this is fascinating, but it wasn't until I came across the work of Paul Zak, working from a completely different angle, that I really started to get it. Paul is most well-known for *[The Moral Molecule](#)*, and research on how we build trust in others. But I was interested

in his work on how good stories literally change a viewer's neural chemistry. Zak showed that effective storytelling caused different chemicals to be released in the brain—mainly cortisol and oxytocin—which, in turn, altered the decisions that people made after viewing the story. For example, Zak showed how a story about a young boy dying of cancer compelled more people to donate more money to charity. A story about the same boy at the zoo with his dad, without mention of his illness, resulted in fewer charitable donations.

So...*interesting*, if a little predictable, right? But why did this experiment compel me to stalk Paul, and ultimately make him a collaborator and friend? Because his research created firm evidence around a thought we've been working toward for years: *we cannot teach hard things without making people feel hard circumstances*. **Empathy**, not information or data, is the missing ingredient in most advanced education today.



Paul Zak, Dr. Feelgood ([📧: Fronteiras do Pensamiento](#))

“Nearly every social interaction involves persuasion at some level,” Zak said during a recent interview I did with him from his HQ in Claremont, CA. “As we started studying the neurological components of storytelling...how do we know if [a story is] effective or not? Well, persuasion is one way to do that.” Zak and his team started building simple stories to see if they had an impact on the decisions people made. It's probably not surprising that better stories were more persuasive: they donated more to charity, they heeded the call to action more reliably, they felt better about political candidates. But the most

valuable insight that Zak & Co. gleaned from this were the reliable ingredients of *better* storytelling. “First, Zak said, “you gotta get their attention. Attention is not free. Second, you gotta make them care.”

These two fundamental building blocks are the difference between inert, effective, and even dangerous storytelling. If I’m not paying attention or don’t care (a bad movie, a by-the-numbers commercial), ***the story is a placebo***; it has all the trappings of the storytelling dynamic without any effect. If I’m paying attention and am being made to care (a great Super Bowl commercial, *The Godfather*), ***the story is coffee***, a stimulant that changes my brain and can therefore change my course of action. When a story is used in bad faith to manipulate our natural responses (fake news, the Monorail!), ***the story is meth***, a mind-altering drug that attacks us through our own biology. But the common thread is very simple. You either pay attention and care...or you don’t. In Zak-speak, those co-occurrences are called “immersion,” but more plainly: “It’s the ‘give a s\*\*t measure’.”

For a Christopher Nolan or a Madison Avenue ad agency, it’s not difficult to churn out an effective piece of storytelling. For educators, it can be. There *is* a craft, it doesn’t just occur naturally. But the ROI in leveraging that craft is quite large. It results in more deeply engaged learners who have greater empathy, and provide a clearer picture of what they would do in certain situations. There is a reason why storytelling is the oldest forms of teaching that we have, especially for complex subjects, but failing to merge the pedagogy with strong story craft often ends up with more placebo than coffee. And trying to get people to click, share, or donate without regard for truth or their own well-being is a much darker drug (*ProTip*: go hang out on Facebook for a bit to see that in action).



Now, it's your turn (📷: [Harvard Graduate School of Education](#))

Learning this skill is valuable for almost any profession, but for educators it's vital! Here are some simple ways to get started using one of your most important teaching tools more effectively:

- **Build Your Own:** Homemade stories are the best kind, and the hard work that goes into them is paid back many times over as that tool stays (and evolves!) in your syllabi for years. A short memoir, a case study, an animation. These are assets that retain a lot of value over time.
- **Don't Build Alone:** Collaborate with someone...a colleague, a subject matter expert, your students. For beginning story-crafters, having an outside perspective is a very healthy gauge of what's working and what's not. Collaborators are your first *audience*, and it's a critical validation point if your story is working on *them* (as opposed to only *you*).
- **Don't Rely on Brand:** Here's the sad truth: most educational storytelling is *bad*. Boring, poor production value, overly didactic, rambling. Even our premiere brands pump out of a lot of forgettable work. Simply because it comes from Harvard Business School Press or Houghton-Mifflin is not an insurance policy.
- **Keep It Short, Stupid:** The goal is not to make *Lawrence of Arabia*. The goal is keep learners in that golden spot of high immersion (attention + caring). Without massive resources and skill, that's not a long time, usually around ten to twenty minutes. The short time limits also force you to be focused and lean, which almost never hurt a good story.
- **Production Value Matters...But Don't Stress:** Things like bad image composition or terrible audio throw people out of otherwise good stories. Thankfully, tools have

exploded in recent years to get you to a minimum level of competency. But don't chase great production value with dollars. Do it with a better-structured story that fits within your resources.

- **Find Your Theme:** What is your story *about*? This is not a question about what happens (that's the *plot*), but what is the point, or theme, of the story? Having a better handle on this helps in writing the story, linking learning objectives, and making a more immersive experience.
- **Use Facts as Story Skeleton:** Our brains are pretty terrible at remembering facts, but they store facts differently when the information is encased in immersive storytelling. Use the important stuff as tentpoles in your story construction, then weave those poles together. You'll be amazed at the memory retention!

It's not easy to get better at using narrative structures to educate, but it's probably the one thing you can do to 10x your ability to teach the hard stuff. It's the difference between learners applying rules they've memorized to make decisions, and learners making smarter decisions like humans in a non-linear, chaotic, emotional world. *So choose the chaotic world, Luke...* (that's from a story, right?).



Pass you shall not! (📷: [Benco42](#))

*Justin Wolske runs [Caseworkx](#), serves as EIR at [Grid110](#), and teaches film producing at [Cal State University, Los Angeles](#). He advises you rewrite your script one more time before he reads it.*