

# Aphasia Insights!

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“The examination of inner speech in individuals with aphasia has potential implications for clinical practice, in that differences in the preservation of inner speech across individuals may help guide clinical decision making around aphasia treatment.

Although there are many questions that remain open to further investigation, studying inner speech in this specific population has also contributed to a broader understanding of the mechanisms of inner speech more generally.”

**Fama M, Turkeltaub P. Inner Speech in Aphasia: Current Evidence, Clinical Implications, and Future Directions.** *American Journal of Speech-Language Pathology (AJSLP)*, Vol. 29, 560-573,

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

Stroke Educator, Inc.  
541 Domenico Circle  
St. Augustine, FL 32086  
207-798-1449  
[tbroussa@comcast.net](mailto:tbroussa@comcast.net)  
[www.strokeeducator.com](http://www.strokeeducator.com)

## *Inner Speech: Another Accidental Tool in Aphasia Recovery.*

*By Tom Broussard, Ph.D.*

I don’t know when I started talking to myself after my stroke (9/26/11). And I don’t know when I started *remembering* what it was that I was talking about. I did keep my calendar. I also started my diary, and that was the first physical evidence of what I had been thinking. My inner speech (as helpful as it was) would have melted away if I hadn’t saved my thoughts in various external devices.

My diary indicates (somewhat) what I was thinking. The text didn’t make much sense, but the images did denote what I was thinking. Recording myself (using my iPhone) and hearing what I was saying (and thinking) allowed me to hear my thoughts (my inner speech) over and over again.

I started walking in the neighborhood on 10/11/2011, just two weeks after my stroke. I kept track of my mileage in the calendar those two weeks but that was it. I

was not aware of what I was thinking (such that I could remember it) at the time until I started my diary (10/27/2011) and recorded myself (11/4/2011).

Once I started using my calendar, diary, recordings, and taking pictures, I had the benefit of “remembering” (what I otherwise couldn’t consciously remember or express) based on the corroboration that the devices provided.

I believe that I was consciously thinking my way through the problems by talking to myself, not necessarily out loud (although I

was aware that I did that too) but “talking to myself” and reviewing my thoughts about one course of action or another. I was trying to understand the damage in my brain as the first step towards understanding how the brain actually works.

Of course, at the time, I didn’t know that what I was doing (mentally trying to assess the damage from my perspective) was the start of recovery itself. The brain is built to think, assess, consider, problem-solve, decide, I



and act on life in any number of activities.

I got better based on the stimuli that my previous habits provided, without knowing that those cognitive and physical activities were the *fuel* that created (the experience-dependent component of) neural plasticity and resultant recovery.

I had been told that I had lost some number of brain cells from my stroke. I wrote in my diary that the brain has about 100 billion brain cells and that I had lost about 2%. I don't know how many were really lost, I just knew that it was a lot.

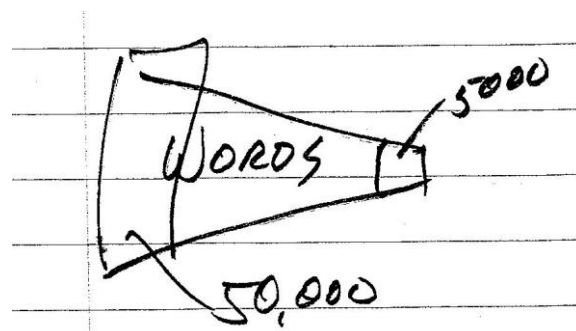
At that point, I knew my language was damaged but I didn't know how much or in what way the damage manifested itself. I had lost a certain number of cells. Would that also mean that a certain number of words were destroyed too? That was my first "thought-problem," and I went in search of the answer.

There is an image in my diary that looks like a traffic cone, labeled with "50,000 words" (I assumed that I had 50,000 words in my lexicon) plus "5,000" words that I (assumed) were lost (I don't know why I used that number.) I remember thinking that there had to have been a mathematical equation; an X number of *cells* lost equating to a Y number of *words* lost.

I started with the assumption that words were word-entities filed in file cabinets. I had no idea how the

brain really works, so I started looking for information that would support my original (and ultimately wrong) supposition.

I started looking for instances of words that were missing in my mind. As I walked around town, I looked at everything I saw and tried to say the words that represented the items. That was the beginning of realizing that my original equation didn't work.



Stroke Diary, dated 11/02/2011

Everything I saw, I knew: roads, lights, stores, signs, cars, buses, birds, clouds, gas stations, trash trucks, gravel, potholes, coins in the street, libraries, and hospitals. I knew what they were. I could "see" them but couldn't "say" some of them. I began to appreciate that this was part of the problem with my language.

I was having a hard time pronouncing some words, or being unable to say them out loud, or feeling like some of the words were "blank" although I could still "see" them. I was conscious of the subjective feeling of "seeing" but not being able to "say" the word.

I started to observe different damaged entities across different modalities. The damage in one

modality wasn't necessarily damaged in the same way as in another.

Everything I did was a dialogue within me (and sometimes with more than one "me"). "What do you think about this?" And the answers were often more questions, "Well, it can't be this, what else can it be?" It was a lively conversation with various "me's" in my diary.

I spent most of my waking hours alone (other than doctors, clinicians and my spouse) for the first year. I was alone but not lonely. I was happy (as much as anyone with a stroke can be) given that I had the time and inclination to study my problems.

My day-to-day musing and internal monologue looked for answers without yet knowing that the act of repetitive, intensive, motivated and problem-solving activities *were* the natural tools designed to induce plasticity and create change and learning in the brain.

Signed: *The Johnny Appleseed of Aphasia Awareness*