

Aphasia Insights!

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“Reorganization of the organism, not reproduction of the stimuli, is the major goal of a stimulation approach.” Pg. 73.

Martin, A. Damien. Ed.D. (1975) *A Critical Evaluation of Therapeutic Approaches to Aphasia*. Veterans Administration Hospital, New York, New York. 10010 [Clinical Aphasiology Paper].

“Reorganization alters behavior, but does not produce specific behaviors. It changes the parameters of behavior, not the content.” Pg. 179.

Powers, E. *Behaviour: The Control of Perception*. Aldine Publishing Co., Chicago, IL., 1973.

Aphasia Nation, Inc. is committed to educating the wider public about stroke and aphasia and the “*Aim High for Aphasia!*” international Aphasia Awareness campaign.

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Aphasia Recovery: *Hildred Schuell and “Schuell’s Stimulation Approach to Rehabilitation”*

By Tom Broussard, Ph.D.

This is the first in a series of articles about the science and scientists behind stroke, aphasia, plasticity and recovery.

Hildred Schuell

was born in South Bend, Indiana and buried at Highland Cemetery in South Bend as well (7/15/1906-2/17/1970). She was a speech pathologist and researcher and graduated with a BA from Milwaukee-Downer College in 1928, an MA at Middlebury College in 1940 and a Ph.D. at the University of Iowa in 1946.

Dr. Schuell was the Director, Aphasia Section, Neurology Service, Veterans Administration Hospital, and Professor of Neurology, Graduate School of Medicine, University of Minnesota (UM), Minneapolis, MN.

The bulk of Dr. Schuell’s work occurred during a fifteen-year

unbroken study from 1948 to 1963 supported by Public Health Service grants from the National Institute of Neurological Diseases and Blindness. Her seminal book, *Aphasia in Adults: Diagnosis, Prognosis, and Treatment* was the result, published in 1964.

Schuell joined the Minneapolis VA hospital staff in 1948 and at that time knew very little about aphasia. However, after 20 years of research, she was internationally known for aphasia research, evaluation and treatment. Her *Aphasia in Adults* text and her test for aphasia (Minnesota



Hildred Schuell

Image from: The National Cyclopaedia of American Biography (1974), rhale1100 on 8 Jun 2021.

Test for Differential Diagnosis of Aphasia) were the baseline for many early aphasia researchers. Apparently, her test for aphasia at UW-Madison was called “The Schuell” however, the same test used in Minnesota, was called “The Minnesota” (Tesak, 2008).

At the time of her death, Dr. Schuell was still the Director of the Aphasia Section at the Minneapolis VA Hospital and Professor of Speech Pathology and Audiology in UM.

Schuell was an ASHA Fellow and received the Honors of ASHA posthumously, nine months after she died of cancer (Tesak, 2008).

Schuell’s stimulation approach to rehabilitation (Coelho, 2008) explains that Schuell was the “prime mover” developing the stimulation approach along with many other prominent scientists. Her work was often

referred to as “Schuell’s therapy” or “Schuell’s stimulation approach.”

As Schuell said, “It would seem that sensory stimulation is the only method we have for making complex events happen in the brain. All the evidence suggest that auditory stimulation is crucial in control of language processes” (Schuell, 1964). Nothing gets into the brain without some sensory stimulation of one kind or another but mostly through auditory stimulation.

Schuell noted the need for adequate stimulus as well. “...we must insure (sic) that the stimuli we use get into the brain. Auditory processes are always impaired in aphasia. As a result, the aphasic patient receives reduced verbal stimulation from his environment, and it is probable that signals that get in are often distorted” (Schuell, 1964).

Sensory stimulation affects brain activity which is converted into electrical activity in the brain. Increasing the stimulus increases the frequency of firing more neurons and stimulating more fibers, increasing with more repetitive stimulation and practice. The brain takes the stimulation activities and integrates the ongoing information at the neural level where learning starts.

Aphasia is classified as a language disorder and is also “a disorder affecting the patient’s *total reaction pattern* due to a disturbance of the integrating capacity of the cortex” (Wepman, 1951). The brain has this “integrating capacity” that has been damaged by a stroke (and other acquired brain injuries). The attempt to reorganize an already damaged brain requires the same type of stimulation activities and pathways that the brain had organized the first time (Martin, 1975).

Schuell believed that our language is not lost or destroyed but “swamped in noise...and general asynchronous chaos of processes whose mass action can no longer be properly coordinated” (Jenkins et al., 1975).

This view of the inference theory (as opposed to the “loss” view) “holds that there is no loss of specific function but that the operation of functions is lessened as a result of the brain damage” (Martin, 1975).



Image from: The National Cyclopaedia of American Biography (1974), Darren DePoy on 13 Apr 2017.

This leads to an emphasis on the action of the patient and the “inner activity which the therapist wishes to stimulate” (Martin, 1975). This approach “treats the patient as an active participant in the reorganization of language and adjusts stimulation to maximize the ability of the patient to participate in the process” (Coelho, 2008).

As Schuell said, “Treating aphasic subjects is relationship therapy from beginning to end” (Schuell, 1964). Our language is acquired and organized through a complex set of sensory systems that aid in the same language acquisition process of aphasia recovery. Schuell is one of the early pioneers in the stimulation approach to aphasia rehabilitation.

Signed: *The Johnny Appleseed of Aphasia Awareness*

The author is a three-time stroke survivor and aphasia. He could not read, write or speak well which took him years to recover. He was lucky enough to find a copy of Schuell’s *Aphasia in Adults* at a second hand store in St. Augustine, FL.

He is Founder and President, Aphasia Nation, Inc., a non-profit organization whose mission is to educate the wider public and especially the hospital and healthcare providers, about aphasia, recovery and plasticity, the foundation of all learning.

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