

# Day 3: Syntax, Post-lexical Phonology and the Orthographic Word

## Lecture 2

# Orthography Seminar given at Bibles International, Grand Rapids, MI, July 6-9, 2010

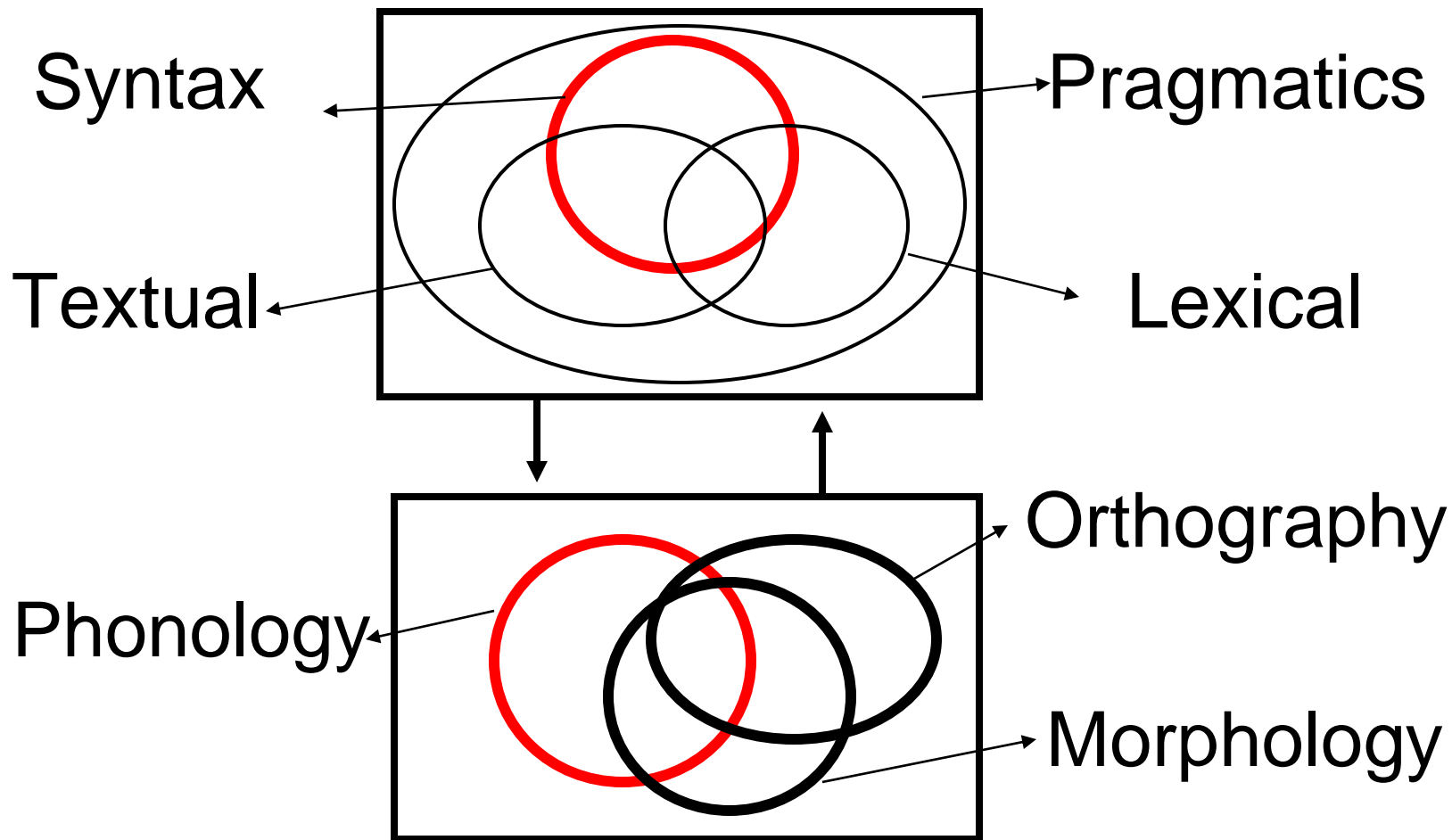
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# Lecture Outline

1. A review
2. Defining Syntax
3. Syntax and the Reading Process
4. Post-lexical Phonology
5. Connected Speech Modification
6. Connected Speech Modification and the Orthographic Word

# A Review of the Top-down Processor

# Interactive Model of Reading Comprehension



# Word Superiority Effect-WSE-1

- **The Maximal Projection Unit of Reading:** The minimal unit of reading is the grapheme. They organize into a larger unit called the syllable. Syllables organize yet in a larger unit called the “orthographic word”. This is the unit that all readers rely on to read. This has been called the “**Word Superiority Effect**” or the “**Word Advantage**”.

# Word Superiority Effect-WSE-2

- **“Minimalist Hypothesis”** i.e., WSE, claims that the whole orthographic word has to be seen before reading can proceed. The claim that the whole word must be seen is also referred to as the **“Holistic Word Recognition”**: **Exterior letters** (the first last letters) of words have been found to be particularly useful in reading.

# Definition of Syntax and Parts of Speech Classification

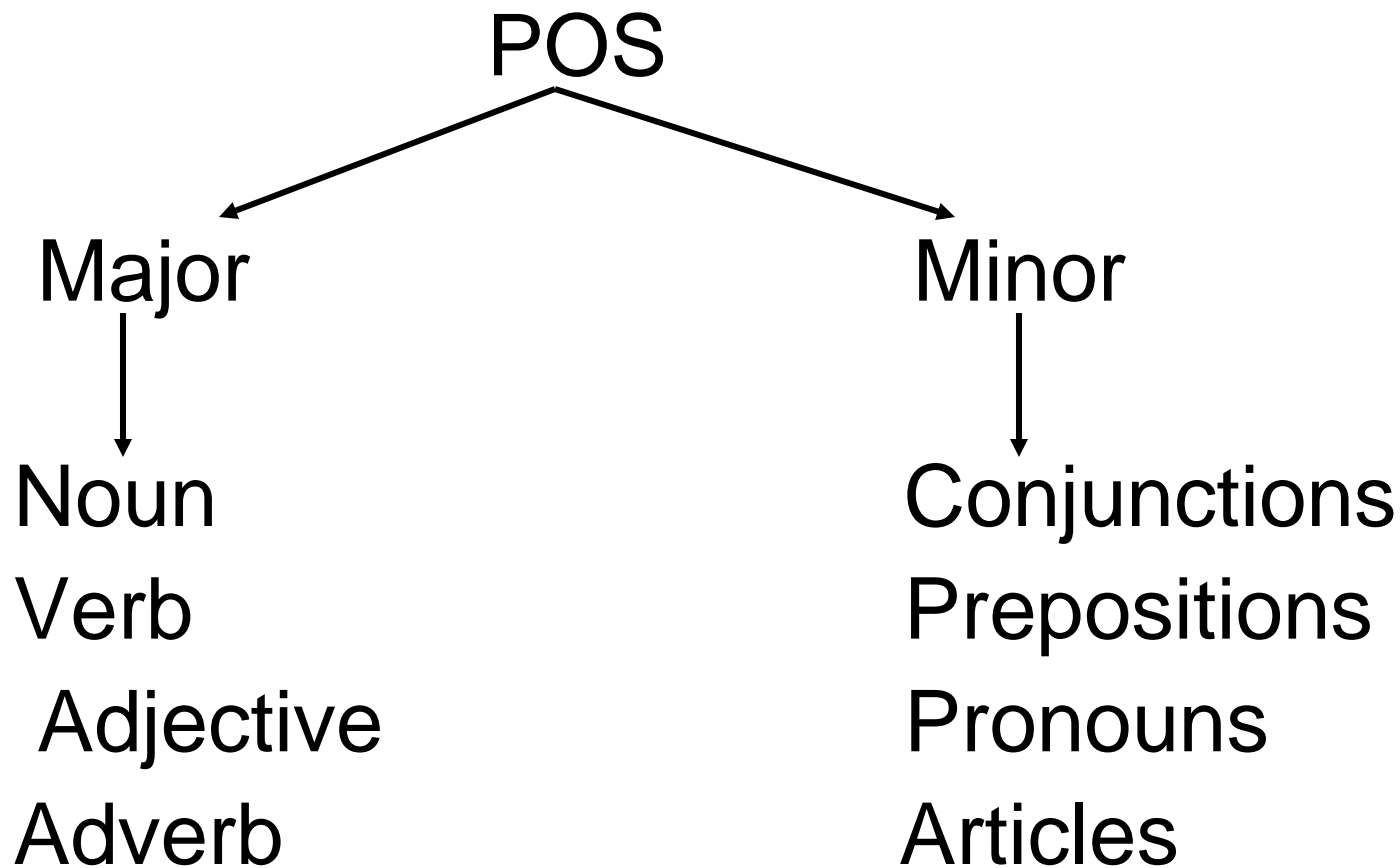
# Defining Syntax

- **Definition:** Syntax is the branch of linguistics that studies:
  1. The arrangement of **individual words** into higher level constituents to form phrases, clauses and sentences
  2. The classification of **words** according to their **parts of speech**
  3. The discovery of syntactic rules that govern sentence formation in every language.

# Classification of Words by Parts of Speech (POS)

- **Traditional Grammar:** Greek grammarians classified words into 8 to 9 parts of speech. These parts of speech have, in turn, been grouped into two major categories:
  1. Major Parts of Speech
  2. Minor Parts of Speech

# Classification of Words per Part of Speech (POS)



# Syntactic Architecture

Source: Koffi (2010). *Applied English Syntax*

# Syntactic Architecture-1


- **Organization:** Syntactic information is organized hierarchically into phrases:
  1. NP (Noun Phrase)
  2. VP (Verb Phrase)
  3. PP (Preposition Phrase or Postposition Phrase)
  4. AdjP (Adjective Phrase)
  5. AdvP (Adverbial Phrase)

# Syntactic Architecture-2

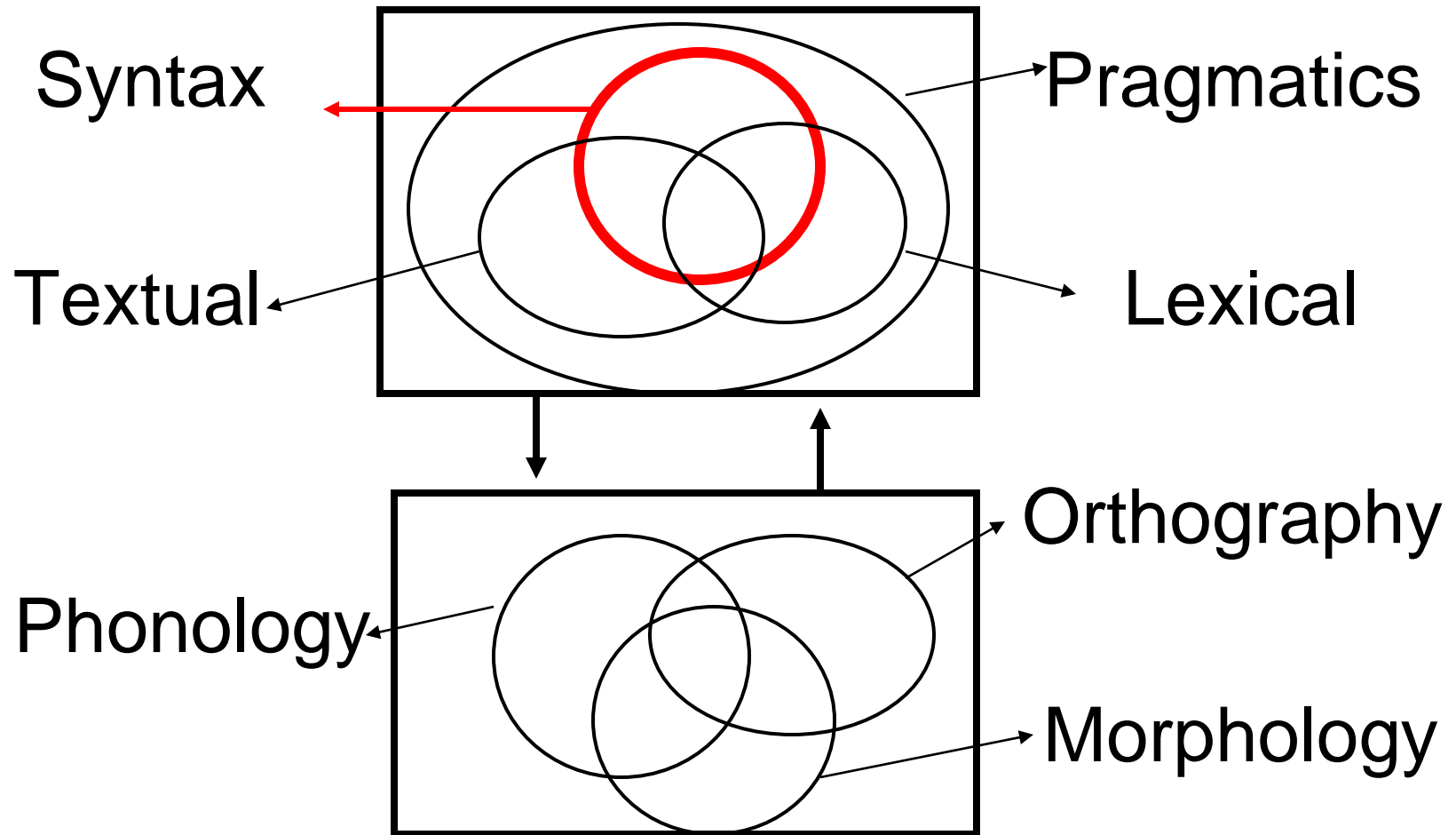
- **Organization:** Syntactic information is also organized hierarchically into clauses:
  1. Main clause/Independent clause
  2. Subordinate clause/dependent clause
- This hierarchical organization of syntactic elements is relevant to orthography (see Day 4, Lecture 2)

# Parts of Speech and Reading

# Parts of Speech and Reading

- **Classification:** Syntactic information is useful in the reading and spelling processes. Readers and spellers rely on syntactic cues, especially cues related to parts of speech, in order to assign the correct pronunciation/spelling to words.
-  This is particularly true for homographs: <contrast> (N) vs. <contrast> (Vb)

# Top-Down and Bottom-up Processes



# Parts of Speech and Reading-1

- **Subconscious Knowledge of POS:** “Most native English readers don’t have a conscious or learned knowledge of the parts of speech of each word in each sentence as it is being read, but they have an unconscious knowledge which allows them to compute phrasal and sentential structure quickly, then discard it as soon as the meaning is clear,” Birch (2002:136).

# Parts of Speech and Reading-2

- **Parts of speech and Word Recognition:**  
“Furthermore, readers fixate more carefully on some words than on others. Stanovich (1991) reported research that indicates that content words receive a direct fixation and that although short words and highly predictable words are often passed over, there is quite a bit of fixation on them as well,” Birch (2002:65)

# Parts of Speech and Reading-3

- **Disambiguation:** “For other languages, however, parts of speech differences may be a cause for confusion in reading, because it is necessary for the reader to understand parts of speech in order to assign the correct syntactic structure to a sentence. Correct comprehension of syntactic structure is an important precursor to correct comprehension of meaning,” Birch (2002:135).

# Evidence of the Use of Syntax in Reading (Aloud)

# Homographs and Reading

- **Homographs and Reading:** The correct identification of the parts of speech is essential in reading the following sentence:

*“**Close** the door but don’t get too **close**.”*

*“The press conference will start in a **minute minute**.”*

# Parts of Speech and Spelling

- **Homophones:** Spellers rely on syntactic cues, i.e., parts of speech to spell homophones accurately:

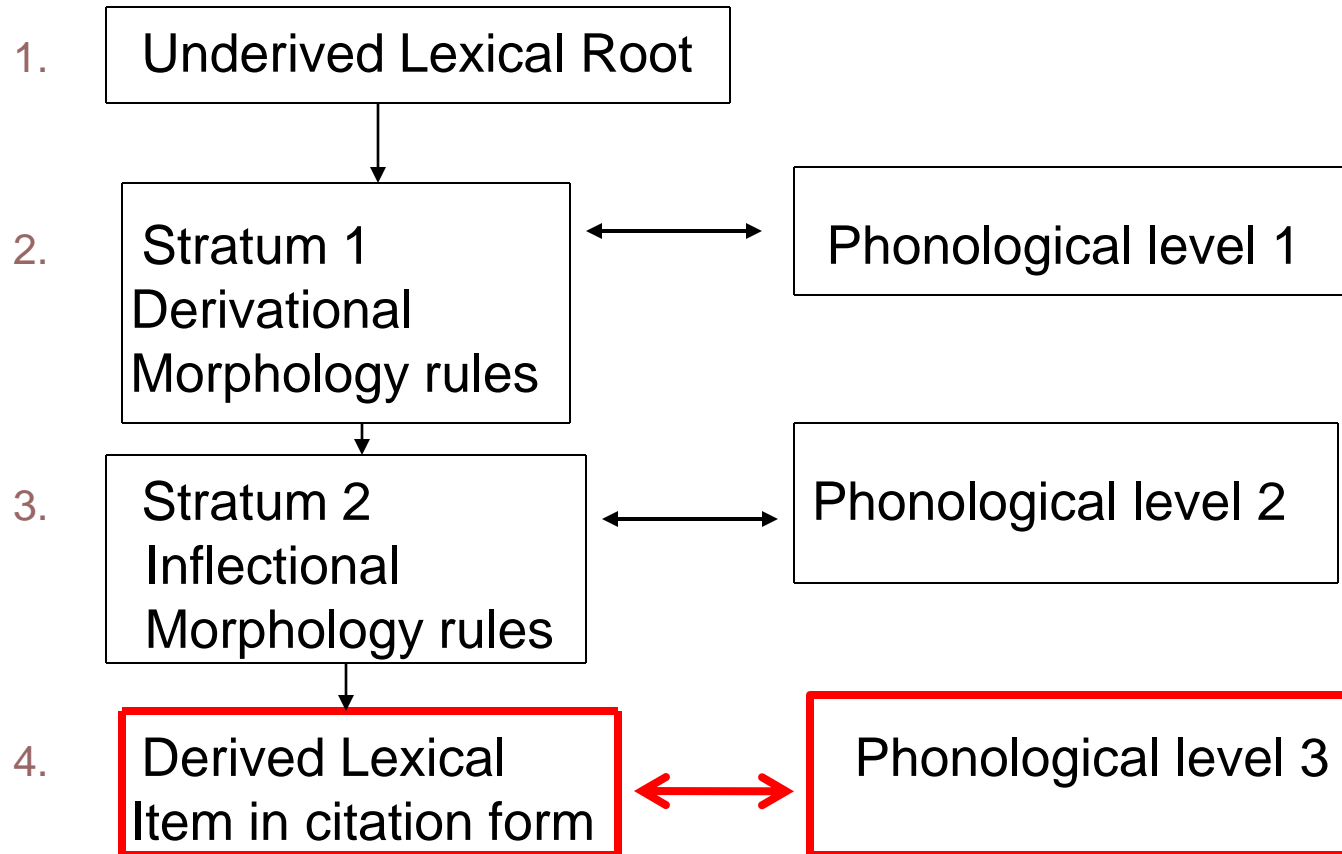
*“Bob and Alex are **merry** because they will **marry Mary** and **Mary**.”*

# Focus on Post-Lexical/ Phrasal Phonology

# Phonology and Syntax

- Phonology and syntax interact at many crucial levels, most notably at the phrasal and at the sentential levels.
- The area of phonology that interacts with syntax is known as post-lexical phonology. It is represented schematically as follows

# Review of the Architecture



# Phonological Level 3 = CSM

**CSM = Connected Speech  
Modification**

# Connected Speech Modification-1

- **Post-lexical phonology** is also known as **Connected Speech Modification (CSM)**. The latter name suggests that when two words are right next to each other, the last sound segment of the preceding word and the sound segment of the onset of the following word influence each other to the point that in many instances there is virtually **no pause** between contiguous words in an..

# Connected Speech Modification-2

- ... utterance. This blending together makes spoken utterances flow seamlessly until the speakers intentionally mark a pause in their statements. The most important feature of Connected Speech Modification is called “**resyllabification**” . . .

# Connected Speech Modification-4

- ... Consequently, **ambisyllabicity** is prevalent in post-lexical phonology. Most of the phonological rules which apply at the lexical level also apply in connected speech. The generic term of “**linking**” is often used to describe the phenomenon of connected speech modification ...

# Connected Speech Modification-5

- ... When a word or syllable ending in a single consonant is followed by a word or syllable beginning with a vowel, the consonant is often produced intervocalically as if it belonged to both syllables,” Celece-Murcia et al. (2000:158, 163)

# Types of Resyllabification-1

- Consonant + Consonant linking  
<short**t** **t**ime>  
<big**g** **m**useum>
- Consonant + Vowel linking  
<east**t** **e**nd>  
<big**g** **a**pple>

# Types of Resyllabification-2

- Vowel + Vowel linking:

<be a good sport>

<be on guard>

☞ This will be the focus of our discussions later on

# Types of Resyllabification-3

- Vowel + Consonant linking:

<be **g**ood sport>

<too **b**ad>

# Types of Resyllabification-3

- **The Effects of Resyllabification:**  
Resyllabification usually results in
  1. elision/coalescence/contraction
  2. liaison
  3. chaining

# French Liaison-1

- **French Liaisons:** A **silent** consonant: <**s, x, z, t, d, r, p, g, f, n**> at the end of one word is pronounced when it precedes another word that begins with a vowel. French is well-known for its three types of liaisons:

# French Liaison-2

1. **Obligatory liaisons:** <les enfants>
2. **Optional liaisons:** <ils ont = accepté l'offre>
3. **Forbidden liaisons:** <salles à manger >


# French Chaining

- **Definition:** Chaining occurs when a **pronounced** consonant at the end of one word becomes the onset of the following word:

1. <avec amour>

[avɛk amur]  $\implies$  [avɛ kamur]

# Euphonic Lengthening

- **Phrase-final Lengthening:** In Anyi, [maybe some other languages], phrasal boundaries are indicated by the lengthening of the last vowel of the word. This is called “**euphonic**” lengthening.
-  More will be said about this in Lecture 4, Day 2.

# Phrasal Lengthening and Shortening

# Euphonic Shortening

- **Word-final Shortening:** “Word-final position is characterized by shortening of long vowels. In many languages, final short-vowels are lost at the same time. This suggests that final vowel shortening is a form of vowel weakening. Final vowels are reduced by one mora each,” Hock (1988:140). *Principles of Historical Linguistics.*

# Syntax, Connected Speech Modification, and Orthographic Word


# Liaison/Resyllabification

## Principle

- **Sentence Phonology Principle**

*Orthographies must make abstraction of the effects of sentence phonology.*

Booj (1987:217)

-  Spanish comes close too fulfilling this principle. This principle may be too strong. A weaker version works best for most languages.

# Post-lexical Phonology and Vowel Elision or Coalescence

- **Scenario 1:** In **Vowel + Vowel** resyllabification, if the two vowels are identical, one of them may be deleted.
- **Scenario 2:** In **Vowel + Vowel** resyllabification, one of the two is deleted even when the two vowels are NOT identical.

# Illustration 1

- French examples:

1. <je aime>  <j'aime>





2. <le été>  <l'été>

3. <le homme>  <l'homme>

4. <la amie>  <l'amie>

# Illustration 2

- Greek Examples: John 7:43-4:

1. δια αυτον  δι' αυτον
2. παρα αυτον  παρ' αυτον
3. αλλα ουδεις  αλλ' ουδεις
4. επι αυτον  επ' αυτον

# Illustration 3

- Anyi examples:

1. <kε ε kɔ>  [kε kɔ]  <k'ε kɔ>

2. <kε ɔ kɔ>  [kɔ kɔ]  \*<k'ɔ kɔ>

3. <sε ε kɔ>  [sε kɔ]  <s'ε kɔ>


4. <sε ɔ kɔ>  [sɔ kɔ]  \*<s'ɔ kɔ>

# Elision and Coalescence

## Principle

- **Application to Orthography**

*Elision and coalescence are frequently represented in orthographies with the diacritic mark <'>.*

-  **Orthographic Word: Contraction <'>** is most common between function words and content words.

# Post-lexical Phonology and Elision Hiatus

- **Definition:** “Hiatus can refer to the **failure** of two [identical] vowels straddling a word boundary to coalesce, for example by elision of the first vowel.”  
Source: Wikipedia.

# Hiatus Principle

- **Hiatus and Orthography**

*Hiatus should be represented in the orthography. The two words must keep their independent orthographic forms.*

☞ If speakers pronounce the two vowels separately, then the orthography should do the same. L'été était insupportable.

# Illustration 1

- Anyi examples:

1. <Kasi akɔ>  [ka sia kɔ]  <Kasie akɔ>

2. <Kasi elua>  <[ka sie luɔ]  <Kasi eluo>

3. <Ama akɔ>  [ama kɔ]  <Ama akɔ>

4. <Ama eluo>  [ama lu]  <Ama eluo>

# Illustration 2




- **Note:** In speech, Anyi makes a distinction between deletable vowel prefixes and undeletable ones. However, the orthography does not make such a distinction. Whether the prefix is deletable or undeletable, it is kept in the orthography. This is in keeping with the **Lexical Principle**.

# Clitics and Orthography

# Definition

- **Etymology:** [Greek *klitikos*, *leaning*, from *klīnein*, *to lean*.] A clitic is an unstressed word, typically a function word, that is incapable of standing on its own and attaches in pronunciation to a stressed word, with which it forms a single accentual unit.
- Examples of clitics are the pronoun <'em> as in </ see 'em>.
- Source: dictionary.com

# Clitic Pronouns


- **The Phonology of Clitic Pronouns:** In Anyi and Fon, and possibly other languages, direct object pronouns are commonly realized by lengthening the last vowel of the verb even though the full form of the pronoun exists.
- <N wunɪ Kasi>  /N wɯɪ ji/  [ n wɯɪɪ ]  
 < N wunɪ yi >

# Orthographic Representation

- **Sentence Phonology Principle**

*Orthographies must make abstraction of the effects of sentence phonology.*

Booj (1987:217)

-  This means that the full form of pronouns is to be preferred to their cliticized forms.

# Homework

# Exercise 1

- How do post-lexical phonology rules apply in your language(s)?
- How are post-lexical phonology issues dealt with in the orthography of your language(s)?

# Exercise 2

- Do you have auxiliary verbs in your language(s)? What are they?
- Do they contract with subject pronouns? If so, how are they represented in the orthography?
- Do clitics occur in your language(s)? In what environment(s)? Do they cause any orthographic/reading problems?

# Selected References

# Selected References-1

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3. Celce-Murcia, Marianne et al. 2000. *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages*. New York: Cambridge University Press.
4. Comrie, Bernard. *Language Universals and Linguistic Typology*. Chicago: The University of Chicago Press.

# Selected References-3

3. Koffi, Ettien. 2010. *Applied English Syntax: Foundations for Word, Phrase, and Sentence Analysis*. Dubuque, Iowa: Kendall Hunt Publishing Company.