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"In summary, if the cortical language system is tightly interwoven with the cortical action system, action context may facilitate language processes. We therefore propose as a further principle of aphasia therapy grounded in neuroscience research the following principle: *Behavioral relevance principle*: It is advantageous to practice language in relevant action contexts."

Pulvermuller F, Berthier M. Aphasia therapy on a neuroscience basis. *Aphasiology*, 2008, 22(6), 563-599.

Stroke Educator, Inc. is committed to educating the wider public about stroke and the 50 state *"Aim High for Aphasia!"* Aphasia Awareness Campaign.

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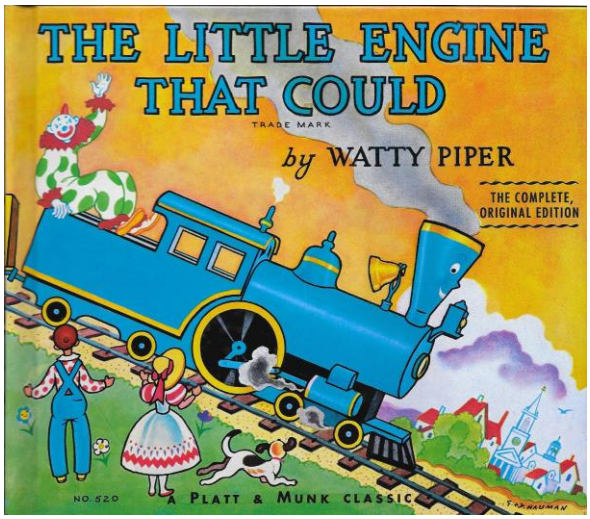
Aphasia Insights!

Aphasia Recovery: Motivation and *The Little Engine That Could.*

By Tom Broussard, Ph.D.

I had a stroke and aphasia on September 26, 2011. I was an associate dean at The Heller School at Brandeis University when I fell down on Main Street, Waltham, MA. I lost my language and could not read, write or speak well.



I started speech therapy in October 2011, and that was the beginning of seven months of formal therapy with one therapist plus an aphasia group at Boston University.

At the start, people with aphasia (PWA) have a hard time talking with *anyone* never mind their family and friends. We can see the damage of our language and are just too scared to talk about it out loud and hear how bad it might sound.

It was years later when I learned about something called "learned non-use," when PWA avoid verbal communication and "retreats from social interaction" as a result of a stroke (Pulvermuller, 2008). The behavior of learned non-use in language is linked at the cellular level as well; the less stimulus on the outside, the less activity, plasticity & learning on the inside.

It turns out that socialization is a highly therapeutic factor in helping avoid behavior such as learned non-use in language. Of course, I didn't know any of that at the time even though I had been applying it (as many people with aphasia do) as a matter of course.

Thanksgiving that year was the first time I had seen my extended family since my stroke. It was also their first time seeing me with a stroke and this thing called aphasia.

No one knew anything about it other than our daughter who was a neuroscience major in college. Our family has had Thanksgiving dinner together for over 35 years and I was quite nervous to see everyone. I didn't talk much and I don't remember much about it either!

It was over nine years since then and we have moved back to Maine from St. Augustine, FL. While unpacking, I found this little book, *The Little Engine That Could*. It was old and beautiful but I had no idea where it came from.

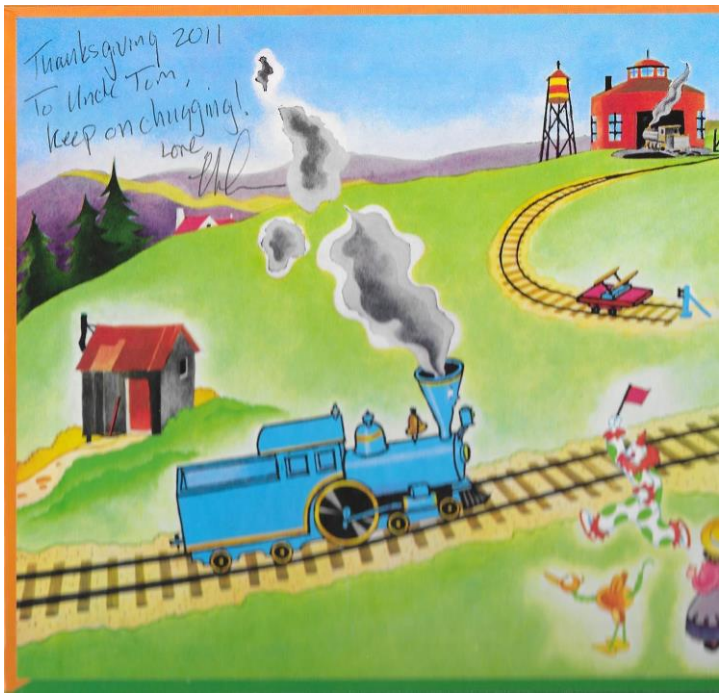
I have been writing quite a few articles about how the brain repairs itself using metaphorical stories in words that people can understand. When I read the book this time, I could see that there was *another* lesson to be used for aphasia recovery in *The Little Engine That Could*.

It is a famous folktale to teach children the value of optimism, hard work, and motivation. In the tale, a long train is being pulled over a big mountain until its engine broke down.

Other engines were asked to pull the train but for various reasons they refused. But a small engine agreed to try. The engine succeeded repeating its motto: "I-think-I-can, I-think-I-can" and then on the other side of the mountain saying, "I thought I could, I thought I could."

The brain, not unlike the little engine, has incredible power even after it has been damaged from a stroke. It has the capacity to rewire the brain and regain its language (depending on severity notwithstanding).

Recovering one's language from a stroke and aphasia can seem like an impossible task. I got (mostly) better but without knowing *how* it happened. It wasn't until much later, when I heard about the five rules of aphasia recovery; motivation, and practice, practice, practice, and more practice! In my case, I think my lifelong helpful habits pushed me to do more "I think I can" than "I think I can't" thinking.



Experience-dependent neural plasticity is the engine and persistent language activities provide the fuel: the more practice, the more healing; and the more healing, the more improvement. The activities *themselves* make the engine work.

I had *avoided* doing exactly the same things that were needed. If my Thanksgiving dinner was therapeutic and helpful, I never knew it at the time. It was just the start of heading up the aphasia mountain with no idea how high it would be.

As I read *The Little Engine That Could* again, I saw an inscription on the inside cover that I hadn't noticed before. It said, *"Thanksgiving 2011, To Uncle Tom, Keep on chugging! Love, Mike Coe."* Mike is my older sister's older son. He must have given it to me at Thanksgiving at a time when I couldn't even remember getting it.

It was clearly a message in a bottle that had come full circle. Whether I knew it or not, or whether I read it or not, the message and the motto of *The Little Engine That Could* urged me to climb my own mountain. It took nothing more than realizing that the little engine *had* believed that the "I think I can" thought was more than half the battle.

Signed: *The Johnny Appleseed of Aphasia Awareness*

Cover of *The Little Engine That Could* used with permission by Penguin Random House LLC.