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Exploring the Dilemma of the Split-L Geminate Pattern in Hong Kong English

LIAN-HEE WEE

1 Basic Patterns

In Hong Kong English (HKE, see Hung 2000 for phonological inventory), and also other Englishes, such as Australian English (Borrowsky and Hovarth 1997, Borrowsky 2001), Estuary English (Alterndorf 2003) and Singapore English, the lateral /l/ vocalizes to [w] when it is in the coda, as may be seen in (1).

- (1) L-vocalization (data from Hong Kong English, HKE)
- | | | | | | | |
|----|----|---------|---------|-----|------------|-----------|
| a. | i. | [smaiw] | “smile” | ii. | [smaili.ˈ] | “smiling” |
| b. | i. | [peiw] | “pale” | ii. | [peilis] | “palish” |
| c. | i. | [meiw] | “mail” | ii. | [meili.ˈ] | “mailing” |
| d. | i. | [kɔː] | “call” | ii. | [kɔːli.ˈ] | “calling” |
| e. | i. | [puː] | “pull” | ii. | [puːli.ˈ] | “pulling” |

Given the [w]~[l] alternation in (1), it is clear that the stems must contain an underlying /l/ that surfaces as [w] (i.e. vocalized) when that /l/ is syllabified into the coda.¹ If the preceding vowel is [+labial], /l/ deletes, and the vowel undergoes compensatory lengthening.

¹ In studying non-native varieties of English, one should not make fallacious assumptions that underlying representations are identical to the Received Pronunciation. Underlying representations are after all hypothetical and must be supported by evidence. As shown in Mohanan (1992), Mohanan and Mohanan (2003) and also Bao (this volume), unprejudiced and rigorous approaches to non-native varieties of English and other contact languages can often lead to very intriguing discoveries.

- (2) a. /l/ → [w] / (rime [-labial] __)
 /smaɪl/ → [smaɪw]
 /peɪl/ → [peɪw]
 /meɪl/ → [meɪw]
- b. /l/ → ∅ / (rime [+labial] __)
 /kɪl/ → [kɪ:]
 /pʊl/ → [pʊ:]

The facts in (1,d e) need not necessarily be analyzed as the deletion presented in (2b). It is also possible to treat this as the lengthening of V due to the vocalization of L (henceforth L-voc)². This matter is immaterial here because both options require /l/ to vocalize. Armed with (2), consider now the data in (3).³

- (3) L-vocalization or preservation (HKE)
- | | | | | | | |
|----|----|-------|--------|-----|-----------|-----------|
| a. | i. | [piw] | “peel” | ii. | [piwli.ˈ] | “peeling” |
| b. | i. | [hɪw] | “hell” | ii. | [hɪwliɪ] | “hellish” |
| c. | i. | [kiw] | “kill” | ii. | [kiwli.ˈ] | “killing” |
- (cf. /pi:/ → [pi.i.ˈ] / *pi.li.ˈ “peeing”)

At first blush, the data in (3) behave like those in (1d, e) and therefore should be analyzed in a way consistent to (2b), where the [w] would be assumed as part of the underlying representations. That way, /l/ would be deleted unless followed by a vowel initial suffix. However, since /l/ must be underlying (without this, there will be no way of predicting the occurrence of the [l] in (3ii) without making erroneous predictions to cases like “pee”~“peeing”), the [w] in (3i) is predictable given the L-voc rule in (2a). It is important to note the predictability of pre-L [w], because by this property, [w] should not be part of the underlying representations in (3). One has ended in a dilemma.

The L-voc Dilemma

- I. If one assumes that there is no underlying /w/ in the stems in (3), the [w] in (3i) must have come from the vocalization of /l/. In which

² Donohue (p.c.) suggests that L-voc implies labiality in the UR, as in /l^w/, which loses the labiality in the onset position; otherwise it would be difficult to explain why L-voc does not take the form of [-labial] vowels. But this issue is tangential to the focus of this paper.

³ Syllabic /l/ is vocalized as [ɫw] in HKE, but since it is irrelevant for the purposes here, it shall not be discussed further.

case, how can there be [-wl-] sequence in (3ii)? Either the /l/ has become a [w] or it has not, but in this case, it seems to do both, which is paradoxical (akin to the particle-wave duality of light).

II. If one assumes that the /w/ is underlying in the stems in (3), one would have missed the fact that [w] is predictable when there is a final /l/, as is shown in (2).

Although assuming no underlying [w] leads to a paradoxical situation, this paper argues that it is in fact the correct choice. The paradox can be resolved if one assumes that (i) phonological information percolates across the various tiers of the structural representations and (ii) the correspondence of percolated phonological information is not necessarily perfect. This approach allows for an analysis of a wider variety of facts, one of which is presented in the following section.

2 Relating to Patterns of Gemination

The first clue to resolving the L-voc Dilemma is to be found in the robust pattern of geminate root-final consonant where a coda consonant geminates when followed by a vowel initial suffix.⁴

- (4) Root-final Consonant Geminates (HKE data)⁵
- | | | | | | | |
|----|----|---------|--------|-----|-------------|------------|
| a. | i. | [stɔ̃p] | “stop” | ii. | [stɔ̃ppi.˙] | “stopping” |
| b. | i. | [pin] | “pin” | ii. | [pinni.˙] | “pinning” |
| c. | i. | [put] | “put” | ii. | [putti.˙] | “putting” |

The process shown in (4) is also widely attested across varieties of English as well as other languages. In HKE, such gemination does not extend to cases where the rime has 3 segments, as in (5).

- (5) Final Consonant Non-Geminates (HKE data)
- | | | | | | | |
|----|----|--------|--------|-----|-----------|-----------|
| a. | i. | [weit] | “wait” | ii. | [weiti.˙] | “waiting” |
| b. | i. | [paip] | “pipe” | ii. | [paipi.˙] | “piping” |

⁴ But see also Silverman (1992:323) for morpheme-internal geminates in HKE where gemination happens only when the preceding nucleus is simplex. The data is slightly different from suffix-triggered gemination, but the motivation for both kinds of gemination lies in the bimoraicity of the Cantonese syllable.

⁵ These are not true geminates in that the CC is ambisyllabic. Evidence for the geminates comes from the clear presence of both pre- and post-pausal Cs when informants are asked to insert pauses into multi-syllabic words. Thus, “stopping” is [stɔ̃p^Vpi.˙], where ^V=pause with two clear [p]s. In (5), there is no geminate because there is no pre-pausal C, “waiting” is [wei^Vti.˙]).

- c. i. [lain] “line” ii. [laini.ˈ] “lining”

The reason behind this is that HKE, by virtue of its origins as a contact language between Cantonese and English, has an inclination for syllables that conform to the Cantonese syllable structure where the rime maximally contains two segments. The patterns in (4) and (5) can be captured in Optimality Theory with the ranking of two fairly straightforward constraints, as in (6) and (7):

- (6) BI-RIME⁶
 The rime contains exactly 2 segments
 MAX
 Do not delete input segments
 DEP
 Do not insert segments
 ONSET
 All syllables have onsets.

MAX » BI-RIME; ONSET » DEP

- (7) a. No Gemination without Suffixation

/CVVC/	MAX	BI-RIME
i. CVVC		*
ii. CVC	*!	

- b. Suffixation Triggering Gemination (cf. (4))

/CVC + i.ˈ/	BI-RIME	ONSET	DEP
i. CV.Ci.ˈ	*!		
ii. CVC.Ci.ˈ			*
iii. CVC.i.ˈ		*!	

- c. Suffixation Not Triggering Gemination (cf. (5))

/CVVC + i.ˈ/	BI-RIME	ONSET	DEP
i. CVV.Ci.ˈ			
ii. CVVC.Ci.ˈ	*!		*
iii. CV.Ci.ˈ	*!		

Thus, in (5), prior to suffixation, the final consonant is kept. Also, the final consonant does not geminate after suffixation since that would give the

⁶ BI-RIME is most likely the effect of two constraints involving (i) the birmoraicity of the Cantonese syllable which is the minimal phonological word and (ii) the biuniqueness correspondence of the mora and the segment (a markedness constraint that forbids multiple linking).

initial syllable a rime with three segments. Instead it is better to simply syllabify the morpheme-final consonant as the onset of the suffix syllable. In (4), where the root morpheme has only two segments in the rime, consonant gemination preserves the unmarked rime structure while providing an onset for the suffix syllable.

There is a clear connection between final consonant gemination and the L-voc dilemma. Notice that the root morphemes in (1) all have tri-segmental rimes. So, where there is no suffix, the /l/ vocalizes rather than deletes. The cases in (3) are analogous to (5): the [-wl-] sequence is really a case of consonant gemination that has split into two distinct phones.

- (8) Comparing the Morpheme-final L with Morpheme-final C
- a. /stɔ̃p+i.·'/ → stɔ̃p.pi.·'
 /pil+i.·'/ → pil+li.·' → piw.li.·'
 gemination *L-voc*
- b. /weit+i.·'/ → wei.ti.·'
 /smail+i.·'/ → smail+li.·' → smai.li.·'
 gemination n/a *L-voc n/a*

There are now two compelling reasons for us to take the apparently paradoxical position that [w] is not underlying in (3). Firstly, the presence of [w] is predictable from the underlying /l/ (see (2) and (8)). If there is /l/, then suffixation with a vowel-initial morpheme will yield [-wl-] only when the nucleus preceding /l/ is simple; without suffixation, /l/ will be syllabified into the coda as [w]. Secondly, the distribution of [-wl-] and [-l-] is identical to that of other consonants such as [-pp-] and [-p-]. They all depend on the complexity of the preceding nucleus. Although the alternative solution that requires underlying [w] would also yield the same surface forms, it would be at the cost of generality.⁷

⁷ L-voc in Adelaide English (AdE, Simpson 1980, Steriade p.c.) is like HKE but without geminates for cases like “stopping”, etc. This may cast doubts on whether greater generality is attained in analyzing HKE L-voc by reference to gemination. Like all attempts at theorizing, it is sometimes a matter of what set of facts a theory hopes to capture. Here, one is faced with the choice of relating a set of facts in one language, or with relating a phenomenon across languages. There is no a priori reason for the choices, though this paper represents an attempt at the former which could appeal to available mechanisms of faithfulness or to certain UR specificities for blocking gemination in AdE. Thus, one would have an account of all the relevant facts after all: HKE and AdE would be typological variations of the same set of universal principles (see section 4). However, taking the position of not relating HKE L-voc with gemination would require two sets of accounts for HKE: one for L-voc which it shares with AdE and one for gemination. I therefore submit, a posteriori, that the choice to analyze L-voc by reference to gemination is the superior approach. Further, Hammond (1997), citing

An account such as (8) where there is no underlying [w] will require /l/ to send its proxy to be the onset of the suffix syllable while it stays in the rime to become vocalized, very much akin to the king sending his viceroy on unpleasant missions while he becomes fat in the comfort of his palace. This split-gemination that is L-Viceroy Effect is opaque in derivational terms and not easily dealt with in classical OT. Classical OT has always had problems with opacity, and in this case one has a combination of transparent and opaque effects in (8). Later models such as Sympathy Theory (McCarthy 2003), Stratal OT (Kiparsky 2003, this volume) and Candidate Chains (McCarthy 2006) address opacity within OT but due to space constraints, the reader is invited to Wee (2004) for an exploration of some of these enhanced OT models. It is also noteworthy that the opacity in (8a) is attributed to the opaque intermediate form *pilli.·'. Although Voc and Gem do not appear to trigger or block each other, the ordering of processes is crucial for producing the right results.

Worse, the following section will show that it is not compatible also with the well-established autosegmental representation account of gemination.

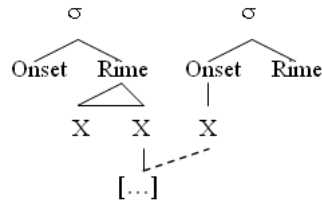
3 A Pattern with a Paradox

Recall the L-voc Dilemma where taking the position that [w] is not underlying, though desirable, appears to be paradoxical because one would have the sequence [-wl-] corresponding to the one underlying element /l/. At first blush, Section 2 seems to have the answer. It is not that /l/ has become [w] and stayed [l] at the same time, rather, it is that there are two /l/s so that one stays in the rime to be vocalized while the proxy is syllabified as the onset of the suffix syllable.

However, the gemination under consideration here is triggered by ONSET and would have to be accounted for in terms of progressive spreading, shown in (9).

(9) ONSET-triggered Consonant Spreading

Halle and Mohanan (1985), presents a variety of American English where gemination appears to be sensitive to the weight of the preceding syllable, similar (though not identical) to HKE.



The main idea in (9) is the multiple association of the melodic content which accounts for a wide variety of facts including compensatory lengthening (Hayes 1989), vowel harmony (Kroeger, this volume), homorganic NC clusters (Peng, this volume) and glide formation (Mohan 1986:75-77, where such spreading not only occurs across the syllable boundary but also across word boundaries in Malayalam).

Such spreading blurs syllable boundaries and may lead to complications where phonological processes target one part of the association (essentially Selkirk's 1990 two-root approach, cited in Broselow 1995, and Doug Pulleyblank p.c.). In Donohue (this volume), Palu'e shows precisely such characteristics where spreading nasality across syllable boundaries competes with vowel phonation, resulting in apparently paradoxical situations. Here too, a spreading account of L-voc returns us to the paradox of having one /l/ corresponding to two segments [-wl-]. Looking at (9), if the two skeletal slots are associated to [l], then there would be an L-geminate. If there is vocalization, then there would be a W-geminate. Either way, one does not arrive at a [-wl-] split-geminate sequence.

A simplistic solution at this point is to return to SPE type rules and account for the data by ordering two rules in the following way:

(10) An Undesirable Rule-Ordering Approach

Step 1: $\emptyset \rightarrow C / [\text{rimeVC}] + _ V$

Step 2: $/l/ \rightarrow w / [\text{coda}_]$

Step 1 ensures gemination when the environment is right while Step 2 ensures that /l/ syllabified into the coda becomes vocalized. Such an account is clearly undesirable because it offers us no insight into why the phonological system is the way it is. Further, it predicts that languages would vary typologically by the re-ordering of the rules, producing such languages that would yield *[piwwi·] for "peeling" and [stɔppi·] for "stopping" if Step 2 is ordered before Step 1. To the best of my knowledge, this is unattested. Thus, a satisfactory theory of any explanatory power must retain the autosegmental representation of gemination as well as the parallel between root-final consonant gemination and the L's Viceroy Effect.

4 Correspondence of Information Across Tiers

If the autosegmental representation of gemination is to be preserved, then the parallel L's Viceroy Effect with consonant gemination would require a theory that encodes the derivational complexity of splitting the L geminate within an enriched representation. This can only be done within the framework of Inter-tier Correspondence Theory (ICT, Wee 2004), where derivational histories are recoverable from hierarchical structures via correspondence of information across tiers. In such a conception, derivations are no longer necessary since the effect of derivation can be derived from the primacy of terminal nodes coupled with the non-faithful correspondence of information at higher nodes.

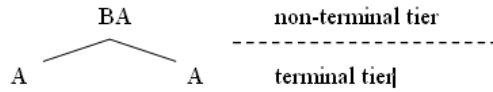
(11) Inter-tier Correspondence Theory (ICT)

- i. Carriage of information
All nodes (terminal or non-terminal) are information-bearing.⁸
- ii. Correspondence of information
There is a correspondence of the information content between nodes that stand in immediate domination.
- iii. Violability of correspondence
Correspondence of information between nodes is not necessarily perfect.

Given the setup in (11), ICT stands phonological representations on their heads in that terminal nodes are now exactly identical to underlying (input) strings. What is traditionally construed as the phonetic output is now the entire representation with the root node looking identical to the traditional notion of surface strings. To illustrate consider a hypothetical language where $/A+A/ \rightarrow [BA]$. In ICT, this would be represented as follows:

(12)

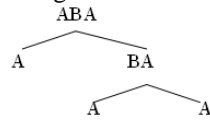
⁸ This idea is not new and is in fact found in endocentric models of syntactic representation. ICT also shares this assumption with Orgun's (1996) treatment for cyclic phenomenon in morphology-phonology interleaving. (See Wee 2004 for the similarities and differences.) Goldrick's (2000) Turbidity presents a closely related idea of accounting for opacity where a covert element X may be realized by its sister Y through the dominating node. The parallel between Turbidity and ICT is somewhat oblique, but both point to structural representations for capturing opacity within an output driven framework.



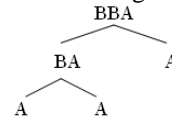
As can be seen in (12), it is the constituency of two adjacent A-s that triggers the “unfaithful” correspondence at the root node. To get the effect in (12), one would of course need a constraint that favors preservation of information from the right branch. This can be easily done with positional faithfulness constraints and general faithfulness constraints. To illustrate the power of ICT, consider now the effect of (12) to ternary strings. With the help of an additional rule $CB \rightarrow CD$, the examples in (13) should suffice:

(13) ICT with reference to Rule-ordering Effects⁹

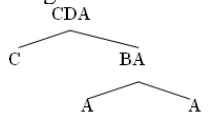
a. Bleeding



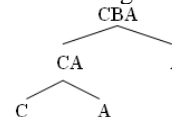
b. Counterbleeding



c. Feeding



d. Counterfeeding



It should be clear from (13) that ICT captures directly the insight that opacity (and for that matter effects of derivation) is often structurally motivated, something that was built into the levels of Lexical Phonology or the mechanisms of bracket erasures (Mohanan 1986 and Kiparsky, this volume).

There are a few advantages with ICT. Firstly, it predicts that opacity is only as deep as there are hierarchical structures, since the number of unfaithful “percolations” is directly proportionate to the number of tiers. In other words, the depth of opacity is not arbitrary. Secondly, it predicts that adjacency does not trigger phonological alternation, rather alternation happens only in marked constituencies. Both predictions are generally supported by patterns across languages. The third advantage is that ICT provides a natural account for opacity within a non-derivational framework such as Optimality Theory (OT). ICT no longer requires derivations because the history of derivation would be a consequence of gradual mismatched

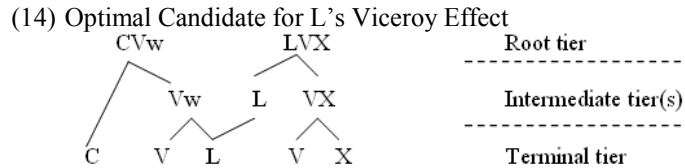
⁹ The same effects can be achieved with a progressive rule $AA \rightarrow AB$ coupled with the mirror-images of these structures.

inter-tier correspondences from the terminals to the root of the candidate tree.¹⁰

The only price one has to pay in accepting ICT is that output forms are no longer strings but structures. This is not a tall price to pay at all since one also has structural outputs in various other domains such as morphology, syntax and prosody. In fact, ICT lends greater coherence to phonological theorizing in general since we can now treat segmental phonology the same way we treat prosody (i.e. in having structural outputs rather than linear ones).¹¹

5 ICT and L's Viceroy

Having gotten this far, the solution to L's Viceroy is now apparent. The optimal candidate for a given input /CVL+VX/ is as follows:



As may be seen in (14), the terminal tier is identical to the input string /CVL+VX/. This string is then parsed into a structure equivalent to two syllables such that the input “L” is doubly associated similar to the autosegmental representation in (9). Information from the terminal tier corresponds to that in the higher tiers (akin to percolation, though not necessarily construed in derivationally). With one exception, all inter-tier correspondences have been faithful. This one exception is where L has not percolated faithfully in its first association: it has [w] as a correspondent. This unfaithful correspondence is triggered by a constraint that prohibits [l] in the coda of a syllable, which would yield the effect of split gemination.

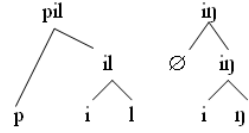
To see how ICT works with the examples in HKE, consider first a set of possible candidates when given an input such as /pil+i.ɨ/ “peeling” and /meil+i.ɨ/ “mailing”.

¹⁰ There is a fourth advantage in that ICT marries the insights of both the containment model (Prince and Smolensky 1993/2004; McCarthy and Prince 1993/2001) and the correspondence model (McCarthy and Prince 1995) of OT. In ICT, the input is contained as the terminal nodes and Correspondence is captured across tiers. See Wee (2004) for discussion.

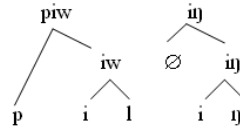
¹¹ Implicit in treatments for prosody, such as parsing of elements into Onsets, Syllables or Feet, etc, is the hierarchical, hence structural organization of material. As such, these outputs are not strings per se.

(15) Candidates for /pil+i.·/ “peeling”

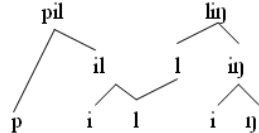
a. Faithful



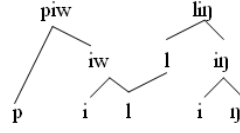
b. Vocalize



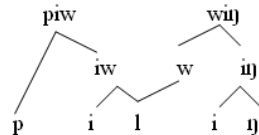
c. Geminate



d. Geminate and Vocalize

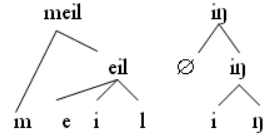


e. Vocalized Geminates

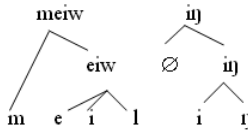


(16) Candidates for /meil+i.·/ “mailing”

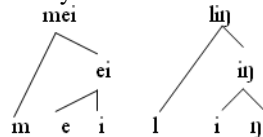
a. Faithful



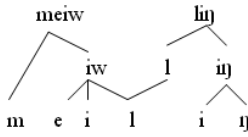
b. Vocalize



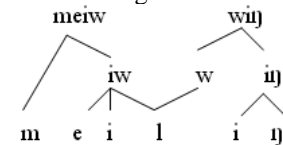
c. Resyllabified



d. Geminate and Vocalize



e. Vocalized geminate



The above candidates are only a subset of all possible candidates, but this representative set should suffice to illustrate how ICT would correctly predict the presence of the L's Viceroy when the rime has two elements and the absence of that effect when the rime has three elements (parallel to the presence or absence of root-final consonant gemination). The above

candidates vary along various parameters: (i) where the final L is syllabified; (ii) if that L is geminate; and (iii) if percolation of the L is faithful.

Armed now with the set of candidates, one can evaluate each candidate with respect to the constraints in an OT tableau.

(17) ICT account of L's Viceroy¹²

*MULT ASSOC

A node cannot be dominated by more than one node.

INTER-TIER FAITH¹³

Dominating nodes must have identical information with subordinate nodes.

*L-CODA¹⁴

[l] is not allowed in the coda.

/pil + i.·' /	*L-CODA	ONSET	*MULT ASSOC	INTER-TIER FAITH
a. Faithful	*!	*		
b. Vocalize		*!		*
c. Geminate	*!		*	
☞ d. Gem & Voc			*	*
e. Voc'd gem			*	**!

/meil + i.·' /	*L-CODA	ONSET	BI-RIME	*MULT ASSOC	INTER-TIER FAITH
a. Faithful	*!	*	*		
b. Vocalize		*!			*
☞ c. Resyllabified					
d. Gem & Voc			*!	*	*
e. Voc'd gem				*!	**

¹² Doug Pulleyblank (p.c.) suggests a classical OT solution where the input /l/ has two correspondences [w_i] and [l_i]. There are two problems: (i) this predicts languages that allow long distance split correspondence /X_j/ corresponds to [Y_j... Z_j] by virtue of GEN's capacity, which as far as I know are unattested. ICT restricts such split correspondence to adjacency because cross-branching structures are impossible to GEN; and (ii) multiple correspondences require different IDENT to apply to each correspondent. These IDENT constraints would have to be positional in nature, which is the insight of ICT. So, while the split correspondence approach could in principle generate the L-voc effects of HKE, it overgenerates.

¹³ This is really a collection of constraints parallel to Faithfulness in classical OT frameworks. For current purposes, this simplification suffices.

¹⁴ Whether or not this is universal is immaterial here, but across languages [l] is often vocalized when in the rime.

Violation counts in the above tableaux are obtained by evaluating each representation candidate at every tier against the constraints. For example, in the faithful candidates (a), /l/ is kept as it is in the corresponding higher tier which constitutes a violation of *L-CODA at that level. It is important to bear in mind that in ICT representations, adjacency and constituency are clearly different. When the /l/ is at the terminal tier, there is no indication of it being in the coda. That information is only available in the dominating tier when /l/ and the preceding vowel form a constituent.

As may be seen in (17), vocalization is only triggered when /l/ is syllabified into the coda, which happens only at the behest of BI-RIME.¹⁵ The same is true for gemination, which is the result of two forces combined: BI-RIME and ONSET. This explains why /meil+i.··/ and /pil+i.··/ is so different. In /pil+i.··/, gemination and vocalization are both necessary if the constraints of BI-RIME and *L-CODA are to be fulfilled. Of crucial importance here is the possibility of “unfaithful” inter-tier correspondence because it is this that allows for the same /l/ to surface differently according to its context (i.e. onset or coda positions).

6 Concluding remarks

This paper began with a simple-looking and common puzzle where [l] alternates with [w] and not others. A straightforward but simplistic solution would have been to assume underlying /w/ in some cases and not others. However, when that pattern is studied with additional patterns of consonant gemination (or lack thereof) during suffixation, a clear parallel with the L-voc facts can be seen. The puzzle deepens: it involves the making of a proxy and the alternation of the original, characterized in this paper as the L’s Viceroy (or Split L-geminate).

The L’s Viceroy Effect leads to the apparently paradoxical situation where /l/ must at once be [l] and [w]. The paradox arose out of our understanding of gemination as two skeletal positions associated to one melody, so perhaps one should consider the simplistic option of discarding autosegmental representations for ordered SPE type rules. The SPE rules, though capable of generating the set of facts, provide little conceptual

¹⁵ Donca Steriade (p.c.) pointed out that in attributing the geminate and vocalization combination in HKE to resyllabification, there must be either (i) no morpheme-internal geminates in words like *silly*, *vanilla* or *dilly-dally* or (ii) these geminates, which do not stem from resyllabification, function differently. It turns out that in HKE, *silly* is [si:li:], *vanilla* [wan.lei.la:] and *dilly dally* [di:li:ɹ̥li:]. Without being Anglo-centric, positing that HKE has geminate UR is unmotivated for these cases, so (i) is most likely true, even with proviso to fn.4. *Vanilla* [wan.lei.la:] presents a complication with the heterosyllabic [-n.l-], which if a geminate, is certainly unlike the kind studied here and would still be consistent with (ii).

understanding to what the facts should be the way they are. Further, one would expect typological differences to stem from the differences in the ordering of the rules. I know of no languages that would attest to this. In other words, one needs a deeper characterization to generate the patterns of L-voc.

In exploring this apparently paradoxical pattern, a discovery is made when one arrives at an ICT account which resolves the paradox by appealing to the structures for correspondence of information. This exploration thus extends beyond arguing that ICT is the right framework for understanding phonological patterns as evidenced by its usefulness in tackling the puzzling L's Viceroy facts. The real purpose is perhaps to demonstrate the spirit of scientific inquiry that sometimes leads one to face apparent dilemmas and paradoxes, and to find resolution in newer conceptions of old ideas (albeit sometimes requiring us to stand our earlier beliefs on their heads such as what the ICT does to phonological representations). I do not know how such a spirit of inquiry is expressed in the epistemological traditions of theoretical linguistics, but it is certainly this patience, courage, curiosity and open-mindedness that make Mohanan so endearing to his students, colleagues and friends.

Acknowledgments

In 1994, Mohanan presented the Teacher's Dilemma in class saying that, "The teacher's job is to make himself useless to the students as soon as possible". He taught us in that spirit (see Ann, this volume for more similar stories). At the LFG-2005 conference in Bergen, I caught Mohanan at an obscure corner, quietly supporting the timid Karene (who was in that class in 1994) as she presented her poster, slowly shedding off her reliance on Tara and Mohanan. I wonder if such teachers ever become useless to their students. Perhaps, that is how this dilemma is resolved.

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ROA = Rutgers Optimality Archive <http://roa.rutgers.edu>, accessed 1 Dec 2006.