Introduction to Prosodic Morphology
Background on Autosegmental Phonology

0. Introduction

- Today's topic: **prosodic morphology**

- **Prosody** refers to the **suprasegemental** elements like meter, stress and intonation that get assigned to phonological structures.
  - Suprasegmental elements are not assigned to individual segment, but to larger units of structure (e.g. syllables, feet, words, phrases)
  - Prosodic structure includes constituents that can be intermediate in size between segments and morphemes (e.g. syllables, feet).
  - Prosodic constituents can also be word-sized and even larger (phrases)

- Prosodic morphology deals with the interaction between prosodic representations and morphological processes.
  - In particular, we will see that prosodic morphology offers important insight into the nature of **nonconcatenative morphology**

1. Nonconcatenative morphology

- We did a brief overview/review of nonconcatentative morphology in Week 1. At that time, we defined nonconcatenative morphology as morphology that does not extend the base of a word.
  - Instead of extending the base, nonconcatentative morphology can alter the pronunciation of the base in some other way. This includes:
    - Null morphology, e.g. $walk_{[N]} \sim walk_{[V]}$
    - Mutation of base segment, e.g. eat [ijt] ~ ate [ejt]
    - Prosodic change, e.g. $prótest_{[N]} \sim protést_{[V]}$

- On an abstract level we can still understand nonconcatenative morphology to involve affixation of a morpheme to a base.
  - The same kinds of lexical properties we've encoded in lexical entries for concatenative morphemes still apply: e.g. meaning, subcategorization, category, selectional requirements, etc.
  - What is special in non-concatenative morphemes is that the form cannot be encoded simply as a string as segments.
    - It can be null (1)
    - It can encode morphologically or lexically conditioned **allomorphy** (2)
    - It can encode a requirement for some phonological/prosodic

process to apply (3)

(1) Null morphology, e.g. $walk_{[N]} \sim walk_{[V]}$

Label: conversion N>V (denominal verb formation)
Form: ø
Meaning: to do (a) X
Subcategorization: [N_]
Category: V

(2) Mutation of base segment, e.g. eat [ijt] ~ ate [ejt]

Label: PAST
Form: /ø//{eat, see, run}___
/d// elsewhere
NB: Lexically conditioned allomorphy
Meaning: [PAST TENSE]
Subcategorization: [N_]
Category: V

Label: 'eat'
Form: /ijt/ —> [ejt]/ ___PAST
NB: Morphologically conditioned allomorphy
Meaning: EAT
Subcategorization: N/A
Category: V

(3) Prosodic process like stress shift, e.g. $prótest_{[N]} \sim protést_{[V]}$

Label: conversion V>N (deverbal noun formation)
Form: ø [+pre-accenting]
Meaning: entity pertaining to X
Subcategorization: [V_]
Category: N

- Our focus this week is on prosodic processes implicated in morphology. Prosodic phonology can produce complex patterns on the surface that might seem to require especially complex lexical entries.
  - However, prosodic phonology is well-studied and known to be systematic.
  - Seemingly complex prosodic patterns that interact with morphology can be shown to be predictable given adequate attention to prosodic representation in the underlying forms of morphemes.

- This is why we have a unit on prosodic morphology, so you can see how prosodically determined patterns can be integrated into our understanding of what morphemes are.

2. Autosegmental phonology: Tone

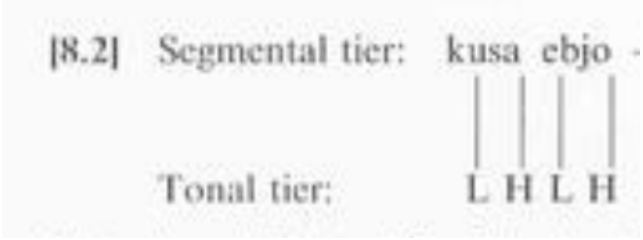
- Tone is one of the best studied prosodic processes. The approaches to prosodic morphology we will survey here originate in analyses of tone within the theory of **autosegmental phonology** (see Katamba and Stonham section 8.2.1). We will briefly go over this.
- We saw an example of nonconcatenative morphology involving tone in Week 1 (Review slides). Here is another, where ˊ = high tone and ˋ = low tone.

(4) Mono Bili (Democratic Republic of Congo)

dá	'spanked'	dà	'will spank'
zÍ	'ate'	zÌ	'will eat'
wó	'killed'	wò	'will kill'

- Tone is a prosodic property that is independent of consonants and vowels. In autosegmental phonology, this independence is represented by modeling tone on its own representational **tier**.

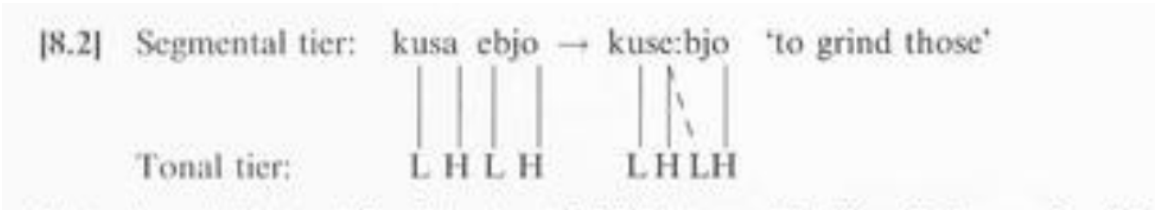
(5) Luganda (Uganda)



- L = low tone, H = high tone
- Association lines connect tones to Vs on the segmental tier where Cs and Vs are represented

- We can see that the tiers are independent because phonological processes can target individual tiers. In (6) a vowel on the segmental tier is deleted while its associated tone is not.

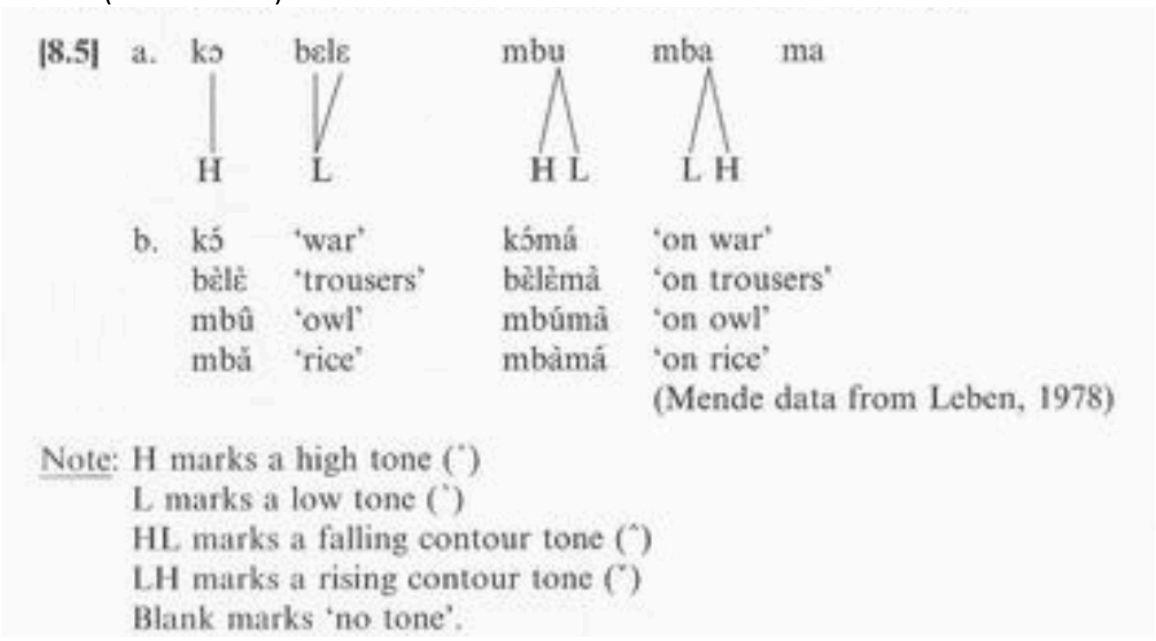
(6) Luganda (Uganda)



- In Luganda, in VV contexts, the first V is deleted unless it is [+high].
- Vowel deletion need not delete the corresponding tone, which re-associates with a new vowel on the segmental tier.
- The dashed line in (5)/[8.2] shows the establishment of a fresh association between tiers.

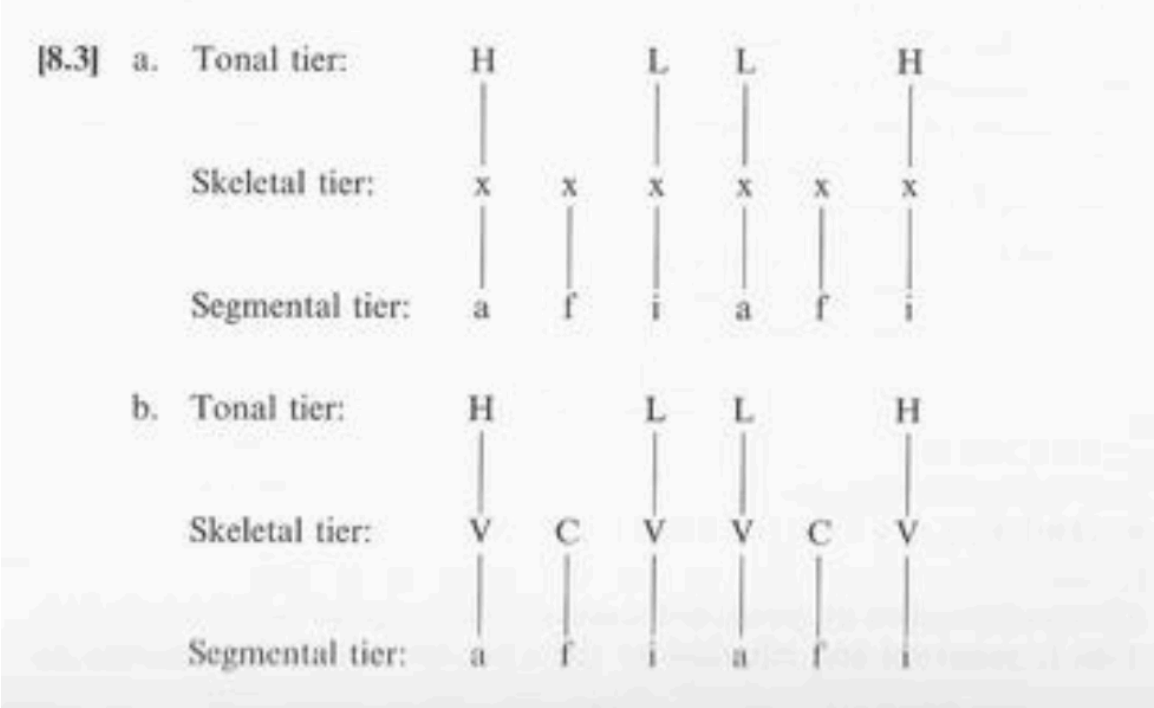
- The mapping between tiers need not be one-to-one

(7) Mende (Sierra Leone)



- An abstract tier, known as the **skeletal tier**, is sometimes posited to mediate between the segmental tier and other tiers (like binding of a book). On some analyses the skeletal tier consists underspecified units (X), on others it consists of abstract Cs and Vs.

(8) Skeletal tier



- Association lines between tiers are derived according to proposed **mapping principles**.

(9) Mapping principles: Universal Linking Convention (cf. Archangeli 1983, Pulleyblank 1986)

[8.8] Universal Linking Convention

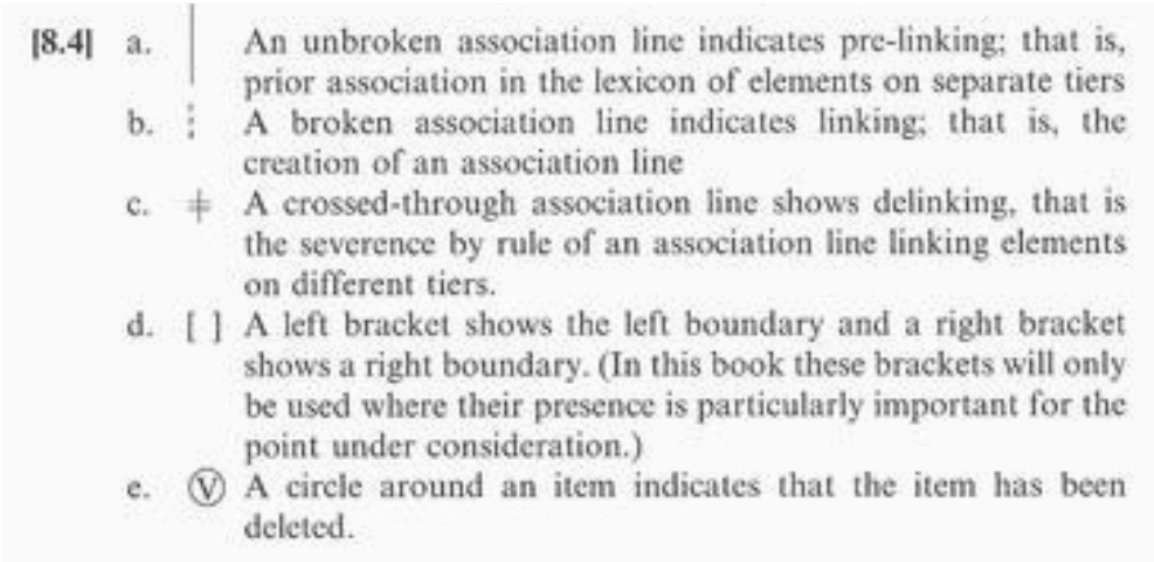
(i) Link a sequence of autosegments (e.g., tones) with a series of elements on the skeletal tier that are capable of bearing them (e.g., link tones with vowels) (see [8.3]);

(ii) Perform the linking going from the beginning to the end of the word. Unless specific instructions are given in the grammar of the language to do otherwise, link autosegments (e.g., tones) with units that are capable of bearing those autosegments (e.g., vowels) in a one-to-one fashion.

(iii) Association lines do not cross in the linking process.

- Various notational conventions are employed in derivations that apply mapping principles.

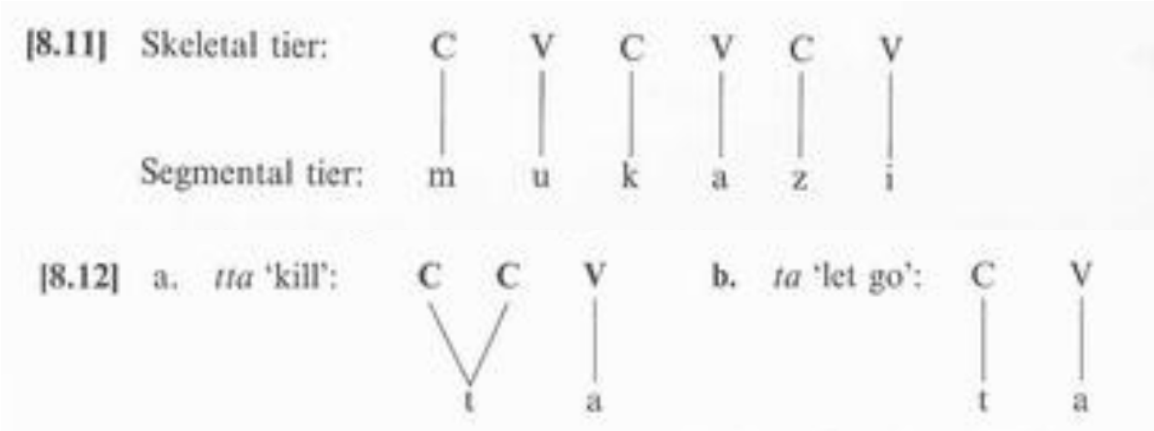
(10) Notations



3. Autosegmental phonology: Beyond tone

- The theory of autosegmental phonology was quickly extended beyond tone, to other phonological properties/processes that were argued to likewise derive from mappings between tiers.
- Katamba and Stonham give examples of gemination and vowel lengthening processes. (See readings for details).

(11) Gemination (Luganda)



(12) Vowel lengthening (Luganda)

[8.14]	a.	/ba- e- laba/ they-themselves-see	[be:laba] 'they see themselves'
	b.	/tu- e -laba/ we-ourselves-see	[twe:laba] 'we see ourselves'
	c.	/bi- e- laba/ they-themselves-see	[bje:laba] 'they (e.g. animals) see themselves'

[8.15] [be:laba] 'they see themselves'

[8.16] a. [twe:laba] 'we see ourselves'

b. [bje:laba] 'they (e.g. animals) see themselves'