

# Iterative Optionality and Markedness Suppression

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LSA Annual Meeting, January 10th, 2009

## Vata Vowel Harmony

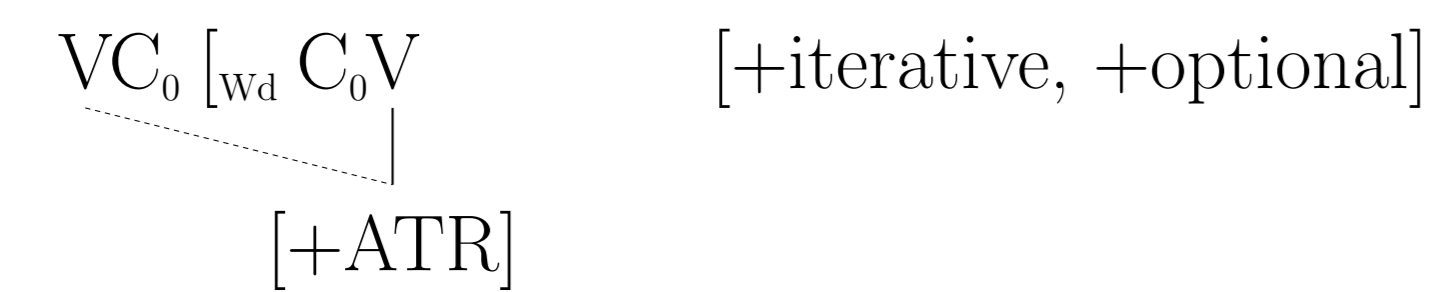
- [+ATR] optionally spreads leftward across word boundaries (Kiparsky 1985):

ó ká zā pī 'he will cook food'  
 ó ká zā pī  
 ó ká zā pī  
 ó ká zā pī

**Iterative Optionality:** Harmony is optional, and the choice to spread at each point is independent of the choice made at other points (Vaux 2003).

- On the basis of phenomena like iterative optionality, Vaux (2003) against OT and in favor of derivational frameworks.

### ⇒ Rule-Based Analysis:



- Iterativity and optionality parameters permit a simple analysis.

⇒ **OT:** Common theories of variation (Stochastic OT (Boersma & Hayes 2001), Multiple Grammars (Anttila 2007)) can produce only maximal harmony or no harmony (high-ranking DEP requires spreading, not insertion):

/ó ká zā pī/	*[-ATR]	IDENT
ó ká zā pī	*!***	
ó ká zā pī	*!* *	*
ó ká zā pī	*! **	**
ó ká zā pī		***

/ó ká zā pī/	IDENT	*[-ATR]
ó ká zā pī		***
ó ká zā pī	*!	**
ó ká zā pī	*!* *	*
ó ká zā pī	*!***	

- The intermediate forms are harmonically bound.

## Markedness Suppression

- Rules can be optional; why not allow optional constraints?
- What does it mean for a constraint to be optional?  
– A violation mark it would normally assign is not assigned—its violations are “suppressed.”

**Markedness Suppression:** On a language-particular basis, markedness constraints can be tagged with the operator  $\odot$ , and in an evaluation, any number of violation marks assigned by the constraint may be omitted.

- Markedness constraints trigger processes. Suppressing their violations is like refraining from applying a process.
- Depending on which violations are suppressed, any of the possibilities in Vata can be produced:

/ó ká zā pī/	$\odot$ *[-ATR]	IDENT
ó ká zā pī	*!***	
ó ká zā pī	*!* *	*
ó ká zā pī	o	**
ó ká zā pī		***!

/ó ká zā pī/	$\odot$ *[-ATR]	IDENT
ó ká zā pī	*!oo	
ó ká zā pī	oo	*
ó ká zā pī	o	**!
ó ká zā pī		**!* *

- Suppression is limited to Markedness constraints:  
– Suppression of Faithfulness constraints could lead to massive unfaithfulness. E.g. suppressing DEP would permit large-scale epenthesis.  
– Markedness Suppression simply permits variation toward greater faithfulness—the range of variation is intrinsically bounded.

## References

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 Kiparsky, Paul (1985) Some Consequences of Lexical Phonology. *Phonology* 2(3): 85-138.  
 Riggle, Jason & Colin Wilson (2005) Local Optionality. In *Proceedings of NELS 35*, Leah Bateman & Cherlon Ussery, eds., vol. 2, Amherst, MA: GLSA.  
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## French Schwa Deletion

- /ə/ is optionally deleted where permitted by the resulting syllable structure, etc. (Dell 1973):

*envie de te le demander* ‘feel like asking you’  
 Delete 1 /ə/ {  $\begin{cases} \text{ãvidtəldəməde} \\ \text{ãvidtəldəməde} \\ \text{ãvidtəldəməde} \\ \text{ãvidtəldəməde} \end{cases}$       Delete 2 /ə/’s {  $\begin{cases} \text{ãvidtəldəməde} \\ \text{ãvidtəldəməde} \\ \text{ãvidtəldəməde} \end{cases}$   
 No Deletion {  $\text{ãvidtəldəməde}$

- \* $[\emptyset]$   $\gg$  MAX favors maximal deletion; MAX  $\gg$  \* $[\emptyset]$  favors no deletion.
- A suppressible \* $[\emptyset]$  permits intermediate forms:

/ãvidtəldəməde/	$\odot$ * $[\emptyset]$	MAX
ãvidtəldəməde	**!	**
ãvidtəldəməde	*oo	*
ãvidtəldəməde	**!***	

- Cf. Riggle & Wilson (2005): each constraint is decomposed into freely rankable position-specific constraints.

/ãvidə <sub>1</sub> tə <sub>2</sub> lə <sub>3</sub> də <sub>4</sub> mãde/	* $[\emptyset]$ @1	MAX@1	MAX@2	* $[\emptyset]$ @2	MAX@3	* $[\emptyset]$ @3	MAX@4	* $[\emptyset]$ @4
ãvidtəldəməde		*		*	*!			*
ãvidtələdəməde		*		*		*		*
ãvidə <sub>1</sub> tə <sub>2</sub> lə <sub>3</sub> də <sub>4</sub> mãde	*!			*		*		*

- It is not clear how these constraints are projected. Multiple grammars are still needed to produce all possibilities.
- Markedness Suppression achieves the same result without expanding the set of constraints.

**Conclusion:** Given the same resources that are available to rule-based theories, OT can produce iterative optionality.

- Markedness Suppression is the OT analog of an optionality parameter. By eliminating violations, Markedness Suppression mimics derivations in which optional rules fail to apply.
  - With suppression limited to markedness constraints, we don’t introduce runaway unfaithfulness.
- ⇒ Iterative optionality is not evidence in favor of derivational phonology.

Thanks to Bruce Hayes, Junko Ito, Abby Kaplan, Anya Lunden, Armin Mester, Jaye Padgett, and Kie Zuraw for their many helpful comments and questions.

## How can OT produce iterative optionality?