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The Science Behind The Art Of Storytelling

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Storytelling has the power to engage, influence, teach and inspire listeners. That's why we argue for organizations to build a storytelling culture and place storytelling at the heart of their learning programs. There's an art to telling a good story, and we all know a good story when we hear one. But there's also a science behind the art of storytelling.

Here's how it works, starting with the science of the non-story:

We've all listened to (and suffered through) long PowerPoint presentations made up of bullet points – bullet points that may be meaningful to the presenter, but lack the same punch for the audience. Even if the presenter is animated, when we hear information being ticked off like this, the language processing parts in our brain, known as Broca's area and Wernicke's area, get to work, translating those bullet points into story form where we can find our own meaning. The problem with this, however, is that the story we come up with in our mind may not be the same one the speaker is intending to convey through data.

When a speaker delivers those same facts within a story, however, something else happens in the brain. In his essay “The Science of Storytelling: What Listening to a Story Does to Our Brains”, entrepreneur and storyteller Leo Widrich noted that there’s research to suggest that when we hear a story, “not only are the language processing parts in our brain activated, but any other area in our brain that we would use when experiencing the events of the story are, too.” For example, sensory details like *the client was as excited as if he had won the lottery* engage a listener’s sensory cortex. Action words like *drive this project home* engage the motor cortex, all leading to a more connected and richer experiencing of the message. In short, the more a speaker conveys information in story form, the closer the listener’s experience and understanding will be to what the speaker actually intended.
Neuroscientists are still debating these findings, but we know from experience that when we’re listening to a good story — rich in detail, full of metaphor, expressive of character — we tend to imagine ourselves in the same situation. Just think about all those scary stories told around the campfire. Your heart rate increases, you get goosebumps, the hair on the back of your neck stands on end. The stories told in a business setting might not be quite as dramatic (or hair-raising), but nevertheless can be more impactful than data alone.

Lisa Cron, in *Wired for Story*, speaks to additional benefits of sharing stories in business settings, “Stories allow us to simulate intense experience without having to actually live through them. Stories allow us to experience the world before we actually have to experience it.” Leo Widrich, citing Princeton neuroscientist Uri Hasson, writes that “a story is the only way to activate parts in the brain so that a listener turns the story into their own idea and experience.” The potential value here for managers to use story to mentor and coach is clear. Through stories, we can utilize vicarious experience, mentally rehearsing how we might handle a situation before we have to face it. Internal data banks, so full of *what if’s* and *how to’s*, are refreshed with new options, without our having to live through an experience and all the risk that might entail.
There are additional scientific elements at play. Scientists are discovering that chemicals like cortisol, dopamine and oxytocin are released in the brain when we’re told a story. Why does that matter? If we are trying to make a point stick, cortisol assists with our formulating memories. Dopamine, which helps regulate our emotional responses, keeps us engaged. When it comes to creating deeper connections with others, oxytocin is associated with empathy, an important element in building, deepening or maintaining good relationships.

Perhaps most importantly, storytelling is central to meaning-making and sense-making. It is through story that our minds form and examine our own

truths and beliefs, as well as discern how they correlate with the truths and beliefs of others. Through story listening, we gain new perspectives and a better understanding of the world around us. We challenge and expand our own understanding by exploring how others see and understand the world through their lens.

By sharing and listening to each other's stories, we all get a little bit closer to what's true.

Ultimately, storytelling is about the exchange of ideas, about growth – and that's learning. That's why we believe that it's important that we embed storytelling in our organizational cultures and in our learning programs. Storytelling is essential. If you're trying to engage, influence, teach, or inspire others, you should be telling or listening to a story, and encouraging others to tell a story with you. You'll have plenty of science to back you up.

Lani Peterson, Psy.D. is a psychologist, professional storyteller and executive coach who specializes in the use of story as a powerful medium for personal growth, connection and change. Drawing on her broad experience with individuals, teams and organizations in the profit and nonprofit worlds, Lani brings a unique combination of personal stories, knowledge of the theory behind stories, and deep experience helping people use stories to transform their understanding of themselves and others. Lani's professional training includes a doctorate in psychology from William James University, a master's in counseling psychology from Lesley University, and bachelor's degree in literature from Smith College. She is a member of the National Speakers Association, the National Storytelling Network, and serves on the Executive Committee of the Healing Story Alliance, which she recently chaired for five years.