Developmental Speech Disorders:
An International Perspective

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Lynda R Campbell Memorial Lecture
Saint Louis University
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Schedule

Morning: *Developmental Speech Disorders*
- 9:30-10:45 A Neurological Perspective
- 10:45-11:00 Break
- 11:00-11:30 First Words
- 11:30-12:00 The Late Eight
- 12:00-1:00 Lunch

Afternoon: *An International Perspective*
- 1:00-2:15 World Views
- 2:00-2:15 Break
- 2:15-3:00 Getting Involved
- 3:00-3:30 The Near Horizon
Recent (Funny) Testimonial
Ciao Dr. Bleile!

I'm currently in Naples, Italy doing my internship. One of the older SLP's I work with gave me a difficult case. She's been working with this boy on /r/ for months now, yet hasn't been able to elicit a true /r/. After 20 minutes and an eliciting technique you mentioned, I successfully had him producing /r/ in isolation. At the end of the session the original SLP walked in and almost s*** herself, I swear! haha
Outline

- Neurological Foundations
- Nature of speech acquisition
- Developmental speech disorders
- Neurological basis of treatment
- Conclusions
A Neurological Perspective:

Foundations
Neurological Foundations
Outline

- Two essential ideas
- Cell connections
- Brain development in childhood
- Conclusions
Two Essential Ideas
First Idea

- Speech development results from an interaction between the brain and the environment.
Speech development is possible because major aspects of brain development occur after a child is born.
Cell Connections
Knowledge and Learning

- At a neurological level knowledge and learning involve connections between cells.
Knowledge

The neurological basis of knowledge are brain cells and neurotransmitters that together form an electrochemical system.
Learning

The neurological basis of learning is selective elimination and growth and elaboration.
Selective Elimination
Growth and Elaboration
Brain development in Childhood
Multiple Areas

- Brain weight
- Myelin sheaths
Speech Areas

- Auditory Cortex
- Broca’s Area
Supportive Areas

- Hippocampus
- Prefrontal Cortex
Conclusions
Brain Size and Childhood

1. A large brain gives us the capacity to learn from the environment, and a lengthy childhood gives us a period during which learning can occur.
Brain Development in Childhood

2. The human pattern is for most brain development to occur during childhood as a child interacts with the environment.
Learning

3. Selective elimination and growth and elaboration appear to be the neurological basis of learning.
Ages and Rates

4. Brain functions develop at various ages and rates.