

## Roots of Orton-Gillingham



Samuel Torrey Orton, assisted by his wife June Lyday Orton, founded the field of dyslexia research (though the term *dyslexia* came much later).



Anna Gillingham and Bessie Stillman (no photo available) developed a system of reading instruction based on Orton's brain research and multisensory learning approach.

### 1800 – 1902: European Brain & Neurological Research

- Research during this time focused on observations of patients with brain injuries (often soldiers) and their difficulties with speaking and using language. Autopsies were performed on patients after their deaths in an attempt to identify areas of the brain involved in language.
- P. Broca and Carl Wernicke were two important figures here. Broca identified a specific area of the left hemisphere of the brain which, when injured, resulted in patients who could speak only slowly, haltingly, and with great difficulty, though their intelligence and language comprehension was intact – today termed *Broca's aphasia*. Wernicke identified another part of the left hemisphere that, when injured, resulted in patients who could speak fluently but whose speech was often nonsensical, and whose comprehension was greatly affected – today termed *Wernicke's aphasia*.
- J. Hinshelwood studied "acquired word blindness" in injured patients, and W. Pringle Morgan identified a 14-year-old boy with "congenital word blindness," perhaps the first documented case of dyslexia in children. Hinshelwood's research later noted that this disorder was more common in males and tended to run in families.

### Biographical Information: Samuel Torrey Orton (1879-1948)

- Born 1879 in Columbus, OH to Edward Orton, president first of Antioch College and then the first president of Ohio State, and Anna Davenport Torrey, President William Howard Taft's aunt.
- Chose to study medicine instead of mechanical engineering; degree from Ohio State, M.D. from University of Pennsylvania in 1905, and a master's from Harvard.
- Studied the pathology of the nervous system & brain at Boston City Hospital and several hospitals and laboratories in MA, PA, and Breslau, Germany.

- Built & directed the State Psychopathic Hospital in Iowa City, IA in 1919 and chaired psychiatry department in the medical school of the State University of Iowa.
- In 1925, Orton set up Mobile Mental Hygiene Clinics, through which (among other research and mental health outreach programs) he identified children who tested at average or above average on the brand-new Stanford-Binet tests of intelligence, but who struggled with reading – most famously, “M. P.,” a 16-year-old from a rural school who “seemed bright but couldn’t learn to read.” Finally there was an intelligence test to confirm the observation that dyslexic children were not deficient in intelligence, just in reading ability! Dr. Orton saw parallels between these children’s reading difficulties and that of stroke victims.

### **Dr. Orton’s Research with Children with Specific Reading Disabilities (ca 1925 – 1948)**

- At SU Iowa from 1925 – 1928 and in New York from 1928-1948, he developed research programs breathtaking in scope and interdisciplinary approach: reading disability studies, experiments with teaching methods, basic human and animal brain physiology research, speech pathology, and the study of specific language problems including reading, spelling, handwriting, auditory comprehension, speech development, stuttering, and language disorders caused by brain injuries – in addition to seeing about 2000 patients in private practice while in NY.
- According to June Lyday Orton, Sam’s wife, his approach brought together medicine, psychiatry, and educational approaches but also “challenged the prevailing currents of thought in each of these disciplines” (xiii, “A Biographical Sketch of Samuel Torrey Orton”)

**MEDICINE** – He did **NOT** believe that children’s inability to read was always the result of a permanent, specific injury to or defect in a specific area of the brain that left children “word-blind.”

Orton’s groundbreaking work led to his theory that several areas of the brain are involved in reading comprehension, and that “strephosybolia” (“twisted symbols”) was not just a defect in one specific area, but involved communication between several areas.

He agreed that their problems were genetic and physiological in origin, but insisted that these children **COULD** learn with the right methods.

**PSYCHIATRY** – Prevailing research (probably heavily influenced by Sigmund Freud’s work during that time) looked for underlying emotional issues as the cause of any childhood problem, including failing in school. Dr. Orton observed that these children’s anxiety and frustration over not being able to learn to read led to their personality problems and acting out – **NOT** vice versa!

**EDUCATION** -- He rejected the “Whole word,” “look-say,” and “sight” methods (based on the 19<sup>th</sup> century work of Horace Mann) that were popular at the time, insisting that children with reading disabilities need to learn words broken down into manageable units, taught in logical sequence. He also held that a multisensory approach was crucial

to helping these children, particularly the tactile-kinesthetic pathway for learning. Unfortunately, today's "phonics-based" methodologies have dropped the multisensory approach to learning, which Orton considered an integral part of phonics education.

### **1936 – 1964: Anna Gillingham & Bessie Stillman's Educational Initiatives**

- Anna Gillingham (1878-1964) taught at Friends Central School in Philadelphia from 1901-05 and was a school psychologist in the Ethical Culture School in New York City from 1905-36, where she worked with Samuel Orton and incorporated his ideas into her work.
- After giving up her quest for a Ph.D., she set about systematically studying the sound system of English from a reading education perspective. Her book, written with Bessie Stillman, *Remedial Work for Reading, Spelling, and Penmanship*, presented a systematic, written curriculum and methodology for applying Orton's multisensory approach to reading intervention. This approach later became known as the Orton-Gillingham approach.
- Gillingham and Stillman "set out on the methodical sorting out of the English language." (Wikipedia), including phonograms, digraphs, diphthongs, spellings of vowel sounds, prefixes, suffixes, roots, and common spelling rules.
- Gillingham and Stillman emphasized visual-auditory, auditory-visual, auditory-kinesthetic, and kinesthetic-visual linkages, and believed "it is essential to establish each linkage with patient care, even into the thousandth repetition" (Gillingham & Stillman, 1936, p. 36).
- After Orton's death, Gillingham co-founded the Orton Society to continue his work – which later became the Orton Dyslexia Society and then the International Dyslexia Association.

### **References and Further Reading**

Gillingham, A. & Stillman, B. (1936, 1997—8<sup>th</sup> ed.). *The Gillingham Manual: Remedial training for children with specific disability in reading, spelling and penmanship*. Cambridge, MA: Educators Publishing Service.

Hallahan, D. P., & Mercer, C. D. (2001). *Learning disabilities: Historical perspectives*. [www.nrclid.org/resources/ldsummit/hallahan.pdf](http://www.nrclid.org/resources/ldsummit/hallahan.pdf)