

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

Nancy Cushen White, Ed.D.

46th Everyone Reading Conference
on Dyslexia and Related Learning Disabilities

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS
PHONOLOGY + PHONICS + MORPHOLOGY + ETYMOLOGY = ORTHOGRAPHY
→FOUR CONVERGING PATHS EN ROUTE TO READING AND WRITTEN EXPRESSION←

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English Orthography
Preserves Bits of History

Richard Venezky—1999—page 4

* “English orthography is not a failed phonetic transcription system, invented out of madness or perversity.

* Instead, it is a more complex system that preserves bits of history (i.e., etymology), facilitates understanding, and also translates into sound.”

English Orthography—David Crystal—2012

Ultimate Test of the Validity of a Spelling Principle:
“We use it to predict the spelling of words as yet unborn.”

“The underlying system is robust and regular, but struggles to be visible through the layers of orthographic practice introduced over the centuries by writers with different linguistic, cultural, and political backgrounds.”

“... the best of way of defeating an enemy is to get to understand him.”

* Spelling is a linguistic problem that must be solved using linguistic tools. 3

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Bruner's Law

"We want kids to experience **success and failure as information**—*not* success or failure."

—Jerome Bruner

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Orthography
Etymology + Morphology + Phonics + Phonology

◆ **Etymology** → *interrelationships* of words with their own *origins* and with *other* words that *share those origins*—through *history*

◆ **Morphology** → sequence and structure of *meaningful units*—in English *today*

◆ **Phonology** → units of *speech* that create meaning *only when combined*

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English's "Loose Immigration Regulations"
Richard Venezky—1999—page 7

↑ "English has always had rather loose immigration regulations for vocabulary.

↑ Words, unlike people, have been forever welcomed, regardless of their origins.

↑ Neither quotas nor IQ tests have ever been required for admission to the lexicon.

↑ And unlike the melting-pot emphasis on assimilation in most of American history, orthography has been unencumbered by pressures to shed its alien

↑ "Consequently, *bijou*, *chalet*, and *chauffeur* retain their French garb, *trekked* smacks of Dutch (via Afrikaans), *ohm* and *Fahrenheit* are still German, and *vodka* remains recognizably Russian."

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Etymology
www.etymonline.com
"Nuggets often nestle in etymonline."
-a 4th grade student of Old Grouch-

INTERRELATIONSHIPS

- Words with their origins
- Other words with the same origin

French → coquette, antique, contour

Italian → piano, Monticello

Yiddish → chutzpah, schlock

Spanish → mesa, taco

Greek → polychrome, philosophy, mythology

ROOTS—Base Elements—Stems

- ❖ Etymological → strictly historical term (diachronic)
- ❖ Etymological source of the base element

Roots—BASE ELEMENTS—Stems

- ❖ Essential kernel of a word's meaning
- ❖ No inherent historical reference—strictly structural
- ❖ Spelling of a word as it is today

Roots—Base Elements—STEMS

- ❖ All stems are complex words, but not all complex words are stems.
- ❖ Base element that has already acquired another element [base or affix] **AND** to which a further affix or base element can be added

ROOTS-Base Elements-Stems

Eponym → a word derived from the name of a person

⊙ <sandwich> → The Earl of Sandwich was a compulsive gambler—who did not want to stop gambling when he was hungry.

⊙ <atlas> → Atlas was a 2nd-generation Titan who personified the quality of endurance. He led the Titans in a rebellion against Zeus and was condemned to bear the heavens upon his shoulders. Illustrations on covers of early books of maps showed Atlas holding up the globe; today a book of maps is called an atlas.

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ROOTS-Base Elements-Stems

Toponyms

Toponym → a word derived from the name of a place

⊙ The root of <fez> is <fez>. This word, meaning cylindrical red headgear with a tassel, is named after the Moroccan city of Fez.

⊙ Examples of **Toponyms**:

- <hamburger>
- <cologne>
- <fez>

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Morpheme → smallest meaningful unit of language

Count the morphemes in these words:

- *elephants → elephant + s
- *election → e + lect + ion
- *accommodation → ac + com + mode + ate + ion
- *interrelationship → inter + re + late + ion + ship?
- *indecisive → in + de + cise + ive
- synchronous → syn + chrone + ous
- beneficial → bene + fice + i + al
- conscious → conscience → conscientious → science
- photograph → telegraph → graphic → geography

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BIG Ideas

❖ Words with spelling connections also have meaning connections.

❖ We don't know the pronunciation of a base until it surfaces in a word.

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Base Element → <sci>
Real Spelling www.realspelling.fr

science omniscient prescient conscientious	un	con	sci "know"	ence	es		
	sub			ist			
	omn	i		ent	fic	al	ly
				i	ous	ly	ness
	pre	ne		ous	ly	ness	
				on	able	ably	

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ENGLISH Is a MORPHOPHONEMIC Language

- English is a morphophonemic language → the pronunciation of polysyllabic words is primarily determined by placement of stress.
- Morphophonemics → interaction between morphological and phonological processes (Venezky, 1999).
- As the number of syllables changes, the stress shifts—and the pronunciation of individual morphemes (and syllables) will change—but the spelling does not change.
- The study of spelling—with a focus on the morphophonemic nature of English—connects even unfamiliar words with a common base to their meanings.

finish finite infinite definite infinitesimal final confine infinitive

▪ Words with spelling connections have meaning connections.

ENGLISH Is a MORPHOPHONEMIC Language

Elaine Silliman, Ph.D.

ASHA Fellow—Board Certified Specialist in Child Language and Language Disorders

◆ **“Spelling is the engine that interconnects new word formation with vocabulary—because English is morphophonemic.**

◆ **Therefore, the teaching of spelling from a morphophonemic framework, should begin in kindergarten.”**

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Morphophonemics	
* <u>invent</u>	in <u>vent</u> ion
* <u>electric</u>	electri <u>ci</u> an
mathema <u>ti</u> cian	mathema <u>ti</u> cs
* <u>definite</u>	de <u>fin</u> e <u>fin</u> ite
<u>speci</u> fic	spe <u>ci</u> es <u>spe</u> cial
<u>gram</u> mar	gram <u>ma</u> rian
<u>poli</u> tics	poli <u>ti</u> cal
* <u>inspiration</u>	ins <u>pi</u> re
<u>rhet</u> oric	rhet <u>ori</u> cal

Morphology	
Morpheme → smallest unit of meaning	
Linguistic Entity → whole word → part of a word → single phoneme	
* <u>accept</u>	ex <u>cept</u>
<u>elicit</u>	il <u>lici</u> t
<u>affect</u>	eff <u>ect</u>
* <u>fiscal</u> -1560s, "pertaining to public revenue," etymological notion: "public purse"...taxes	<u>physi</u> cal
<u>speci</u> fic	pa <u>ci</u> fic
<u>consci</u> ous	consci <u>en</u> ce
* <u>dentist</u>	swi <u>ft</u> est
* <u>hostess</u>	fa <u>mo</u> s
<u>spectroheliograph</u> -instrument for taking photographs of the sun in light of one wavelength only	

Another <u>BIG</u> Idea
❖ Words with <u>spelling connections</u> also have <u>meaning connections</u> .
❖ We don't <u>know the pronunciation of a base</u> until it <u>surfaces in a word</u> .
❖ The meanings of specific words need to be taught in ways that support students in understanding <u>how words are connected semantically and morphologically</u> (Graves, Juel, & Graves, 2004).

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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**Denotation and Connotation
NOT THE SAME**

- ❖ **BOTH** Denotation AND Connotation must be considered, but they are **NOT THE SAME**.
- ❖ Denotation → refers to *literal, primary meaning*
- ❖ Connotation → refers to other characteristics *suggested or implied*

◆ A word like <mother> **denotes** "a woman who is a parent" but **connotes** qualities such as protection and affection.

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Free Morphemes-Bases

- ❑ Can stand alone as words
- ❑ Do not have to be combined with other morphemes
- ❑ May be made up of one or more syllables

<u>FUNCTION WORDS</u>	<u>CONTENT WORDS</u>
▪ conjunctions	▪ nouns
▪ prepositions	▪ verbs
▪ pronouns	▪ adjectives
▪ helping verbs	▪ adverbs
▪ articles	

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Function Words

- ❑ Have little meaning of their own
- ❑ Give information about the function of lexical [content] words
- ❑ Are the main concern of grammar books
- ❑ Are usually unstressed (unaccented)

Function Words

- conjunctions
- prepositions
- pronouns
- helping verbs
- articles

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WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Content [Lexical] Words

- Have denotation, or specific meanings
- Can be defined in isolation
- Are the principal concern of dictionaries
- Are usually stressed [accented]

Content-Lexical Words

- nouns
- verbs
- adjectives
- adverbs

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**Lexical [Content] Words
Must Have At Least Three Letters**

odd egg err ebb

When a lexical [content] word and a function word are homophones, one more letter is used to spell the lexical word.

in	for	by	to	or	but	be	we
inn	fore	bye	too	ore	butt	bee	wee
		buy		oar			

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**Lexical [Content] Words
Must Have At Least Three Letters**

◇ What about one-syllable words ending in the phoneme /ɹ/?
<cry> <dry> <try> <sly> <pry> <shy>

These words can be spelled with a <y> grapheme to represent their /ɹ/ phoneme because their spelling includes a consonant blend or consonant digraph thus providing the 3 letters required for a lexical word.

<lie> <die> <vie> <tie>

These words cannot be spelled with the single letter <y> grapheme to represent their /ɹ/ phoneme because they begin with a single consonant grapheme and therefore need an additional letter to meet the minimum of three letters required for a lexical word—so <ie> must spell /ɹ/.

24 Thanks to Gina Cooke for her insights on use of graphemes <y> and <ie> to spell /ɹ/.

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Affixes → Prefixes and Suffixes

□ **Affixes** → bound morphemes that generate derivations and inflections of a base element

◆ Prefixes

- ◇ Prefixes precede base elements within words.
- ◇ A single base element may have multiple prefixes.

◆ Suffixes

- ◇ Suffixes follow base elements within words.
- ◇ A single base element may have multiple suffixes.

Although there are only about 50 suffixes used in everyday English, suffixes appear in 50% of English words (David Crystal, 2012).

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Roots-Base Elements-STEMS

□ How do **STEMS** differ from roots or base elements?

- *Complex words to which additional affixes can be added
- Base element that has already acquired another element [base or affix] **AND** to which a further affix or base element can be added
- All stems are complex words, but not all complex words are stems.

*Morphologically **Complex Word** → at least two morphemes

elect = e+lect joyful = joy+ful walked = walk+ed

resist = re+sist science = sci+ence
anyone = any+one rusty = rust+y

*Morphologically **Simple Word** → a single morpheme

string baffle rhythm corner liver cyst

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Connecting Vowel Letter

□ It **connects**; it's a **vowel**; it's **ONE** vowel letter.

- ◇ A connecting vowel letter **follows** a base element within a word.
- ◇ Only **one** connecting vowel letter may follow a base element.

-synonym = syn + onym

◇ **Default connecting vowel letter in Latin:** <i>
-proficient = pro + fice + i + ent

Sometimes <u>:

-situation = site + u + ate + ion

Occasionally <e>

-righteous = right + e + ous

◇ **Default connecting vowel letter in Greek:** <o>

-thermometer = therm + o + meter

-psychology = psych + o + loge + y

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Base Elements

**Free Bases—Bound Bases
Twin Bases**

Free Bases can function as single words independently.
will the text she with run warm

Bound Bases are only words in combination with at least one other element.
sponse ject rupt chrone phys fer tain sci

Twin Bases have alternative forms.
vide-vise scribe-script tend-tense duce-duct flex-flect

- o Any or all may appear in the same word family.

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- o Any or all may appear in the same word family.

Different Bases derived from the same root:
same etymological family—different morphological family
face-fice-fact-fect → to make tain-tent-tine-tene → to hold

The meaning of the word is the sum of its parts.
How many words can you think of that share these Latin base elements?

mobe-mote-move ↗ *same etymological family*
↘ *different morphological family*

text

fide

***crede**

***duce-duct** *twin bases*

fer

sponse-spond *twin bases*

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The meaning of the word is the sum of its parts.
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mobe-mote-move ↗ same etymological family
↘ different morphological family

mobility → **emotion** → **moveable**

text → **textile** → **context** → **texture** → **textual**

fide → **confident** → **diffident** → **fideliy** → **fiduciary**

crede → **accredit** → **creditor** → **credulous** → **credential**

fer → **refer** → **reference** → **referral** → **prefer** → **different**

duce-duct *twin bases* → **introduce** → **introduction**

sponse-spond *twin bases* → **respond** → **responsive**

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A ****Sample for Illustration**

Basic Daily Lesson Plan Format **INTEGRATED** Structured Literacy Lesson
Slingerland® Multisensory Structured Language Approach

LEARNING TO WRITE

1. Learning new letters
2. Practicing letters newly learned
3. Review of letters previously learned
4. Teaching and Practicing letter connections (Cursive)

AUDITORY	VISUAL
<p>A. Phoneme-Grapheme Practice Auditory ● Visual = Phoneme ● Grapheme</p> <p>B. Encoding (segmentation)</p> <p>C. Spelling</p> <ol style="list-style-type: none"> 1. Base Elements + Affixes 2. Unpredictable Words 3. Phrases—Sentences—Paragraphs <p>D. Dictation</p> <p>E. GOAL: Independent Writing</p>	<p>A. Grapheme-Phoneme Practice Visual ● Auditory = Grapheme ● Phoneme</p> <p>B. Decoding (blending)</p> <p>C. Preparation for Reading (Pre-Teaching Vocabulary and Syntax—words, phrases, grammar, punctuation, etc.)</p> <p>D. Reading Connected Text (Structured Reading ● Studying)</p> <p>E. GOAL: Independent Reading</p>

**Two Types of Suffixes:
Inflectional and Derivational**

Inflections and derivational morphemes are two kinds of morpheme units that operate differently in word formation.

- **INFLECTIONAL SUFFIXES** do not change the part of speech of the word to which they are added. The word continues to be a **noun, verb, or adjective**—even with the inflection.
- **DERIVATIONAL SUFFIXES** usually, but not always, change the part of speech of the word to which they are added.

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More Morphophonemics
Phoneme Shifts

- ◇ English is a morphophonemic language.
 - *Pronunciation of polysyllabic words is primarily determined by placement of stress.
- ◇ Morphophonemics → interaction between **morphological** and **phonological** processes (Venezky, 1999).
 - * Phonological (pronunciation) changes occur in morphemes (minimal **meaningful** units) when they combine to form different words
 - † As # of syllables changes, stress shifts—and pronunciation of individual morphemes (and phonemes within) will change.
 - † Words with spelling connections have meaning connections.
 - † The study of spelling—with a focus on the morphophonemic nature of English—connects even unfamiliar words with a common base to their meanings.

Morphophonemics
Vowel Phoneme Shifts

Long Vowel Sound	Short Vowel Sound
* <u>sā</u> ne	<u>să</u> nity
<u>vī</u> ce	<u>vī</u> cious
<u>nā</u> ture	<u>nă</u> tural
<u>telescō</u> pe	<u>telescō</u> pic
* <u>stū</u> dious	<u>stŭ</u> dy
<u>analy</u> ze	<u>analy</u> sis
* <u>abbrē</u> viate	<u>brē</u> vity
<u>decī</u> sive	<u>decī</u> sion
<u>fī</u> nite	<u>fī</u> nish
<u>cy</u> clist	<u>bicy</u> cle

The Elusive SCHWA (ə)

- 1895 from German *schwa*
- Ultimately from Hebrew *shewa*
- “A neutral vowel quality”
- Literally means “emptiness”

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Accent—Stress Hints

1. ___ ' ___	4. ___ ' /sh/ ___
2. ___ base element'	5. ___ ' ity
___	___ ' ic
3. ___ ' ___	___ ' ial
___ ' ___	___ ' ian
	___ ' ion
	___ ' ious

*British English pronunciation variations (e.g., conTROVersy, CONtribute)

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**Accent—Stress Hints
with examples**

1. ___ ' ___	spider, scramble, olive, crisis
2. ___ base element'	provide, invert
___ base element' ___	repellent, committee, referral
3. ___ ' ___	cucumber, government, reference
___ ' ___	ridiculous, provisional, reciprocal
4. ___ ' /sh/ ___	education, delicious, proficient
5. ___ ' ity	responsibility, tenacity, personality
___ ' ic	electric, cosmic, authentic, algebraic
___ ' ial	familial, radial,
___ ' ian	Italian, crocodilian, physician,
___ ' ion	champion, religion, onion
___ ' ious	scrumptious, curious, delicious

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SCHWA

- ◆ Vowel sound in an unstressed (unaccented) syllable
- ◆ Degrees of Schwaness
- ◆ The sound of the schwa is **NOT** the same as the stressed (accented) /ū/ as in /must/.
- ◆ *That would be impossible.*
- ◆ *Why?*

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The Elusive SCHWA /ə/

I want to be a schwa. A schwa is never stressed.

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Romance (Latin) Layer

Words of Romance origin frequently become **affixed** (i.e., have prefixes and suffixes). There are **bound base elements** that work as meaningful units **ONLY** in **combination** with other morphemes, and there are **free base elements** that can stand alone as meaningful units.

press	pressed	pressure	impression
reject	interrupted	concise	decision
transmitting	prevention	sequence	propeller
pulse	repulse	propulsion	science

[Nist, J. (1966). *A Structural History of English*. NY: St. Martins Press]

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Triple Word Form Theory Phonology—Orthography—Morphology (Berninger et al., 2003)

◆ Learning to read and write words is a process of increasing awareness and coordination (**integration**) of **three different types** of word forms and their parts:

- **Phonological Awareness**
- **Orthographic Awareness**
- **Morpheme Awareness.**

◆ Multidisciplinary evidence for **triple word form** theory continues to accumulate.

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Layers of the English Language
 borrowed from Marcia K. Henry

GREEK
 specialized words
 mostly scientific
 dependable
 some common non-phonetic
 phone + o + graph ← combined base elements → neur + o + psych + o + loge + y

LATIN
 academic language
 content area text
 "high class" words
 formal settings
 mostly phonetic

OLD ENGLISH—ANGLO-SAXON
 compound words
 common, everyday
 down-to-earth
 ordinary situation
 many non-phonetic

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Old English Layer

▪ **Compounds** are characterized more by their stress pattern than by their spellings. Stress, or accent, almost always occurs on the first word of the compound. Spelling may include a hyphen or a space.

earthquake oatmeal baseball snowman

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Old English Layer
COMPOUNDS

oatmeal	honky-tonk	apple pie
applesauce	day-to-day	green beans
brainwash	two-way	under water
baseball	under-the-table	honor roll
cornbread	twentieth-century	business suit
48 earthquake	old-fashioned	credit card

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Homophone Principle Venezky (1999)

* When two words are pronounced the same, if possible, they will be spelled differently to mark that difference in meaning.

* "... with one etymological concept—the *homophone principle*—we can drop the false assumption that homophones are confusing because they are spelled differently..."

heal health	please pleasant	steal stealth
loan lone	grown groan	beet beat
scene seen	sight site cite	knead need

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Old English Layer

Words of Old English origin are characterized as the common, everyday, down-to-earth words used frequently in ordinary situations.

What is the base element in <happiness>?

hap [*chance*]

happy mishap happen happily happiness

happenstance

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Saga of the Scribal-o

- Before the printing press, monks who were scribes noticed that many of their quill-penned letters were difficult to read.
- Most troublesome were the letters formed with *similar, beginning, up-and-down strokes*:

m n w u r v

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Saga of the Scribal-o

- Therefore, the wise scribes changed the vowel grapheme <u> to o when <u> appeared adjacent to one of the letters listed.
 - The scribes could not, however, alter the pronunciation of the words that were affected by the spelling change they made.
 - Therefore, the grapheme o in words like, *brother, love, some, and wonder*, is pronounced /u/.
- What about *month* and *Monday*?

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Adapted from Carol Murray

Think of a word that ends in v...

- | | |
|----------|-----------------|
| ▪ have | ▪ believe |
| ▪ starve | ▪ move |
| ▪ love | ▪ arrive |
| ▪ strive | ▪ heave |
| ▪ nerve | ▪ relative |
| ▪ give | ▪ motive |
| ▪ twelve | ▪ beehive |
| ▪ grieve | ▪ authoritative |
| ▪ live | ▪ attractive |

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Why don't English words end in <v>?

- The letter <u> shares history and behavior with <v> and has a spelling partnership with <o>.
- The letters <u> and <v> used to be written—and printed—identically—something like <v>.
- The early printers did develop two versions of the letter—<v> and <u>—but choice between them was determined ONLY by their position in the word, not whether they were functioning as the vowel or the consonant letter.
- When vowel <u> or consonant <v> appeared at the beginning of a word, it was written <v> but when either occurred inside a word it was written <u>:

*vnder have loue
vpon every ouer vse*

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Spelling /r/ with wr...

- Usually one syllable
- Meaning associated with “twisting”

wring	wreath	wrestle	wrangle	write
wrath	wrinkle	wrong	wrench	wrist

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Words that begin with tw...

- Meaning associated with “two”

twins	twine	twinkle
tweezers	twelve	twenty
betwixt		between

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Etymological Marker?
Venezky 1999

Ⓞ The <w> in <two> is not there as a grapheme representing a phoneme.

Ⓞ It is there to inform readers that <two> is the spelling for the number.

Ⓞ ... so there is sense to the <o> in <people> when we consider words like <popular> and <population>—from the same etymological family.

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Why does <ey> spell /ā/ in <they>?

they

them

their [y changed to i inside a word]

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Why is there an <l> in <would>?

will → would

shall → should

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...so what about the <l> in <could>?

ANALOGY

- Words that sound similar tend to be spelled the same. This process of **analogy** affected many new words as they arrived in English—and some older spellings were changed to conform. (p. 121, Crystal, 2012).
- Throughout the history of English spelling, even in tiny groups of words (e.g., auxiliary verbs *would-should-could*), analogy has had influence.
 - + Though they all look the same now, there was no <l> in <could> originally.
 - + The other two verbs both had an <l>: *wolde-sholde*.
 - + When <wolde> and <sholde> became <would> and <should> in late Middle English, scribes decided there should also be an <l> in <could>.

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Is the spelling of <does> unpredictable?

do	does	doing	done
go	goes	going	gone

Is the spelling of <does> unpredictable?

*do	does	doing	done
*go	goes	going	gone

The spelling of <does> is predictable, but the pronunciation is not.

**lexical words with only two letters*

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Latin Layer

Derivational → Word-Building

- **Words derived from Latin roots/base elements are most common in content area textbooks.**
- Analysis of the number of distinct words in printed school English showed that students encountered over 88,000 “distinct” words in texts through ninth grade (Nagy and Anderson, 1984).**
- About half the words in printed texts through ninth grade occur once in a billion words of text or less (e.g., *inflate, extinguish, nettle*).**

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WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

Nancy Cushen White, Ed.D.

Latin Layer
Morphological Awareness

- ****For every word a student learns, there are usually between one and three related words that should be understandable.**
- ****There are degrees of semantic transparency in words**
 - **Apparent:** *red* → *redness*
 - **Less Apparent:** *apply* → *appliance*
- ****The less morphological awareness a student has, the more distinct words need to be learned.**
- **Semantically transparent words are skewed toward the low end of the frequency distribution to a greater degree than morphologically basic words or semantically opaque words (Nagy and Anderson 1984).**
- **About 60% of the unfamiliar words encountered in the middle school years and beyond are sufficiently transparent—even though they are morphologically complex in structure and meaning—that a reader might be able to infer the meaning of the word (Nagy et al., 1989).**

Romance Layer

How many words can you think of that share the Latin base element <nate>?

<u>nature</u>	<u>nation</u>
<u>innate</u>	<u>national</u>
<u>natural</u>	<u>native</u>
<u>naturalize</u>	<u>perinatal</u>

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Romance Layer

How many words can you think of that share these Latin base elements: <secute-seque> [to follow] ?

<secute>	<seque>
prosecutor	sequence
consecutively	consequential
persecute	sequential
prosecution	sequester
persecution	subsequent

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WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Romance Layer	
How many words can you think of that share these Latin base elements: <i><grade-gress></i> [to step] ?	
<i><grade></i>	<i><gress></i>
gradient	progress
graduate	digress
degrade	aggressive
gradual	regress
biodegradable	congressional

Romance Layer	
How many words can you think of that share these Latin base elements: <i><pel-pulse></i> [to push] ?	
<i><pel></i>	<i><pulse></i>
compel	repulsion
repellent	compulsive
propeller	pulsate
expelled	impulse
dispel	compulsory

Romance Layer	
How many words can you think of that share these Latin base elements: <i><pense-pend></i> [to hang] ?	
<i><pense></i>	<i><pend></i>
pensive	pendant
suspense	appendage
propensity	pulsate
compensatory	impulse
dispense	pendulum

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Romance Layer	
How many words can you think of that share these Latin base elements: <i>mit-miss</i> [to send] ?	
mit	miss
commit	mission
committee	emissary
transmitted	remission
permit	permissive
emit	emission

Where Do You Stand on These Questions?
1. What is the <u>base element</u> in <instant>?
2. Is <stand> a <u>free base</u> ?
3. Do <circumstances> and <stationary> have the same base element?
4. Do <establish> and <statistical> have the same base element?

What are the elements of the word <antidisestablishmentarianism>?

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Greek Layer	
<p>◇ Scientific and mathematical terms incorporated into English in the past 500 years have most often been constructed from Greek morphemes.</p> <p>◇ Many Greek-derived morphemes combine with other bound morphemes of equal importance in flexible order:</p>	
geography	photosynthesis
psychology	philanthropic
73 chronic	synonym

Greek Layer Scientific and Mathematical Terms	
neurology	apostrophe
physician	catalyst
gyroscope	hypnotize
mythology	anonymity
amorphous	hypothermia
technology	synthesis
hemisphere	stereotype
74 sympathy	symmetry

Effects of Morphological Awareness
<p>▪ Phonological awareness facilitates morphological awareness in younger children (Carlisle & Nomanbhoy, 1993), and both are associated with stronger reading skills.</p>
<p>▪ Problems that poor readers have with applying morphological rules to unfamiliar base words are attributable in large part to more basic weaknesses in phonological processing (Carlisle, 1987, 1988; Fowler & Liberman, 1995).</p>
<p>▪ *Because morphemes are units of both sound and meaning, deficits in phonological processing contribute to confusion of similar-sounding words and word parts, failure to recognize similarities of structure, and failure to either store or retrieve word form with precision.</p>

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Effects of Morphological Awareness

- Better readers with excellent language abilities in fourth through eighth grade are able to talk about word structure and word meaning in a precise, decontextualized manner that reveals conscious knowledge of phonology and morphology (Snow, 1990).
- Adults who read poorly have less information in their mental dictionaries as well as less ability to organize and gain access to words using morphological relationships (Cunningham & Stanovich, 1997; Leong, 1989; Shankweiler et al., 1996).
- Adults who read accurately and fluently have accumulated wide networks of word families for ready access and cross-referencing in the lexicon (Nagy et al., 1989).

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Effects of Morphological Awareness

- Differences between good and poor spellers are associated with significant differences in sensitivity to word structure at the morphological level.
- Children with specific written language and spelling disorders have been shown to misuse, substitute, or omit inflected endings more than typical children (Bailet, 1990; Moats, 1996).
- Insensitivity to morphological aspects of word structure also characterizes adults who spell poorly.

(Fischer, Shankweiler, & Liberman, 1985; Liberman, Rubin, Duques, & Carlisle, 1985; Shankweiler et al., 1996; Berninger, Abbott, Nagy, & Carlisle, 2010; Kirby et al., 2012; Goodwin & Ahn, 2013)

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Effects of Morphological Awareness

- ◆ Well-designed spelling and vocabulary programs make use of morphological structures in word study, making explicit the kind of understanding that good spellers tend to get on their own from seeing words in print.
- ◆ Good spellers and people with larger vocabularies search for and notice in new words letter sequences that can give them clues to meaning (Moats).

WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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A **Sample for Illustration
 Basic Daily Lesson Plan Format **INTEGRATED** Structured Literacy Lesson
 Slingerland® Multisensory Structured Language Approach

LEARNING TO WRITE
 1. Learning new letters
 2. Practicing letters newly learned
 3. Review of letters previously learned
 4. Teaching and Practicing letter connections (Cursive)

AUDITORY	VISUAL
A. Phoneme-Grapheme Practice Auditory ↔ Visual = Phoneme ↔ Grapheme B. Encoding (segmentation) C. Spelling 1. Base Elements + Affixes 2. Unpredictable Words 3. Phrases—Sentences—Paragraphs D. Dictation E. GOAL: Independent Writing	A. Grapheme-Phoneme Practice Visual ↔ Auditory = Grapheme ↔ Phoneme B. Decoding (blending) C. Preparation for Reading (Pre-Teaching Vocabulary and Syntax— words, phrases, grammar, punctuation, etc.) D. Reading Connected Text (Structured Reading ↔ Studying) E. GOAL: Independent Reading

Why are these words spelled this way?

commitment
 committee
 referral
 reference
 illegal
 accommodate
 efficacious
 effective

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Layers of English Language
 Categorize these words.

table	syllable	anthropology
extract	constellation	character
symmetry	healthy	perspiration
brown	pterodactyl	mystery
insect	utility	brother
interrupt	house	illicit
chaos	complement	phantom
survival	eloquent	been

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WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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Layers of English <i>Categorize these words.</i>		
Old English	Latin	Greek

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<fide> → "to trust"

Fidelity
+
Intensity
+
Duration
=
Efficacy

A thought to ponder...

"Until you are willing to be confused about what you already know, what you know will never become wider, bigger or deeper."

-Milton Erikson

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WORDS WITH SPELLING CONNECTIONS HAVE MEANING CONNECTIONS

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