

## On the Phonologically Driven Non-Realization of Function Words

ELISABETH SELKIRK

*University of Massachusetts, Amherst*

### 0. Introduction

The empirical focus of this paper is on cases where function words may fail to be realized in surface phonological representation due to the action of phonological constraints. Zec and Inkelas (1990) and Golston (1996) investigate cases of this sort, with a mind to their implications for theories of the organization of the grammar. My intention here is to further probe what such cases show about the nature of the phonology-morphosyntax interface, and to sketch a general theory of the phonologically driven non-realization of words.

Until recently, models of the relation between surface morphosyntax and surface phonology in a grammar did not countenance the possibility that phonology might have an influence on syntax. The idea of a phonology-free syntax was built into models of generative grammar from the 1960s up through the 1990s. These earlier models saw the output of the syntactic component as providing the input to the phonological component. But the last decade has seen possibilities for a different conception of the phonology-morphosyntax interface emerge. A Minimalist model of grammar (Chomsky 1995) does countenance the possibility that the phonological interface representation may influence syntactic form. Optimality Theory (Prince and Smolensky 1993, McCarthy 2001) allows in principle for this sort of influence as well. In the OT framework, a grammar consists of a set of ranked constraints on output form; outputs consist of both phonological structure (PStruc) and morphosyntactic structure (MStruc) representations; and constraints on PStruc and on MStruc appear in the same constraint hierarchy, such that constraints from either set may (in principle) dominate constraints from the other.

This paper adopts the OT framework in arguing for two related ways in which phonology may influence the morphosyntax of the sentence. First, the phonological constraint ranking may force the non-realization, i.e. deletion, of a word—but just when that deletion is recoverable. Second, the phonological constraint ranking may lead to the non-realization of the sentence containing the function word, i.e. to a “crashing” of the derivation, when the word deletion found in the optimal output candidate is *not* recoverable. It is proposed that both cases of non-realization arise when a particular morphosyntactic constraint of the general form

REALIZE( $\alpha$ ) (where  $\alpha$  is a variable over morphemes) is violated due to a higher ranking of phonological constraints. The question of what other types of morpho-syntactic constraints may be dominated by phonological constraints is left unaddressed in this paper.

### 1. Hausa *fa* and Phonologically Driven Non-Realization

Inkelas (1987) analyzes the possibilities of distribution of the Hausa morpheme *fa*, which she refers to as a focus particle. *Fa* is positioned by the morphosyntax to the right of the element in focus in the sentence, but it may not always appear there. For example, for a sentence to be realized in which the focus particle *fa* is associated with a preceding focused verb, that *fa* must be either verb phrase-final or be followed by a VP complement that consists of more than one word. Inkelas argues that this seemingly odd pattern of distribution has a prosodic characterization. She proposes that *fa* must appear at the right edge of a phonological phrase, as in (1b). The mechanism proposed for ensuring this distribution is a lexical prosodic subcategorization, given in (1c).

- (1) Non-realization of *fa* in Hausa (Inkelas 1987, Zec and Inkelas 1990)
- |                                                                                                           |                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a. Sentence types</p> <p>Verb <i>fa</i></p> <p>Verb <i>fa</i> Adj Noun</p> <p>*Verb <i>fa</i> Noun</p> | <p>b. Prosodic structures for those types</p> <p>(Verb <i>fa</i>)<sub>PPh</sub></p> <p>(Verb <i>fa</i>)<sub>PPh</sub> (A N)<sub>PPh</sub></p> <p>(Verb <i>fa</i> N)<sub>PPh</sub></p> |
| <p>c. Prosodic subcategorization frame for <i>fa</i>: [PPh ___]</p>                                       |                                                                                                                                                                                       |

But treating this as a case of stipulative prosodic subcategorization gives up on the search for any deeper explanation of these distributional patterns. The idea that there are no stipulative prosodic subcategorizations and that instead an output constraint hierarchy plays a determining role in the appearance, distribution, or allomorphic shape of morphemes has been proposed in Optimality Theoretic treatments of phonology-morphology interactions within words (e.g. McCarthy and Prince 1993, Mester 1994, Kager 1996). Tranel (1995), Mascaró (1996), and Golston (1996) have brought this perspective to the study of the non-realization of words in the sentence phonology. The leading idea in the theory of sentence-level allomorphy proposed by Tranel and Mascaró is that the choice between surface allomorphic variants (e.g. the appearance of French *vieux* [vjø] ‘old’ before the consonant-initial *garçon* ‘boy’ in contrast to the appearance of the allomorph *vieil* [vjɛj] ‘old’ before the vowel-initial *ami* ‘friend’) is decided by higher ranking phonological constraints, in this case the markedness constraints that favor a CV syllable structure. In other words, allomorphy is controlled by surface phonology constraints. The non-realization of morphemes in particular phonologically defined contexts, such as that of Hausa *fa*, is also arguably driven by the surface phonology.

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My proposal for implementing non-realization is that a constraint of the form  $\text{REALIZE}(\alpha)$  exists for every lexical item  $\alpha$  in a language and that the language-particular ranking of  $\text{REALIZE}(\alpha)$  determines the susceptibility of  $\alpha$  to non-realization. Such a constraint in a non-morpheme-specific form has been variously termed MORPHREAL, EXPONENCE, etc. The morphemic specificity predicts that in the grammar of Hausa, for example, there are the constraints  $\text{REALIZE}(fa)$ ,  $\text{REALIZE}(sayi)$ ,  $\text{REALIZE}(babban)$ , etc. In the default case,  $\text{REALIZE}(\alpha)$  is undominated in the constraint hierarchy, ensuring that words in the input will be realized in the output:

- (2) Default realization of morpheme  $\alpha$ :  
 $\text{REALIZE}(\alpha) \gg$  All P-Constraints

In the idiosyncratic case of a particular word  $\beta$  which may fail—like *fa*—to be realized in a particular phonological context,  $\text{REALIZE}(\beta)$  is specified as lower ranked than the relevant phonological constraints on the output, giving rise to the possibility of phonologically controlled non-realization:

- (3) Idiosyncratic non-realization of morpheme  $\beta$ :  
Certain P-Constraint(s)  $\gg$   $\text{REALIZE}(\beta)$

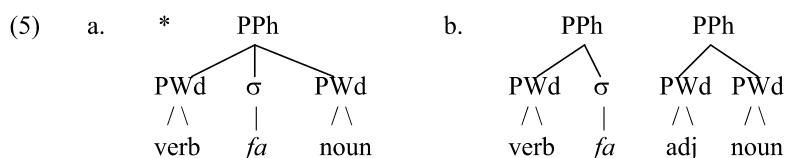
Let's see how this theory works with the case of Hausa *fa*. In the output constraint hierarchy of Hausa,  $\text{REALIZE}(fa)$  will be ranked below certain phonological constraints. It is this idiosyncratic low ranking of  $\text{REALIZE}(fa)$  which makes it vulnerable to non-realization. Because we do not have sufficient information about the prosodic structure of Hausa to make very informed hypotheses about which phonological constraints are responsible for the restrictions on the appearance of *fa*, the analysis I am about to propose can serve only as a hypothetical illustration of a type of possible analysis that could be offered, given the theory above. Let's use the cover term PHRASING for the sub-hierarchy of constraints that are responsible for the phonological phrasing of Hausa sentences that Inkelas assumes in (1b). In particular assume that a BINARY MAXIMUM constraint (cf. Selkirk 2000) will force a phonological phrase break between a verb and a two-word complement. And let's use the term WORDING as a cover term for the sub-hierarchy of constraints that are responsible for determining whether a function word is part of a Prosodic Word or not (cf. Selkirk 1995). For the sake of illustration, let's assume that WORDING in Hausa has the result that a monosyllabic function word like *fa* is not a PWd itself and is furthermore not incorporated into an adjacent PWd—which means that *fa* will be immediately dominated by a phonological phrase. And let's also posit the existence of a constraint family called MEDIAL EXHAUSTIVITY, which would rule out EXHAUSTIVITY violations except at the periphery of a prosodic constituent. This can be seen as a generalization of the peripherality constraint on “extrametricality.”

(4) MEDIAL EXHAUSTIVITY (MEDEXH):

A prosodic constituent C must immediately dominate prosodic constituents of the next level down in the prosodic hierarchy, except if the daughter constituent lies at the edge of C, e.g.

- a. \*<sub>PWd</sub>( ... Ft σ Ft ... )<sub>PWd</sub>      b. \*<sub>PPh</sub>( ... PWd σ PWd ... )<sub>PPh</sub>, etc.

Now we are in a position to account for the non-realization of *fa* in the illicit context in (5a), alongside its permissibility in (5b):



The crucial constraint ranking is that in (6):

(6) WORDING, PHRASING, MEDEXH » REALIZE(*fa*)

The success of this ranking in accounting for realization of *fa* in the (5b) context and its non-realization in the (5a) context is shown in the tableau in (7):

(7) Realization and non-realization of *fa*

a.	[ [ [ verb ] <i>fa</i> ] [ [ adj ] [ noun ] ] ]	WORDING	PHRASING	MEDEXH	REALIZE( <i>fa</i> )
⇒	1. ((verb) <sub>PWd</sub> <i>fa</i> ) <sub>PPh</sub> ((adj) <sub>PWd</sub> (noun)) <sub>PPh</sub>				
	2. ((verb) <sub>PWd</sub> <i>fa</i> (adj) <sub>PWd</sub> (noun)) <sub>PPh</sub>		*!	*	
	3. ((verb- <i>fa</i> ) <sub>PWd</sub> ) <sub>PPh</sub> ((adj) <sub>PWd</sub> (noun)) <sub>PPh</sub>	*!			*
	4. ((verb) <sub>PWd</sub> ) <sub>PPh</sub> ((adj) <sub>PWd</sub> (noun)) <sub>PPh</sub>				*!
b.	[ [ [ verb ] <i>fa</i> ] [ [ noun ] ] ]	WORDING	PHRASING	MEDEXH	REALIZE( <i>fa</i> )
	1. ( (verb) <sub>PWd</sub> <i>fa</i> ) <sub>PPh</sub> ((noun) <sub>PWd</sub> ) <sub>PPh</sub>		*!		
	2. ( (verb) <sub>PWd</sub> <i>fa</i> (noun) <sub>PWd</sub> ) <sub>PPh</sub>			*!	
	3. ( (verb- <i>fa</i> ) <sub>PWd</sub> (noun) <sub>PWd</sub> ) <sub>PPh</sub>	*!			
⇒	4. ( (verb) <sub>PWd</sub> (noun) <sub>PWd</sub> ) <sub>PPh</sub>				*

In the case where the input consists of Verb-*fa* Adjective Noun, the first candidate, where *fa* lies at the edge of a phonological phrase, is the optimal one. It respects all the relevant constraints. In the case where the input consists of Verb-*fa* plus an object consisting of a single noun, it is that fourth candidate that is the optimal one. This is the one that respects all the higher constraints, but violates REALIZE(*fa*). So here the optimal candidate shows a non-realization of *fa*.

Unfortunately, Inkelas says nothing about the meaning of *fa*. Does *fa* carry some additional focus-related meaning, like ‘really’ or ‘indeed’ or ‘only’ or

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‘too’? Or is it simply a semantically empty marker of a focus construction? *Fa* could in principle be semantically empty or redundant, since Focus is a property of the focused surface constituent at any rate, and is reflected in the sentence prosody (Inkelas and Leben 1990). If *fa* is empty or redundant, then its non-realization can simply be accounted for as in (7). But if *fa* does indeed have semantic content, then non-realization constitutes a violation of the principle of Recoverability:

(8) **Recoverability** (Pesetsky 1998):

A syntactic unit with semantic content must be pronounced [= realized] unless it has a sufficiently local antecedent.

So on the scenario that *fa* has semantic content (and no antecedent), if underlying *fa* were not to appear in the surface, the “derivation” of the sentence should “crash,” to use Minimalist terms. This would be a case of the non-realization of a sentence. To ensure this “derivation crashing” effect, I will assume that the following property characterizes an OT grammar:

(9) The principle of Recoverability checks the output of EVAL

If the candidate chosen by the constraint hierarchy (EVAL) involves a Recoverability violation, as would be the case in (7b) if *fa* had semantic content, then that sentence is simply not realized. This would be a case of the non-realization of a sentence, not the non-realization of a word. The theory of non-realization can be summed up as follows:

(10) **Types of Non-Realization and Recoverability:**

- i. The *non-realization of  $\alpha$*  in a phonologically illicit configuration:  
When the optimal output candidate S’ corresponding to a specific input S contains a violation of  $REALIZE(\alpha)$ , and the absence of  $\alpha$  in the output S’ does *not* incur a Recoverability violation, then  $\alpha$  is simply not realized.
- ii. The *non-realization of a sentence with  $\alpha$*  in a phonologically illicit configuration:  
When the optimal output candidate S’ corresponding to a specific input S contains a violation of  $REALIZE(\alpha)$ , and the absence of  $\alpha$  in the output *does* incur a Recoverability violation, then neither the optimal output S’ nor any other output candidate with the same input S is realized. (“The derivation crashes.”)

So if Hausa *fa* has no semantic content, then it will simply not be realized in the output representation corresponding to the input with *fa*. But if *fa* has semantic

content, there will be no output sentence at all corresponding to the input. It remains to see what the facts of interpretation of Hausa *fa*-less sentences are.

The above theory, then, is the alternative I am proposing to Inkelas's prosodic subcategorization theory of the non-realization of Hausa *fa*. As with allomorphic realization effects (Tranel 1995, Mascaró 1996, Golston 1996), the proposal here is that the grammar should and can shoulder the responsibility for accounting for the *non-realization* of words in phonologically defined surface configurations. What's crucial to explaining the pattern of realization of a word  $\alpha$  is (i) the lexical status of the word (what phonological shape it has, whether it is a function word or not, and whether it has semantic content), and (ii) the ranking of  $\text{REALIZE}(\alpha)$  with respect to the rest of the phonological output constraint hierarchy. This explanatory account of patterns of non-realization of words comes at a small cost—the stipulation of the ranking position of  $\text{REALIZE}(\alpha)$ .

An advantage of this theory is its ability to explain why it is that word non-realization is apparently limited to function words. A function word, unlike a "content" word, may indeed fail to make an independent semantic contribution to the sentence, and so its deletion is potentially recoverable. Second, because function words, unlike content words, may fail to be assigned the status of Prosodic Word by the constraint system (Selkirk 1995), they may violate certain phonological constraints and so be vulnerable to deletion if  $\text{REALIZE}(\alpha)$  is low ranked. The Japanese case below shows how the prosodization of the functional particle *no* determines its (non)realization.

## 2. The Recoverable Non-Realization of Japanese *no*

The case of non-realization of the Japanese particle *no* which we examine next has the advantage that the phonological constraint hierarchy that is responsible for the attested violations of  $\text{REALIZE}(no)$  has a straightforward independent motivation, and thus provides solid evidence that the non-realization of *no* is phonologically driven. The factual material is drawn from Poser (1984), who analyzes the sentence-level haplology involving adjacent instances of various functional particles with the phonological shape *-no*. These are the genitive, the copular, the nominal, and the interrogative *no*:

(11) The various *-no* particles of Japanese:

- |                 |                           |                          |
|-----------------|---------------------------|--------------------------|
| a. Genitive:    | <i>Taroo no hoN</i>       | ‘Taro’s book’            |
|                 | Taro GEN book             |                          |
| b. Copular:     | <i>isyā no ozisaN</i>     | ‘uncle, who is a doctor’ |
|                 | doctor COP uncle          |                          |
| c. Nominalizer: | <i>akai no</i>            | ‘the red one’            |
|                 | red-PRES NMZ              |                          |
|                 | <i>Hanako ga katta no</i> | ‘the one Hanako bought’  |
|                 | Hanako NOM bought NMZ     |                          |



(13) ANTIHOMOPHONY—Generalized (cf. Golston 1996):

- \*  $\alpha \beta$ , where  $\alpha$  and  $\beta$  are morphemes which are
- a) adjacent,
  - b) segmentally identical, and
  - c) prosodically identical

*Def.* Two morphemes of a sentence *S* are *prosodically identical* when both are dominated by identical instances of prosodic constituents in *S* and both have the same prominence status (as stressed or unstressed).

(Note that it follows from this definition that only morphemes that are dominated by the same instances of Ft, PWd, or PPh can be prosodically identical. This means that content words, which are each dominated by a distinct PWd, can never be prosodically identical, thus predicting that only function words will be susceptible to ANTIHOMOPHONY.) Haplology crucially involves a ranking of ANTIHOMOPHONY over REALIZE( $\alpha$ ):

(14) ANTIHOMOPHONY—Generalized » REALIZE( $\alpha$ )

This ranking is part of the analysis that I want to propose for *-no* haplology in Japanese. Specifically I want to propose that haplology patterns as it does in Japanese due to the manner in which the constraint hierarchy of Japanese organizes the *-no* particles into prosodic words in the different contexts in (12):

(15) The hypothesis:

- In *peripheral position* in the phonological phrase (cases (ii) and (iii)), a sequence of *-no* particles is forced to be incorporated into the same Prosodic Word with the word that precedes. ANTIHOMOPHONY rules against the sequence of non-footed *no* syllables that would have to appear within PWd, and so one of the *-no* particles fails to be realized:

\*<sub>PPh</sub>( <sub>PWd</sub>( *ZyoN no no* )<sub>PWd</sub> )<sub>PPh</sub>  
 John GEN NMZ

\*<sub>PPh</sub>( <sub>PWd</sub>( *utyooteN no no wa* )<sub>PWd</sub> )<sub>PPh</sub> PPh( <sub>PWd</sub>( *Hanako de* )<sub>PWd</sub> )<sub>PPh</sub>  
 ecstatic COP NMZ TOP Hanako be

- In *phrase-medial position* (case (i)), the first *-no* is incorporated into the preceding prosodic word, but the second one is not. ANTIHOMOPHONY does not rule the sequence out, and so haplology does not occur.

<sub>PPh</sub>( <sub>PWd</sub>( *akai no* )<sub>PWd</sub> *no* <sub>PWd</sub>( *futa* )<sub>PWd</sub> )<sub>PPh</sub>  
 red-PRES NMZ GEN lid

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Independent evidence for the prosodic structure analyses in (15) is provided by the phenomenon of final deaccenting (McCawley 1968 and Poser 1984).

(16) **Phrase-Final Deaccenting**

A final accent in a polysyllabic word is retained when it is followed by a phrase-final particle (*wa, ga, o*, the nominalizer *-no*, etc.), but not when the word itself is phrase-final. [Note that accent is lexically specified.]

<p>a. <i>onna</i>     ‘woman’ <i>kaki</i>     ‘fence’ <i>atama</i>     ‘head’</p>	<p>b. <i>onna’-no</i>     woman-NMZ ‘the woman’s’ <i>kaki’ wa</i>     fence TOP <i>atama’-o</i>     head-ACC</p>
-------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------

The avoidance of a tonal accent on the final mora in the (a) cases can be captured by a constraint of the NONFINALITY family (Prince and Smolensky 1993), which rules out prominent syllables at edges, (17a). The ranking in (17c) of NONFINALITY(H\*, PWd) over the anti-deletion Faithfulness constraint MAX(H), (17b), provides part of the analysis of Final Deaccenting. The other part is provided by the ranking (18c) of the constraint PERIPHERAL EXHAUSTIVITY disallowing unparsed syllables at phrase edge over the constraint ALIGN-R(MWd, PWd).

(17) a. NONFINALITY(H\*, PWd):

\*(... σ<sup>H\*</sup>)<sub>PWd</sub>

b. MAX(H):

A H tone in the input must be present in the output.

c. NONFINALITY(H) » MAX(H)

(18) a. PERIPHERAL EXHAUSTIVITY(PPh):

\*(..... δ)<sub>PPh</sub>, where δ is a constituent of level lower than PWd

b. ALIGN-R(MWd, PWd)

Align the R edge of an MWd with the R edge of a PWd.

c. PERIPHERAL EXHAUSTIVITY » ALIGN-R(MWd, PWd)

PERIPHERAL EXHAUSTIVITY forces a phrase-final particle into the preceding PWd, where its presence saves the stem-final tone from a fatal violation of NONFINALITY:

(19) Absence of deaccenting before phrase-final particles<sup>1</sup>

[ [onna'] -ga ]	PEREXH	ALIGN-R	NONFIN(H)	MAX (H)
⇒ a. ((onna' -ga) <sub>PWd</sub> ) <sub>PPH</sub>		*		
b. ((onna') <sub>PWd</sub> -ga) <sub>PPH</sub>	*!		*	
c. ((onna-ga) <sub>PWd</sub> ) <sub>PPH</sub>		*		*!
d. ((onna) <sub>PWd</sub> -ga) <sub>PPH</sub>	*!			*

The ranking (18c), which forces phrase-final particles into the preceding PWd, will also have the effect of creating an ANTIHOMOPHONY violation in the case of a sequence of two *no*, and so leads to the haplologic deletion of *no*:

(20) Haplology in a phrase-final *no* sequence

[ [utyooteN] no ] no ]	PEREXH	ALIGN-R	ANTIOMOPH	REALIZE(α)
a. ((utyooteN no no) <sub>PWd</sub> ) <sub>PPH</sub>		*	*!	
b. ((utyooteN no) <sub>PWd</sub> no) <sub>PPH</sub>	*!	*		
c. ((utyooteN) <sub>PWd</sub> no no) <sub>PPH</sub>	*!			
⇒ d. ((utyooteN no) <sub>PWd</sub> ) <sub>PPH</sub>		*		*

So this is the story for why a sequence of two *no* is not found in phrase-final position. What now of the maintenance of the double *no* sequence in medial position within the phrase? The solution to this question also finds independent motivation in the properties of final deaccenting in phrase-medial position.

(21) **Medial Deaccenting:**

A final accent in a polysyllabic word is deleted when it is followed by a *single* phonological phrase-medial particle, e.g.

<i>onna no yaoya</i>	‘the woman’s grocer’, or
woman grocer	‘the woman, who is a grocer’

The analysis of this phenomenon is straightforward. It must be assumed that the *no* particle is *not* forced into a PWd with the preceding word, and that the final accent, consequently final in the PWd, therefore violates NONFINALITY and is deleted. The ranking in (22), added to the rankings motivated above, will have this result, shown in the tableau in (23):

(22) ALIGN-R(MWd, PWd) » MEDIAL EXHAUSTIVITY

<sup>1</sup> The dotted line indicates that no ranking has (as yet) been established between members of the two ranked constraint pairs posited in the tableau.

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(23) Deaccenting PwD-finally when followed by single medial *-no*

[ [onna'] no ] [yaoya]	PEREXH	ALIGN-R	MEDEXH	NONFIN(H)	MAX(H)
a. ((onna'-no) <sub>PWd</sub> (yaoya) <sub>PPH</sub> )		*!			
b. ((onna') <sub>PWd</sub> no (yaoya) <sub>PPH</sub> )			*	*!	
c. ((onna-no) <sub>PWd</sub> (yaoya) <sub>PPH</sub> )		*!			*
⇒ d. ((onna) <sub>PWd</sub> no (yaoya) <sub>PPH</sub> )			*		*

Now we are in a position to derive the failure of *no* haplology when two *no* appear in sequence phrase-medially. Our contention is that the relevant phrase in (11b,i) has the prosodic structure ((*akai-no*)<sub>PWd</sub> no (*futa*)<sub>PWd</sub>)<sub>PPH</sub> ‘the red one’s lid’, where the first *no* is incorporated into the preceding PwD, but the second is not. ANTIHOMOPHONY is not violated here, since the two *no* are not prosodically identical, not being dominated by identical constituents in the prosodic tree. The additional pairwise constraint ranking, (24), in combination with earlier rankings yields this prosodic structure as the optimal candidate in (25):

(24) ANTIHOMOPHONY » ALIGN-R(MWd, PWd)

(25) No haplology with phrase-medial sequence of *-no* particles

[[ <i>akai</i> ] no] no] [ <i>futa</i> ]]	PEREXH	ANTIOMOPH	REALIZE(α)	ALIGN-R	MEDEXH
a. (( <i>akai no no</i> ) <sub>PWd</sub> ( <i>futa</i> ))		*!		*	
b. (( <i>akai</i> ) <sub>PWd</sub> no no ( <i>futa</i> ))		*!			**
c. (( <i>akai no</i> ) <sub>PWd</sub> ( <i>futa</i> ))			*!	*	
d. (( <i>akai</i> ) <sub>PWd</sub> no ( <i>futa</i> ))			*!		*
⇒ e. (( <i>akai no</i> ) <sub>PWd</sub> no ( <i>futa</i> ))				*	*

Safely lodged in prosodically nonidentical positions, one inside and the other outside the PwD, the two *no* in the optimal candidate are correctly predicted to surface.

This account also predicts that a final-accented word preceding a sequence of two medial *no* would fail to undergo deaccenting, in contrast to the single *no* case in (21). Unfortunately, this additional data about final deaccenting, available only from older speakers of the Tokyo standard, is not available at this writing.

### 3. Crashing Derivations vs. Alternative Syntax: Ancient Greek

Golston (1996) provides exemplary documentation from Ancient Greek to show that sequences of articles are permitted in DPs with a center-embedded possessor DP, as in (26a), but only if the adjacent articles are not homophonous, cf. (26b).

- (26) a. [ *t-éei* [ *t-ées huphántikees*] *dunámei* ]  
           the-D:F the-G:F weaving-G:F power-D:F  
           ‘with the power of weaving’

*P. Pol.* 281b

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- b. \*[[*t-óon* [ *t-óon eikeín-oon*] *oikeí-oon*] *tin-ás*]  
           the-G:F:P the-G:M:P those-G:M:P slave-G:F:P some-A:F:P  
           ‘some of the slaves of those [people]’ [construct]
- c. \**t-óon* Ø *eikeín-oon* *oikeí-oon* *tin-ás*

The important point here is that an output form showing haplology, as in (26c), is not available as a resolution of the dilemma. This center-embedded structure simply fails to be realized, whether with the two underlying homophonous morphemes, or with only one. In the theory that I have proposed here, the non-cooccurrence of both (26b) and (26c) could be analyzed as a case of the non-realization of the sentence, which results when a nonrecoverable deletion (that of one of the articles) is called for in the optimal output candidate, as seen in tableau (27). The outranking of REALIZE(Article  $\alpha$ ) by ANTIHOMOPHONY (the constraint proposed by Golston for these cases) makes the non-realization optimal.

(27) A crashing derivation account

[[ <i>t-óon</i> [ <i>t-óon</i> ...]]] †	ANTIOMOPHONY	REALIZE( <i>t-óon</i> )
a. ( <i>t-óon t-óon</i> ...)	*!	
⇒ b. ( <i>t-óon</i> ...)		*

The cross † alongside the input marks the fact that the input is dead, the “derivation” having “crashed” because of the Recoverability violation.

Golston, however, argues that there is not a failure to realize the morphosyntactic structure underlying sentences with constituents like (26b) containing center-embedded structures with adjacent homophonous articles. Rather, he argues that sentences with the constituency of (26b) have an alternative realization with a postposed possessor phrase, and that as a consequence what cannot be expressed with either (26b) or the haplogized (26c) can be expressed by the postposed (28):

(28) [[*t-óon* *oikeí-oon*] [*t-óon* *eikeín-oon*] ] *tin-ás*.

If we assume, with Golston, that (28) and (26b/c) are indeed simply variant output realizations of a same, presumably non-linearized, input representation, then, with Golston, we can understand (28) as the optimal candidate selected by EVAL.

*Phonologically-Driven Non-realization of Function Words*

(29) Selection of (28) as optimal candidate

[ [ <i>t-óon</i> [ <i>t-óon</i> noun ] noun ]	MORPHOSYNTAX	ANTIOMOPH	REALIZE( <i>t-óon</i> )
a. ( <i>t-óon t-óon</i> noun)(noun)		*!	
b. ( <i>t-óon ---</i> noun)(noun)			*!
⇒ c. ( <i>t-óon</i> noun)( <i>t-óon</i> noun)			
d. ( <i>t-óon</i> Noun) (--- Noun)			*!

And so the impermissibility of (26b/c) would not be a case of the non-realization of a sentence. To choose between the “derivation crashing” analysis of (27) and the “alternative syntax” analysis of (29) one would need to establish whether or not these variant word orders are indeed simply alternative realizations of a same input structure with an identical semantics. In either case, it should be said, the constraint ANTIHOMOPHONY and the prosodic structure constraints assigning the articles identical prosodic status are responsible for the absence of a particular syntactic construction among the output sentences of the language.

#### 4. Conclusion

To conclude, what’s been offered in this paper is a theory of the non-realization of words in specified surface phonological contexts. The claim is that the (non)recoverability of a phonologically driven deletion determines whether a word is simply deleted, or whether the sentence containing that word fails to be realized. The possibility of these limited effects of phonology on syntax are available without making any assumptions about whether syntactic constraints must in general dominate phonological constraints (Golston 1996), or whether phonological constraints may in principle dominate syntactic constraints (Zec and Inkelas 1990). The notion that Recoverability checks the output of EVAL is what allows for the phonological filtering out of syntactic constructions in these non-realization cases.

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Elisabeth Selkirk

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Department of Linguistics  
South College  
150 Hicks Way  
University of Massachusetts  
Amherst, MA 01003-9274

selkirk@linguist.umass.edu