

Neural Networks and Narratives

The human brain co-evolved with increasing social complexity, the emergence of language, and the expansion of culture. Storytelling is obviously an ability that emerges from larger brains and sophisticated language capacities. While storytelling serves to teach the lessons of culture, it also serves as a means of homeostasis and integration of brain functioning. How So?

Narratives are heard sequentially but must be understood as a whole. Bringing together linear and holistic processing requires joint participation of the left and right hemispheres, says Nobel neurophysicist, Carl Pribram. It appears that, over time, narratives became a strategy for neural integration contained within the group mind (language and culture) that allowed the brain to grow further in size and complexity. According to neurobiologist, Louis Cosolino, there is a correlation between mental health, emotional regulation, and the coherence of the narratives individuals tell about themselves and their relationship histories. There is evidence that narratives foster emotional security while minimizing the need for elaborate psychological defenses.

Because narratives require participation of multiple structures throughout the brain, they require us to combine, in conscious memory, our knowledge, sensations, feelings, and behaviors. In bringing together multiple functions from diverse neural networks, writes neuroscientist Ernest Rossi, narratives provide the brain with a tool for both emotional and neural integration.

Think about basic narrative structure. It contains a hero who faces a series of obstacles and struggles to overcome them. Some obstacles are external, such as a natural disaster, winning a Gold Medal, or fighting an enemy. Other obstacles are internal, such as fear, anger, or emptiness that hinder the hero's way of obtaining his or her goals. The hero also brings a personal wound that causes emotional pain. In the process of the narrative things get bad and then get a little worse, but eventually the internal and external challenges are located, faced and surpassed. As the story proceeds, the hero matures, confronts his pain, succeeds, and usually gets the girl.

All stories contain trouble, and it is in this fact that their essential evolutionary value is contained. Without conflicts and resolutions, good and bad, a story seems pointless. We are reflexively drawn in by the narrative process. By identifying with the heroes in stories, movies, and folklore, we enter into the conflict with them, struggle with different feelings, and learn about ourselves. Beyond the conscious lessons we learn from stories, the stories themselves become part of our internal emotional experience.

A story well-told, containing conflicts and resolutions and thoughts flavored with feelings, connects people and integrates neural networks. An inclusive narrative structure provides the executive brain with the best template and strategy for the oversight and coordination of the functions of mind. Narratives allow us to practice facing challenging experiences in imagination as our brains learn to cope with the emotions they stimulate.

The simultaneous activation of narratives and emotional experiences builds neural connection and coherence between easily dissociable networks of affect and cognition. Thus, although it may appear that storytelling, at best, may be teaching us cultural wisdom, the process of traveling with the hero is an experiential journey that serves to build our brains, regulate our emotions, and rehearse our skills. Later, when we train for an athletic event or prepare to go into a boardroom battle, we carry inside us the heroes who live in our hearts. And, it is our own personal narrative which contribute to our reactions, responses, and ways of engaging with others, as we look back on our own unique stories to guide us in relationships and how we choose to live.

These co-constructed narratives remind us that each unique story of our own contains elements of someone else's story, which contains elements of someone else's story. It has been said that there are only a few stories in literature, and these stories just kept getting retold in slightly different ways.

We need each other and our stories to discover ourselves, regulate our emotions, and heal from traumatic injuries. Humans serve as external neural circuits that we can use to help each other bridge dissociated neural networks, provide us with new ideas, and activate feelings within us that we may be unable to access or have forgotten to remember. When loving others link their brain with ours, the result is a vital integration. We can use our interpersonal resonance, intuition, and empathic abilities to help and heal one another. Human brains have vulnerabilities and weaknesses that only other brains are capable of mending. For human beings (and neurons), relationships are a natural habitat.