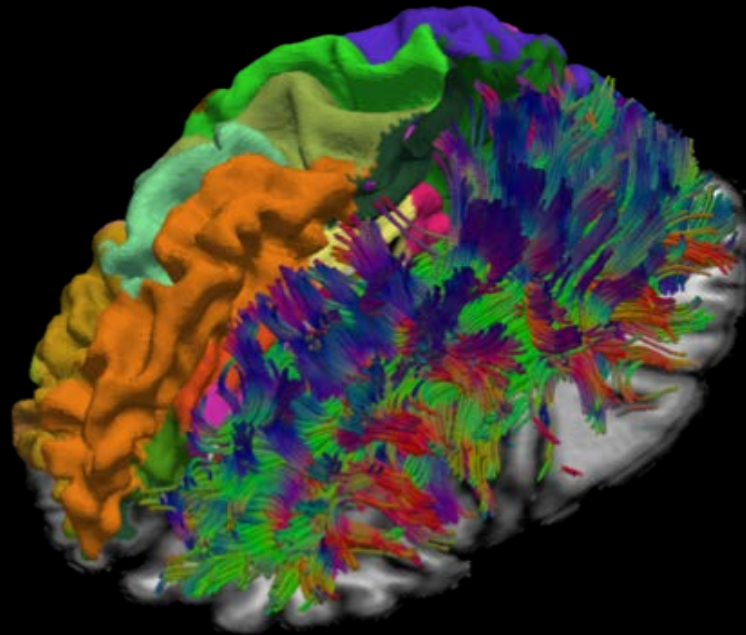


Adolescent Reading Abilities & Education Policies



Laurie Cutting, Ph.D.

Vanderbilt University & Haskins Laboratories

*Education Committee of the Southern Office of The
Council of State Governments, July 19th, 2015*

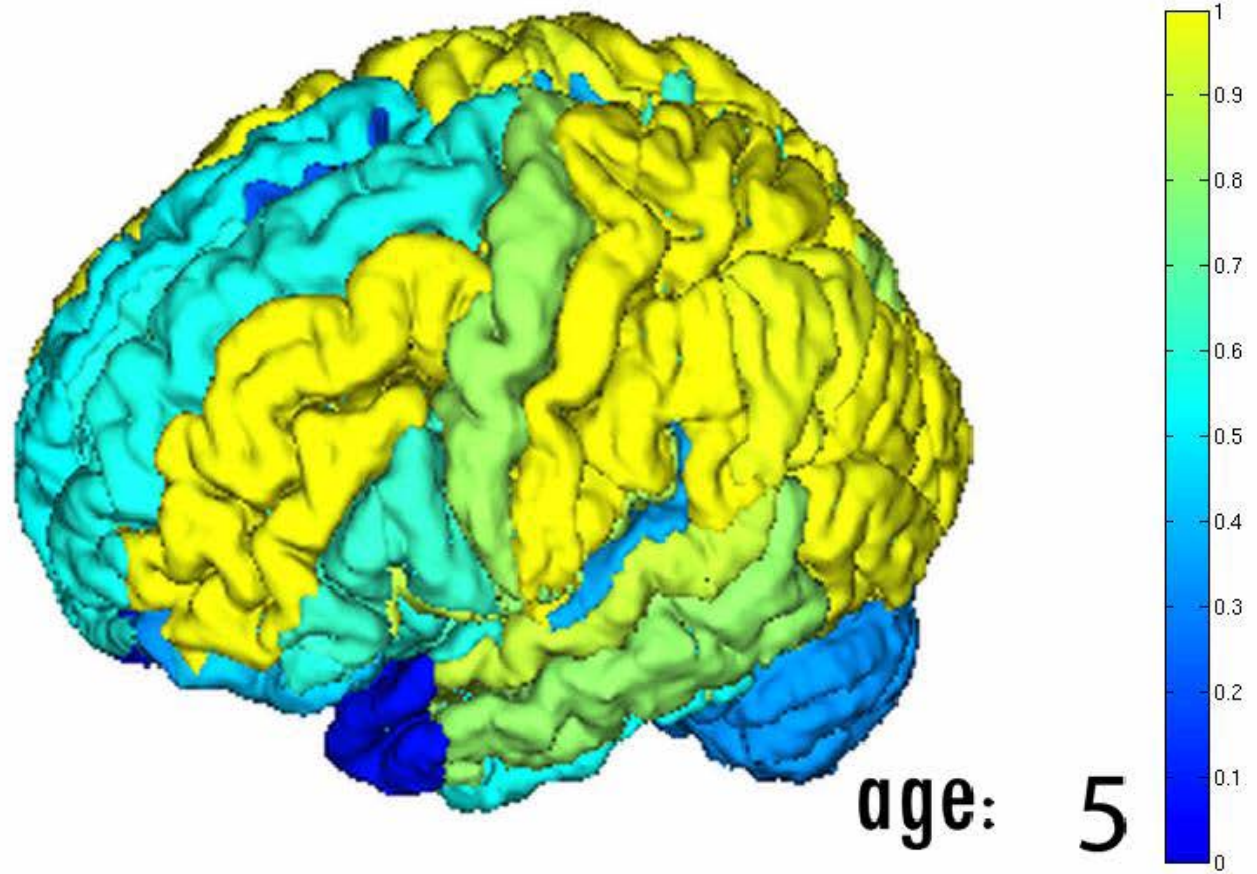
Overview

- I. The developing brain, particularly adolescents
- II. The specific case of reading
 - Components of reading
 - Findings
- III. Implications for policy



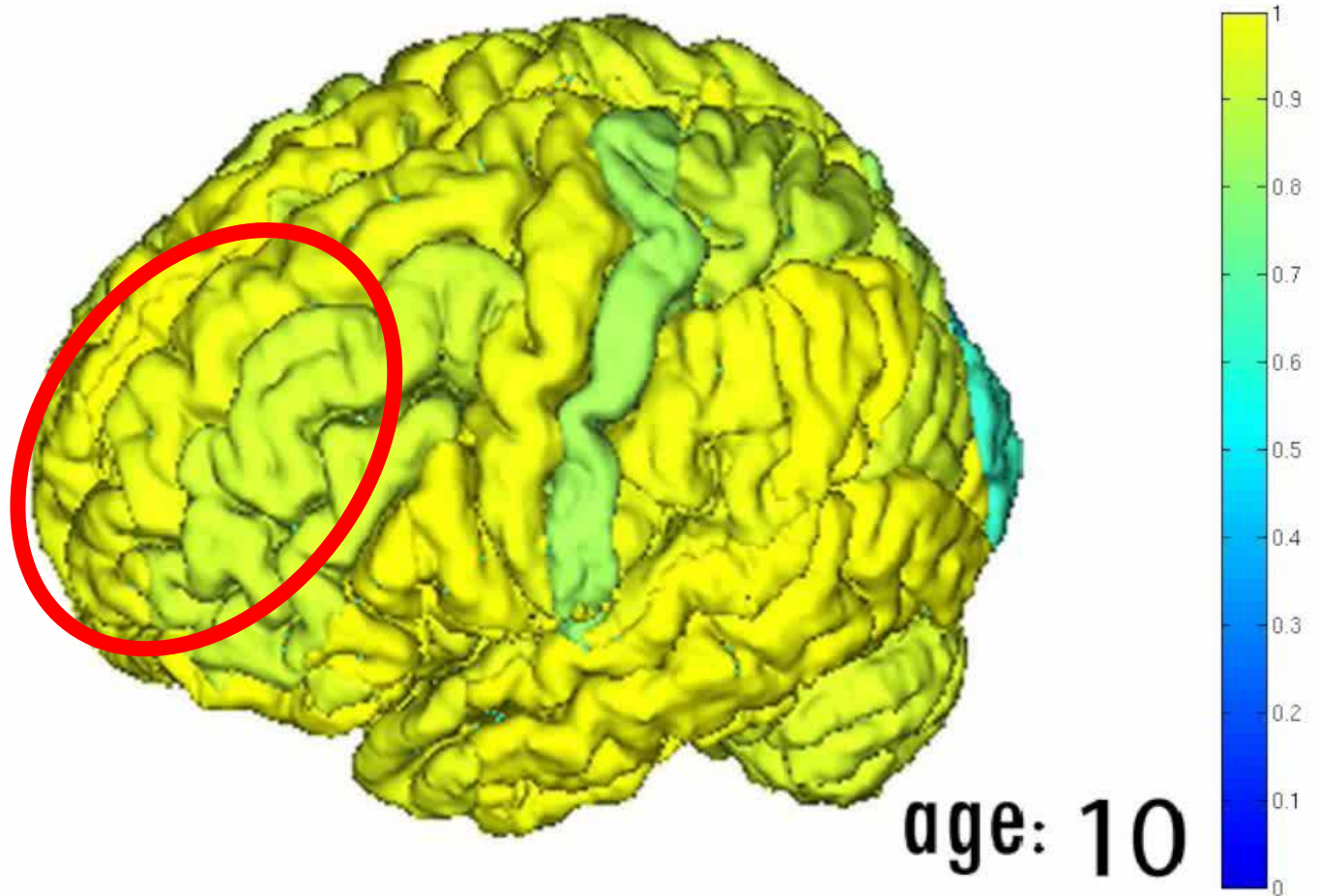
**PART I: THE DEVELOPING BRAIN:
*Growth in Brain and In Education Are
Dynamic and Interactive Processes***







***Adolescence in particular
is a time of important
brain changes***





- One area that is known to be late-maturing is the frontal cortices; adolescence is a time of great change in frontal cortex.
- Frontal cortices are known to be important for executive function, or:

“top-down control processes used when going on automatic or relying on instinct or intuition would be ill-advised, insufficient, or impossible”

~Diamond, p.136 (2013)

PART II: THE SPECIFIC CASE OF READING

A Common Developmental Framework for Reading: The Simple View (but expanded)

LANGUAGE COMPREHENSION

Background
knowledge

Vocabulary

Language Structures

Verbal Reasoning

Literacy Knowledge

WORD RECOGNITION

Phono Awareness

Decoding

Sight Recognition
(of Words)



Skilled Reading



LANGUAGE COMPREHENSION

Background knowledge

Vocabulary

Language Structures

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Literacy Knowledge

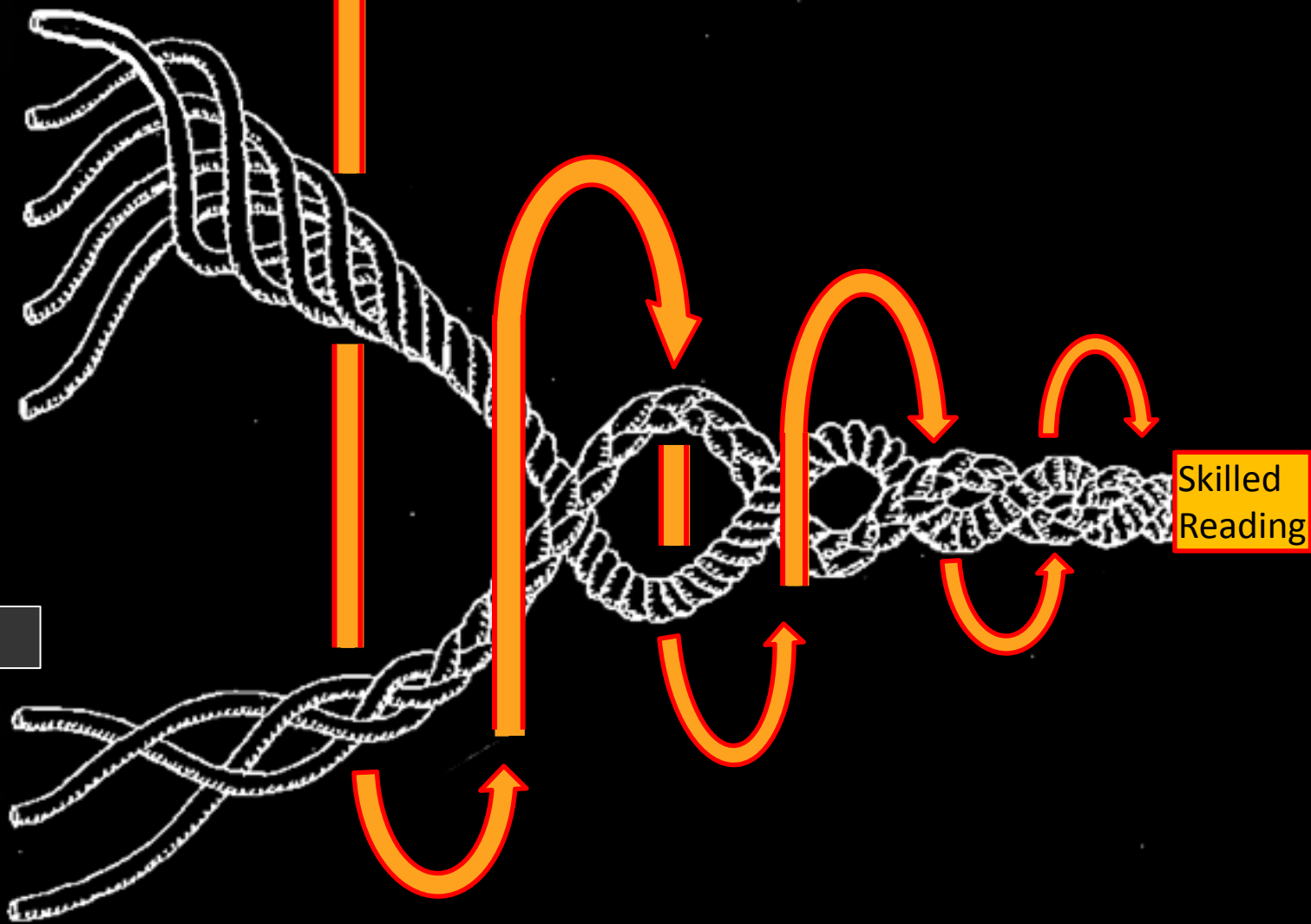
WORD RECOGNITION

Phono Awareness

Decoding

Sight Recognition (of Words)

Executive Function



Skilled Reading

Extended and adapted from Scarborough, 2001

*Can Reading Skills Be Improved
in Poor Readers?*

Yes, especially in younger readers.



***Studies Generally Show
Brain Changes after
Intervention and with
Improvements in Reading***

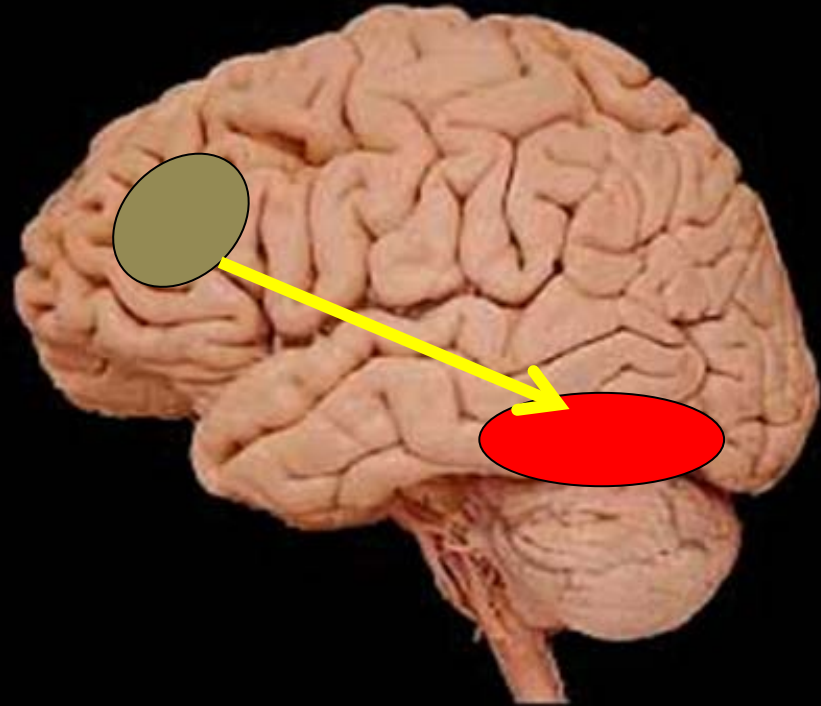
BUT...

Adolescent poor readers typically have problems in both strands, and have more difficulty overcoming their reading problems than younger kids.

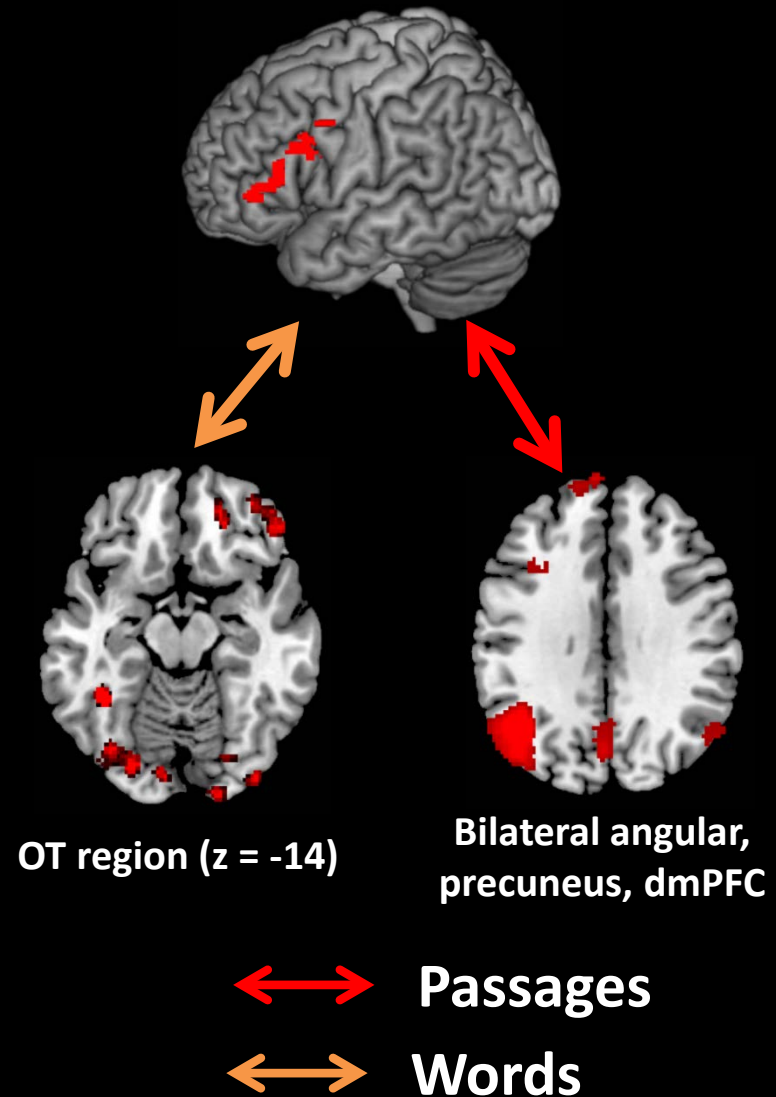
WHY?*

*To truly know, this is a life long pursuit in science, but we have some very good clues

Connections between domain general networks are related to areas in the “lower strand”, and these connections are related to intervention response.



*Domain general networks:
Turns out they are also important for connecting two strands of reading in adolescents*



PART III: IMPLICATIONS FOR POLICY

1. Intensity – many adolescents are “nonresponders”
2. Treating all aspects of reading difficulty
3. Understanding why a child who has been a good reader can all of a sudden have reading difficulty in adolescence.
4. Domain general networks also interact with other academic areas (math, writing).

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Thank you!

Laurie.Cutting@Vanderbilt.Edu

YOUTUBE VIDEO:

<https://www.youtube.com/watch?v=VEk-433IQf8>