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Why Your Brain Loves Good Storytelling

by Paul J. Zak

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It is quiet and dark. The theater is hushed. James Bond skirts along the edge of a building as his enemy takes aim. Here in the audience, heart rates increase and palms sweat. I know this to be true because instead of enjoying the movie myself, I am measuring the brain activity of a dozen viewers. For me, excitement has a different source: I am watching an amazing neural ballet in which a story line changes the activity of people's brains.

Many business people have already discovered the power of storytelling in a practical sense – they have observed how compelling a well-constructed narrative can be. But recent scientific work is putting a much finer point on just how stories change our attitudes, beliefs, and behaviors.

As social creatures, we depend on others for our survival and happiness. A decade ago, my lab discovered that a neurochemical called oxytocin is a key "it's safe to approach others" signal in the brain. Oxytocin is produced when we are trusted or shown a kindness, and it motivates cooperation with others. It does this by enhancing the sense of empathy, our ability to experience others'

emotions. Empathy is important for social creatures because it allows us to understand how others are likely to react to a situation, including those with whom we work.

More recently my lab wondered if we could “hack” the oxytocin system to motivate people to engage in cooperative behaviors. To do this, we tested if narratives shot on video, rather than face-to-face interactions, would cause the brain to make oxytocin. By taking blood draws before and after the narrative, we found that character-driven stories do consistently cause oxytocin synthesis. Further, the amount of oxytocin released by the brain predicted how much people were willing to help others; for example, donating money to a charity associated with the narrative.

In subsequent studies we have been able to deepen our understanding of *why* stories motivate voluntary cooperation. (This research was given a boost when, with funding from the U.S. Department of Defense, we developed ways to measure oxytocin release noninvasively at up to one thousand times per second.) We discovered that, in order to motivate a desire to help others, a story must first sustain attention – a scarce resource in the brain – by developing tension during the narrative. If the story is able to create that tension then it is likely that attentive viewers/listeners will come to share the emotions of the characters in it, and after it ends, likely to continue mimicking the feelings and behaviors of those characters. This explains the feeling of dominance you have after James Bond saves the world, and your motivation to work out after watching the Spartans fight in *300*.

These findings on the neurobiology of storytelling are relevant to business settings. For example, my experiments show that character-driven stories with emotional content result in a better understanding of the key points a speaker wishes to make and enable better recall of these points weeks later. In terms of making impact, this blows the standard PowerPoint presentation to bits. I advise business people to begin every presentation with a compelling, human-scale story. Why should customers or a person on the street care about the project you

are proposing? How does it change the world or improve lives? How will people feel when it is complete? These are the components that make information persuasive and memorable.

My research has also shown that stories are useful inside organizations. We know that people are substantially more motivated by their organization's transcendent purpose (how it improves lives) than by its transactional purpose (how it sells goods and services). Transcendent purpose is effectively communicated through stories – for example, by describing the pitiable situations of actual, named customers and how their problems were solved by your efforts. Make your people empathize with the pain the customer experienced and they will also feel the pleasure of its resolution – all the more if some heroics went in to reducing suffering or struggle, or producing joy. Many of us know from Joseph Campbell's work that enduring stories tend to share a dramatic arc in which a character struggles and eventually finds heretofore unknown abilities and uses these to triumph over adversity; my work shows that the brain is highly attracted to this story style.

Finally, don't forget that your organization has its own story – its founding myth. An effective way to communicate transcendent purpose is by sharing that tale. What passion led the founder(s) to risk health and wealth to start the enterprise? Why was it so important, and what barriers had to be overcome? These are the stories that, repeated over and over, stay core to the organization's DNA. They provide guidance for daily decision-making as well as the motivation that comes with the conviction that the organization's work must go on, and needs everyone's full engagement to make a difference in people's lives.

When you want to motivate, persuade, or be remembered, start with a story of human struggle and eventual triumph. It will capture people's hearts – by first attracting their brains.

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