

The Graduate School
EASTERN ILLINOIS UNIVERSITY



Ancient Greece Symposium

From Demosthenes to Speech-Language Pathology in the 21st Century

How Ancient Greece
Launched the Field of Speech
& Hearing Science

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Demosthenes: A Sketch

- 384 BC: Born
- 377 BC Orphaned (7)
- 366 BC (18) Bankrupted by Guardians: Aphobus, Demophon, Therippides
- 366-364 BC (20) Sued Guardians for Inheritance: Retrieving a Portion
- 363-359 BC: Political Office
- 355 BC: Lawyer: "Logographer (writing briefs) and "Synegoros" (speaking for others)
- 330 BC: Greatest Oration "On the Crown"



Plutarch's Observations of Demosthenes



- Weakness in his voice
- Speech perplexed and indistinct
- Shortness of breath
- Breaking and disjointed sentences
- Obscured meaning
- "Rhotacism" = substituting "l" for "r" as in "lake" for "rake" or "vely" for "very"

Other Observations



- Negative
 - Aeschines: Nickname = "Batalus" or "stammerer"
 - Cicero: "Can't say 'r'"
- Positive
 - Eunomus: Diction "like Pericles" a well regarded orator

Treatment

- Practiced speaking with pebbles in his mouth
- Recited verses while running along the shore to speak over the roar of waves
- Followed a disciplined program of diction, voice and gestures



Other Historical Context

- Moses: "I am slow of speech/of tongue"
 - Treatment: faith
- Herodotus/Greek Historian: "stammered, unintelligible in childhood"
 - Treatment: emigrate south to Libya
- Roman Language Reference: "Balbus" = "stammerer and lisper"
 - Treatment: none identified



16th, 18th, & 19th Century Perspectives



- 1584 Hieronymus Mercurialis
 - References: *chronic vs. accidental stammering*
- 1771 Sauvage
 - States: *defective speech caused by weaknesses of soft palate, uvula, root of tongue*
- 1817 Itard
 - Publishes: *Stammering = pathology of the larynx and tongue*
- 1843 Beesel
 - Publishes: *Defective speech caused by misapplication of breath*

Earliest Systematic Treatments



- 1841 Dieffenbach
 - Surgical: *cut the root of the tongue*
- 1840 Colombat
 - Behavioral: *Metronome + single word exercises*
- 1843 Blume
 - Behavioral: *Breathing, tongue exercises*
- 1889 Coen
 - Medical: *Electricity, ferrum, quinine, opiates*

Emerging Discipline: University of Iowa

- 1878 G. T. W. Patrick: "Empirical Psychology" first course in USA on applied psychology & laboratory study
- 1897 Carl Emil Seashore: Invents the audiometer; first instrument offering reliable measurement of hearing
- 1905 Seashore named Head of first Department of Psychology
- 1908 Seashore named Dean of the Graduate College



20th Century: University of Iowa

- 1917 Seashore: Creates interdisciplinary study via Iowa Child Welfare Research Station; first in the nation.
- 1919 Sarah Stinchfield Hawk: Completes MA multidisciplinary thesis with first modern study of children's problems including stuttering
- 1921 Dr. Glenn Merry: Establishes the first "speech clinic"



Organizational Structure Emerges

- 1923 Merry named President of the National Association of Teachers of Speech
- 1923 Quarterly Journal of Speech Education published
- 1924 Barrows & Cordts publish *The Teacher's Book of Phonetics*
- *Mid-1920s Programs Established at Northwestern (Illinois) and Wisconsin Madison*



Early 20th Century

- 1925 Lee Travis establishes the American Academy of Speech Correction
- 1926 Giles Gray of Illinois launches career & publishes *Bases of Speech*
- 1927 Bryngelson initiates speech science separate from speech department
- 1939 Fairbanks publishes *Voice and Articulation Drillbook*
- 1939 Van Riper publishes *Speech Correction Principles & Methods*



Mid 20th Century

- 1948 Johnson, Brown, Curtis, Edney, & Keaster Publish *Speech Handicapped School Children & Initial Organizational Structure for Study*
 - Articulation
 - Voice
 - Stuttering
 - Delayed speech development
 - Cleft palate; cerebral palsy
 - Impaired hearing
- 1960 Issac Bracket (SIUC) Establishes the *Illinois Speech-Language-Hearing Association*



National Data Mackie & Dunn 1952-1953

- 307,000 speech handicapped children received services in US public schools
- 3700 Members of the American Speech-Language-Hearing Association
- 2256 speech correction professionals across US schools
- 5000 speech correction professionals in all work settings
- 500 to 1000 new professionals required to maintain work force



Illinois Data Martha Black 1953

- \$1,132,577 General Assembly appropriation for speech correction
- 8000 Illinois school children received services
- Training Course available at Illinois, Normal, Northwestern, Augustana
- New programs emerging in **Charleston**, DeKalb, and Bradley
- Thousands yet un-served



Eastern Illinois University

- 1948 First courses in speech correction
- 1951 Dr. McKenzie Buck aligns EIU with state standards
- 1953 Dr. Wayne L. Thurman named Head of Speech Pathology & Audiology
- 1964 Program moves to new Clinical Services Building
- 1971 EIU becomes 3rd ASHA accredited program in Illinois
- 2003 Program moves to the new Human Services Building



Speech Pathology & Audiology 2012

- 150,000 ASHA Members
- 4000 ISHA Members
- Graduate Degree Required
- Evidence Based Practice Guides



Organizational Structure

- Language Disorders
- Autism Spectrum Disorders
- Cognitive Communication Disorders
- Cultural Differences
- Phonological Disorders
- Organic/Neurological Disorders:
Aphasia, Traumatic Brain Injury, Cleft
Palate, Cerebral Palsy, & Others
- Syndromes
- Stuttering
- Voice Disorders
- Hearing Disorders



Was Demosthenes Right?

- Does evidence based research support speaking with pebbles as effective for increasing fluency or articulation?
- Does reciting verses while running along the shore to speak over the roar of waves improve fluency or articulation?
- Does following a disciplined program of diction, voice and gestures improve fluency or articulation?



Approach 1

- Speaking with pebbles in the mouth
 - No evidence that speaking with pebbles in the mouth reduces dysfluency (stuttering) or increases articulation of /r/.
 - Van Riper: Delayed Auditory Feedback (DAF) has been effective with increasing fluency temporarily
 - Fairbanks: Tongue placement programs effectively correct /l/ for /r/ substitutions



Approach 2

- Reciting verses while running along the shore to speak over the roar of waves
 - Fairbanks Approaches: Strong evidence that increasing breath support for speech and slowing speech rate increases fluency
 - Van Riper Approaches: Identification, desensitization, cancellations, easy onset, pullouts increase fluency
 - Fairbanks Approaches: Identification and modeling of /r/ increases accuracy



Approach 3

- Following a disciplined program of diction, voice and gestures
 - Fairbanks Approaches: Repeated practice at sound, word, phrase, sentence levels increases accuracy of /r/ production
 - Van Riper Approaches: Isolation, discrimination practice essential to correct /r/ production



Demosthenes of Today

- Gabrielle Giffords: TBI
- Barbara Walters: PHO
- Kirk Douglas: APH
- Julie Andrews: VOI
- Marlee Matlin: HER
- Temple Grandin: AUT
- King George VI: FLU



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