Cyclicity

And

Stress Pattern

β²

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Overview

1. Literature Review: Stratal Phonology and Cyclicity

2. Use Stratal Phonology to Understand Stress Pattern

3. Compare Stress Pattern to Other Phonology Processes

4. Conclusion and Further Thoughts: Opacity and Cyclicity

5. References

Explanation
Cyclicity

A technical term in a generative derivation, as in Chomsky (1966) and Evers (1975). In this early model, cycles specified that transformations applied to certain domains before others.

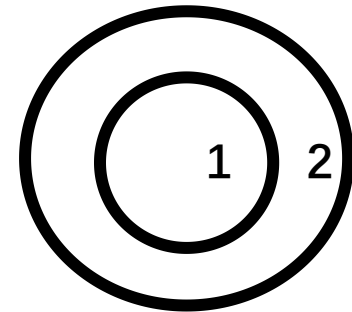*Cyclicity in historical linguistics is not the same idea
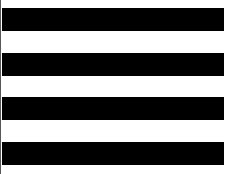
Stratal Phonology's Opinion

Cyclicity

Stratification
"Certain constituents in the morphosyntactic structure of a linguistic expression define domains for phonological computation. "

Recursiveness
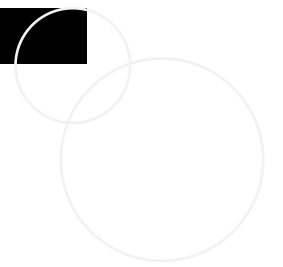"Phonology applies iteratively over these domains"

Cophonology Theory: Every nonterminal morphosyntactic node triggers a phonological cycle

OO-correspondence: phonological computation may directly refer to a surface base that does not
match a constituent of the opaque expression

How Stratal Phonology understand Stress Pattern of Polymorphemic Engslish Word?

First, we need to understand Stress Pattern of Monomorphemic English Word

Stress Pattern of Monomorphemic Noun

1.Primary Stress in Monomorphemic Noun

I	IIa	IIb
əˈmɛ.ɹɪ.kə	əˈɹəʊ.mə	əˈdʒɛn.də
ˈsɪ.nə.mə	əˈɹiː.nə	vəˈɹæn.də
məˈtɹɒ.pə.lɪs	həˈɹaɪ.zn̩	sɪˈnɒp.sɪs
ˈdʒæ.və.lɪn	ænˈdʒaɪ.nə	æsˈbɛs.təs
əˈnæ.lɪ.sɪs	mɪ.nɪˈsəʊ.tə	juːˈtɛn.sl̩

If the penultimate syllable is light, then main stress falls on the antepenultimate; if the penultimate syllable is heavy, then it bears primary stress.

Stress Pattern of Monomorphemic English Noun

2.Final Syllable Extrametricality: σ → <σ> / __ Noun]
A syllable is extrametrical (i.e. invisible to the stress rules) at the right edge of a (monomorphemic) noun.

3. Bimoraic Foot Hypothesis
cínema vs aréna

```
        *                            *
    (μ   μ)                      (μ   μ)
     |   |                        ↘ ╱
    sɪ nə <mə>              ə  ɹiː  <nə>
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Stress Pattern of Monomorphemic Verbs and Adjectives

1. Primary stress in monomorphemic verbs and adjectives

- The pattern

I	IIa	IIb
ɹ.ˈmæ.dʒɪn	kə.ˈɹiːn	kə.ˈlæps
ˈstɜː.dɪ	sɪ.ˈkjʊə(ɹ)	tɔː.ˈmɛnt
ɹ.ˈlɪ.sɪt	dɪ.ˈvəʊt	kə.ˈɹʌpt
ɪm.ˈbæ.ɹəs	kə.ˈɹaʊz	ɹ.ˈmɛns
ˈvʌl.gə (ɹ)	sɪn.ˈsɪə(ɹ)	ə.ˈdæpt

if the final syllables is CV or CVC, stress the penultimate;
if the final syllable is CVV, CVVC, or CVCC, stress the final syllable.

Stress Pattern of Monomorphemic Verbs and Ajectives

2.Final Consonant Extrametricality: C → <C> / __ Verb/Adj]
A consonant is extrametrical (i.e. invisible to the computation
of syllable weight) at the right edge of (monomorphemic)
verb or adjective.

3. Bimoraic Foot at the right edge of the visible domain
elícit (= illícit) vs devóte, collápse

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        *                    *                    *

     (μ    μ)              (μμ)                 (μμ)
      |    |                ||                   ||
   ɪ  lɪ  sɪ <t>        dɪ vəʊ <t>          kə  læp <s>
```

Stress Pattern of Monomorphemic Words
Abracadabra Rule

(à.bra.)ca.(dá.bra), not *a.(brà.ca.)(dá.bra)

(dè.li.)ca.(té.ssen), not *de.(lì.ca.)(té.ssen)

In a sequence of three pretonic light syllables, secondary stress falls on the initial syllable

Now, we can move to Morphological Factors
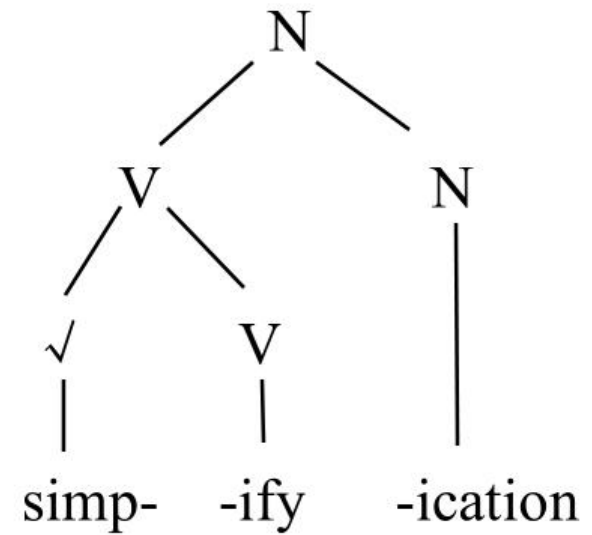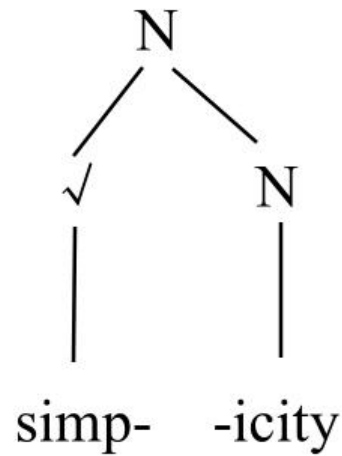
Morphological Structure of a Word

Root   Stem   Base

A stem must have lexical meaning

We could use these three ideas to get the morphological structure of a word
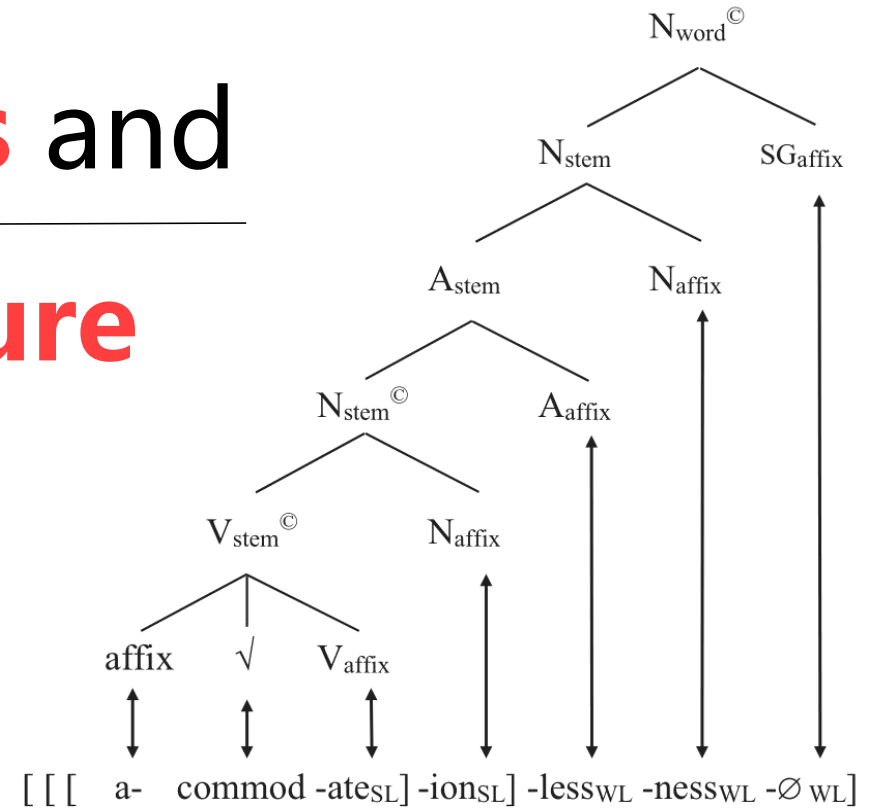
Example
Morphological Structure of a Word

Morphological Structures of *Simplícity* and *Sìmplificátion*

Phonological Findings and **Morphological Structure**

Stem-level suffixes are '**cyclic**' in the sense that a new domain for the application of **stem-level** phonological rules is created each time a stem-level suffix is added. In contrast,
word-level suffixes are '**noncyclic**' in the sense that only the outermost word-level suffix triggers the application of word-level phonological rules; in other words, **the word-levelphonological rules apply in a single pass to the whole word**.

Stress-affecting ⸻⸻ $\mathcal{P}_{SL}$

stress-neutral affixes ⸻⸻ $\mathcal{P}_{WL}$

$N_{word}^{©}$
N_{stem} SG_{affix}
A_{stem} N_{affix}
$N_{stem}^{©}$ A_{affix}
$V_{stem}^{©}$ N_{affix}
affix $\sqrt{}$ V_{affix}

[[[a- commod -ate$_{SL}$] -ion$_{SL}$] -less$_{WL}$ -ness$_{WL}$ -∅$_{WL}$]

$\mathcal{P}_{WL}(\ \mathcal{P}_{SL}(\ \mathcal{P}_{SL}(\ a\text{-, commod-, -ate), -ion), -less, -ness, -∅\ })$

1ˢᵗ cycle	accómmodàte
2ⁿᵈ cycle	accòmmodátion
3ʳᵈ cycle	accòmmodátionlessness

*Understanding **Polymorphemic Stress Pattern** using **Stratal Phonology***

1. Stress Pattern as a morphosyntactically induced **Opacity**

2. Cyclicity in stress pattern compared to cyclicity for other phonological rules :
A phonological process happened recursively or a phonological property inherited?

Explanation
Opacity

i n v i s i b l & m i s a p p l i c a t i o n e

A rule R of the form A →B / C_ D is opaque to the extent that there are surface representations in the language having either
(i) A in the environment C_D
(ii) B derived from A in an environment **other than C_D**
When a rule is opaque, it does not hold true of surface representations: i.e. it seems to misapply

• **Underapply**: Surface representations contain the structural description C_D but A do not undergo the structural change. R appears to underapply.

• **Overapply**: Surface representationss have undergone the structural change A→ B, but do not meet the structural description as the environment C_D is absent. R appears to overapply.
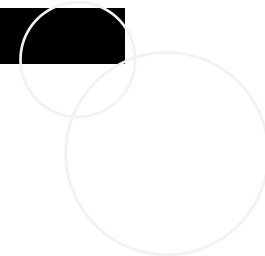
Cyclic Containment

"In cases of morphosyntactically induced phonological **opacity**, a linguistic expression **inherits its opaque phonological properties** from a constituent defining an **immediate** cyclic subdomain."

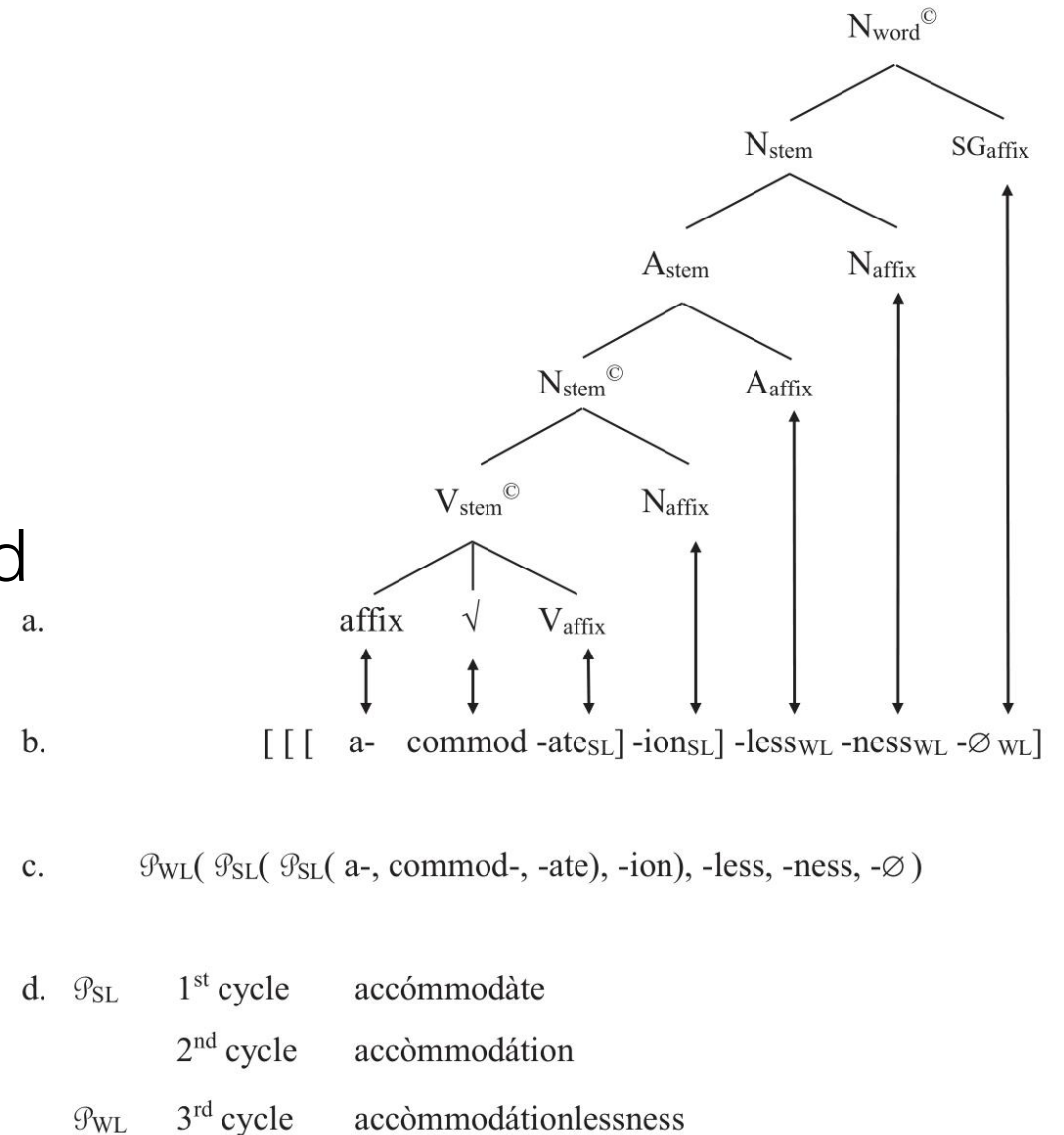"**Let there be the nested cyclic domains [γ . . . [β . . .[α . . .] . . .] . . .].
If a phonological process p is opaque in β because its domain is α, then
p is opaque in γ.**"

Explanation

Stress Pattern of Monomorphemic word fails to apply (underapply) in "accommodation";

it also fails to apply(underapply) in "accommodation"
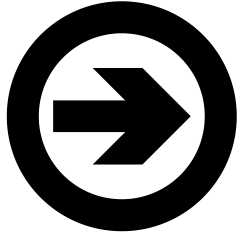
Compared to Other Phonological Processes

postnasal /g/-deletion overapplies
before the initial vowel of the suffix -ish
[ɪʃ]

t postnasal /g/-deletion will also
overapply when a vowel follows across
a word boundary, as in the phrase long
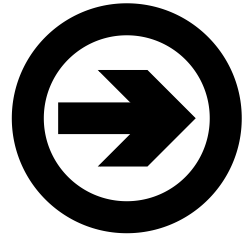effect [lɒŋɪfɛkt]

[[long~sm~]ish] [lɒŋɪʃ]
[[long~WL~] effect] [lɒŋɪfɛkt]

Conclusions

Stress Pattern in English provides evidence for stratification and recursiveness (only at stem level) in cyclicity.

Further Thoughts

Cognitive Perspective
As for phonological property, stress pattern in English presents
Retention[Clarity?] and Renewal[Comfort?]

Comparing English Stress Pattern with Other Languages
1. Indonesian: Polymorphemic words sometimes behave as monomorphemic word at the word level

2. Turkish: Same morpheme sometimes falls outside of the "cyclic" domain, while sometimes it falls inside
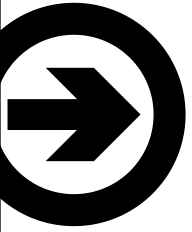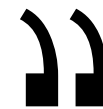
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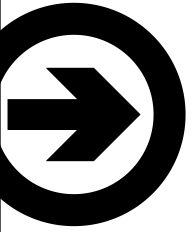
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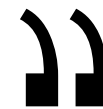
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[THANKS]
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