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Lecture overview

- The development of reading
 - Three types of writing systems
 - Shared properties across them
 - The simple view of reading (Gough & Tunmer, 1986)
 - Foundations of emerging decoding (reading) skills
 - Evidence from longitudinal studies
- Spelling development
 - Why so hard
 - Three perspectives on spelling development

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Learning outcomes

1. Name three theoretical frameworks for understanding the development of spelling skills
2. Outline the key stages that children go through in learning to spell
3. Evaluate the notion of 'stages'
4. Explain what the term 'statistical learner' means

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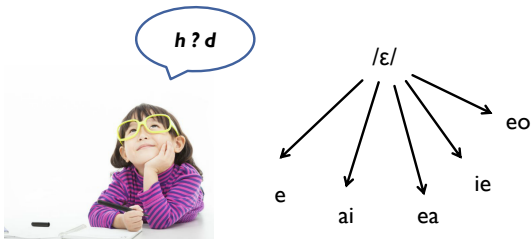
Spelling: the 'Cinderella' of literacy



- Integral part of literacy but significantly under-researched
- Just the reverse of reading? NO!
 - Much more difficult than reading (especially in English)
- Develops more slowly than word recognition
- Most seriously impaired skill among people with dyslexia

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h ? d

/ε/

e ai ea ie eo

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Why so hard?

Diachronic change in phonology not matched with reform in orthography

Retained foreign spellings but Anglicized pronunciation of imported words

Encoding of morphology

Homophony

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Three perspectives on spelling development

- Broad conceptualizations of early spelling development through different methodological approaches
- 1. Phonological perspective
- 2. Constructivist perspective
- 3. Statistical learning perspective

Pollo et al. (2007)

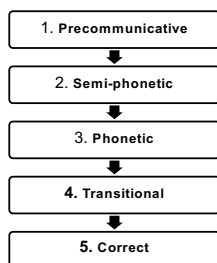
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Phonological perspective

- Biggest challenge when learning to spell (at least in alphabetic writing systems) is understanding the idea that letters represent sounds
- Learning to spell captured in 3 to 5 main stages (e.g., Gentry, 1982) or phases (e.g., Ehri, 1998)
- From random letter strings (nonphonological) to phonological adequate/ conventionally correct

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Gentry(1982)



Ehri (1998)



llloojn

ke

ckeik

cak

cake

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Evidence for the phonological perspective

- Substantial evidence that phonology is important and partly represented in conventionally incorrect spelling attempts (**invented spellings**) (Read, 1975, 1986; Treiman, 1993)
 - *truck* → *CHRAC* motivated by the phonetic similarity between /t/ before /r/ and *ch*
- Note that this goes against the idea that spelling is learnt via pure memorization

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Evidence against the phonological perspective

- Bowman & Treiman (2008)
 - No evidence for pre-alphabetic phase among US 4-year-old children who classify as pre-readers
 - AP for ape and MA for may are better learnt than OM for ape and PO for may: These differences are unpredicted on basis of phase/stage theories
- On stages in general....
 - Not really discrete, they overlap in time
 - Individual differences in learning styles
 - 'Mature' strategies (e.g., sensitivity to morphology) emerge earlier than predicted

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Cassar & Treiman (1997)

- Assessed kindergarteners' sensitivity to untaught orthographic patterns governing doublet letters
- "Choose the funny word that looks the best"
 - e.g. baff vs bbaff, heniss vs hhenis
- (Remember these are predicted to emerge late)
- Demonstrated they were above chance at choosing the conventionally more correct spelling
- Against strong prediction that children pick up on the most advanced aspects of their orthography at the latest stage/phase of spelling development

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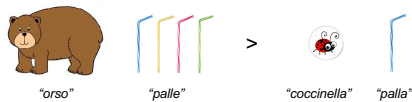
Constructivist perspective

- Influenced by Piaget's developmental stage theory
- Details sets of hypotheses children have about writing (note that term is preferred over spelling)
- Acknowledges early/informal knowledge *pre-literacy*
- **Ferreiro & Teberosky (1982)**
 - *Presyllabic* stage: Children can tell apart writing from drawing
 - *Syllabic* stage: first attempt to represent in print the sounds of language (1 symbol/syllable)
 - *Alphabetic* stage: letters stand for smaller sounds, namely, phonemes

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Constructivist perspective

- Presyllabic stage: Children can tell apart writing from drawing
 - Minimum quantity: BDC > BC
 - Variation hypothesis: BDC > BBB
- However (Stella & Biancardi, 1990) ...



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Constructivist perspective

- *Syllabic* stage: first attempt to represent in print the sounds of language (1 symbol/syllable)
 - Case studies supporting the theory (e.g. Nunes et al. 1984)
 - But what's the baseline? i.e., how often can someone be expected to produce these by chance alone?
- Not universal
 - Evidence for consonantal rather than monosyllabic spellings in English (Kamii, Long, Manning, & Manning, 1990)

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Concluding thoughts & remarks on perspectives in spelling development

- Three approaches for studying and understanding spelling development
- Different levels of 'positive' emphasis on the appropriateness (**conventional accuracy**) of children's spelling attempts
- Implications for spelling instruction
- Flexible view needed to account for individual differences in literacy and other cognitive abilities

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Core & recommended reading

- Bowman, M., & Treiman, R. (2008). Are young children logographic readers and spellers? *Scientific Studies of Reading*, 12, 185-202.
- Cassar, M., & Treiman, R. (1997). The beginnings of orthographic knowledge: Children's knowledge of double letters in words. *Journal of Educational Psychology*, 89, 631-644.
- Ehri, L.C. (2005) Development of sight word reading: Phrases and findings. In Snowling, M.J. and Hulme, C. (Eds) *The Science of Reading: A Handbook* (pp.135-154). Oxford, Blackwell.
- Pollo, T. C., Treiman, R., & Kessler, B. (2007). Three perspectives on spelling development. In E. J. Grigorenko & A. Naples (Eds.), *Single word reading: Cognitive, Behavioral, and Biological Perspectives*. Mahwah, NJ: Erlbaum.
- Saffran, J. R., Aslin, R. N., & Newport, E. L. (1996). Statistical learning by 8-month-old infants. *Science*, 274, 1926.

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