

CUNY Conference on the segment

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**Silent segments
and
prosodic dependency**

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【 1 】

Introduction

Introduction 1

- Schwa/zero alternation in English
- In Government Phonology, schwa is the phonetic manifestation of a featureless vowel.
- In English, the empty nucleus can be silent if it is followed by a melodically-filled nucleus.
- Proper Government, which is assumed to be for the phonetic manifestation of empty nuclei.

Introduction 2

- The representation of English schwa is not an empty nucleus. It is the phonetic manifestation of a single element |A|.
- Given this, this paper provides an alternative analysis of schwa/zero alternation in English by referring only to prosodic strength rather than to Proper Government.

The structure of this talk

- The notion of empty category in GP.
- how the phonetic manifestation of an empty nucleus is controlled by Proper Government.
- English schwa is the manifestation of element |A| rather than an empty nucleus.
- schwa/zero alternation will be analyzed as a case of weakening by referring to prosodic dependency.

【 2 】

**Empty categories
in phonology**

Empty categories 1

The notion of empty category is found in some analyses of vowel-zero alternations in various languages such as Moroccan Arabic (Kaye (1990)), French (Charette (1991)), Polish (Gussmann and Kaye (1993)), English (Harris (1994)) and Japanese (Nasukawa (2005)).

Empty categories 2

- An empty nucleus is phonetically realized as a vowel. It is realized as the most unmarked vowel in a given system.
- In order to suppress empty nuclei phonetically, LGP and ET employ a principle called Empty Category Principle (Kaye (1990: 314)), which controls phonetic interpretation of empty nuclei.

【 3 】

**Dependency and
Proper Government**

Two relational properties

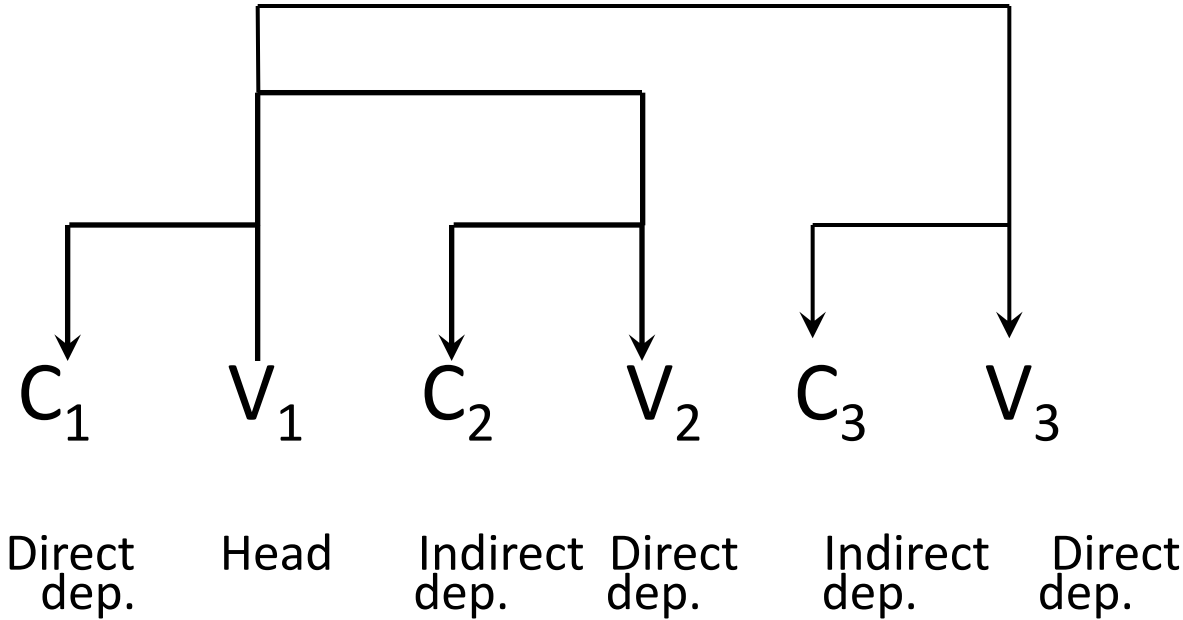
- In LGP and ET, there exist two relational properties between units
 - Dependency (licensing): a head-modifier relation at all levels of phonological representation
 - Proper Government: a relation established between a melodically silent vowel and the following audible vowel.

Dependency

- In LGP, the notion of dependency plays an important role not only for melody but also prosody.
- In prosody, dependency relations are found between constituents such as nucleus, onset, and so on.
- On the other hand, melody shows dependency relations between elements within a segment.

Prosodic dependency

(1)



strong pos.

Melodic dependency

(2)

a. |A| + |I| → e

b. |A| + |I| → æ

c. Elements (Buckley & Nasukawa 2010: 23-24)

nucleus

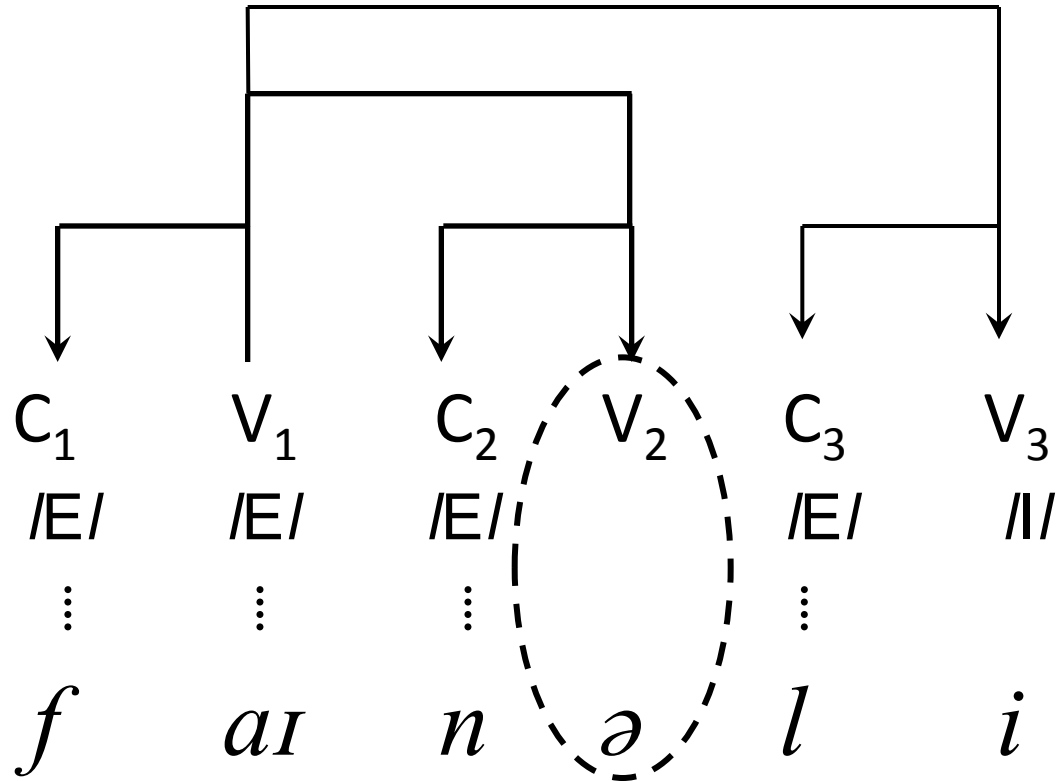
onset

|I| front vowels palatal, coronal POA

|U| rounded vowels labial, velar POA

|A| non-high vowels uvular, pharyngeal POA

(3) *fainəli* 'finally'



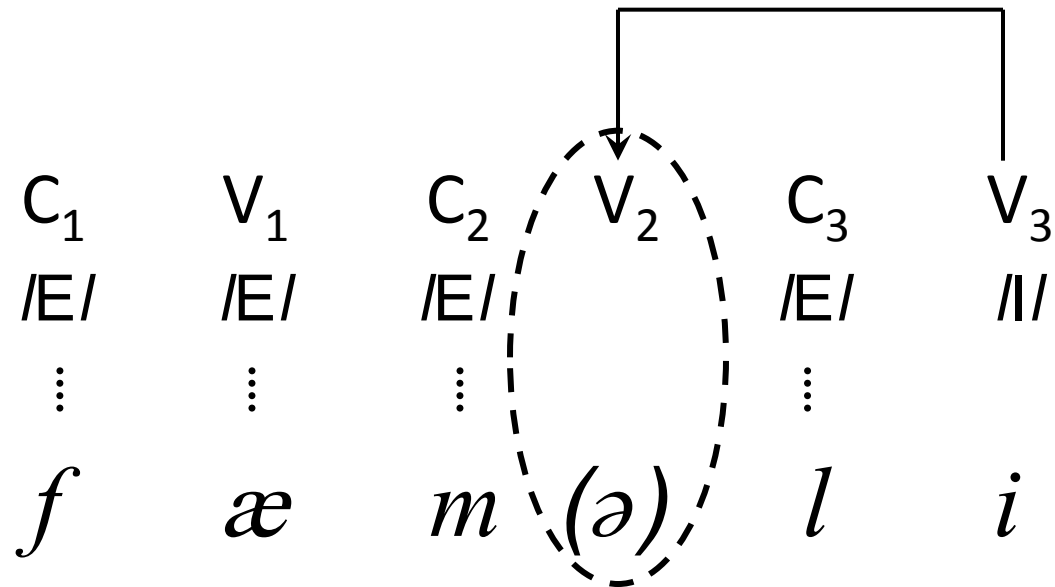
(|E| stands for any element which forms of a segment)

(4) Proper Government (Kaye (1990), Harris (1994),
Charette (1991))

- a. a proper governor and its proper governee are adjacent at the level of nuclear projection,
- b. a proper governor stands to the right of proper governee, and
- c. a proper governor is not itself p-licensed.
(+ the licensing nucleus must itself not be empty.)

(5) *fæm(ə)li* 'family'

P-licensed by Proper Government



(|E| stands for any element which forms of a segment)

【 4 】

**The representation of
English schwa**

English schwa

(6) V
|
|A|
ə

(Backley (2011); Onuma (2011))

Vowel reduction to schwa

(7)

a. e ~ ə

segment

[seg'mɛnt]_V ~ ['segmənt]_N

academic ~ academy

[ækə'demɪk] ~ [ə'kædəmi]

b. æ ~ ə

addict

['ædɪkt]_N ~ [ə'dɪkt]_V

magic ~ magician

['mædʒɪk] ~ [mə'dʒɪʃən]

c. ʌ ~ ə

subject

['sʌbdʒekt]_N ~ [səb'dʒekt]_V

production ~ product

[prə'dʌkʃən] ~ ['prɒdəkt]₁₉

Vowel reduction to other vowels

(8)

a. i: ~ I

decrease

[¹dɪ:kri:s]_N ~ [dɪk¹ri:s]_V

regress

[¹rɪ:ɡres]_N ~ [rɪ¹ɡres]_V

a. u: ~ ʊ

beauty ~ beautician [¹bju:ti] ~ [bjʊ¹tɪʃən]

【 5 】

Schwa deletion

Schwa deletion

- (9) a. separate, temperature, elaborate, factory,
boundary, licorice, chocolate, mystery,
reference, quandary, awfully
- b. misery, every, surgery, century, nursery,
camera, treasury, prisoner, decimal,
definite, opener, desolate, especially,
finally, family, pedaling, javelin, general,
marginal, company, personal, national

(Harris 1994) 22

Schwa deletion

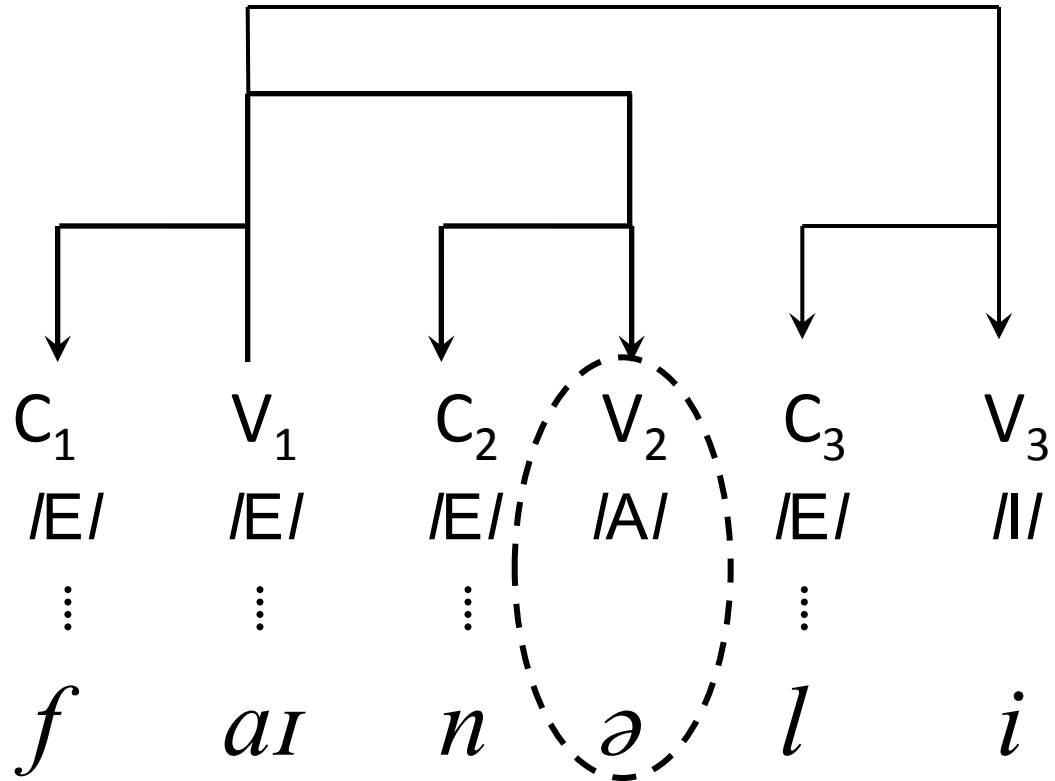
(10) ?/* rocketɪng, ballotɪng, monɪtor,
opacɪty, gossɪping, menəcing,
bracketɪng

- (11) a. C V C ə **son.** (=9)
- b. C V C ə **obs.** (=10)

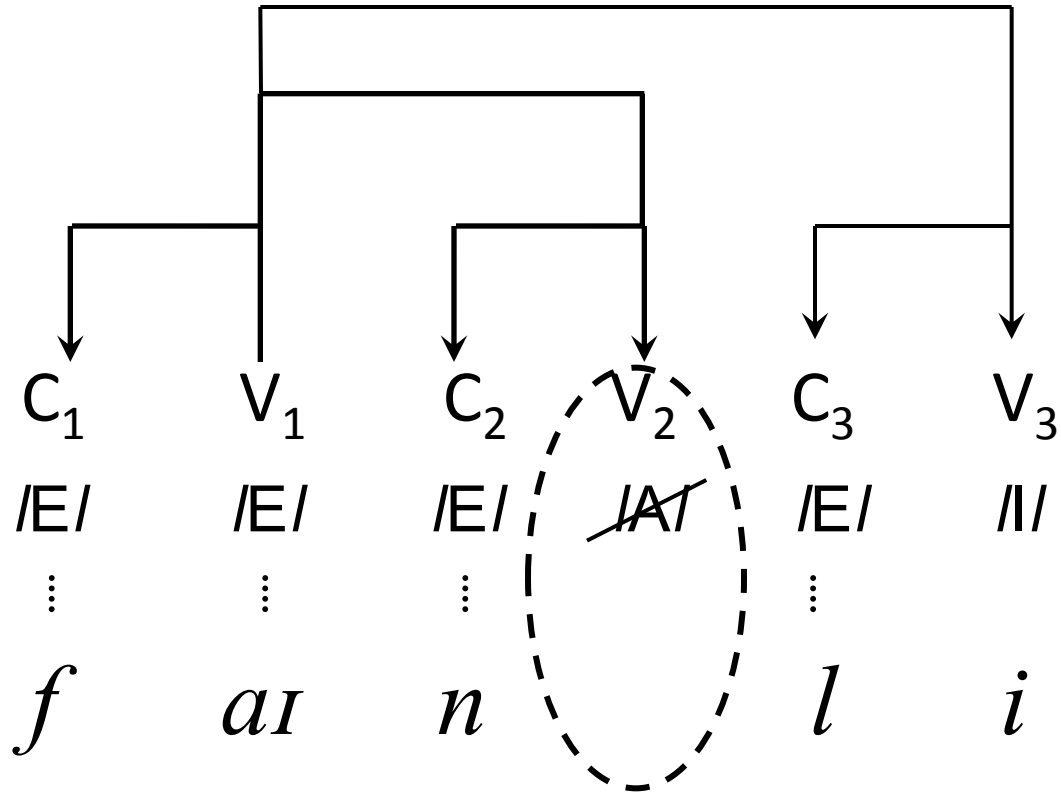
【 6 】

An analysis of schwa deletion

(12) *fainəli* 'finally'



(13) *fainli* 'finally'



schwa deletion

an extreme form of weakening

Summary

- This paper has discussed the distribution of English schwa in terms of prosodic dependency.
- The mechanism of schwa deletion of English is an instance of weakening; the loss of |A| element in prosodically-weak position.

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