Session 3B Abstracts

Turkic Nasal Harmony as Surface Correspondence

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This paper presents an analysis of a nasal harmony process attested in nearly a dozen Turkic languages using Surface Correspondence Theory (Bennett 2015). The process nasalizes onset stops between two nasal codas in adjacent syllables, e.g., /CVN.CVN/ → [CVN.<u>N</u>VN], even when the resulting cluster is otherwise avoided. Nasal harmony varies by language in its scope and how it interacts with syllable contact phenomena. For example, in Kazakh, nasal harmony overrides restrictions on heterosyllabic clusters, while in Teleüt, the opposite holds. Nasal harmony is not found in Kyrgyz, but the language exhibits a nearly identical process targeting liquids.

Nasal codas in adjacent syllables are analyzed as corresponding, with the intervening onset surfacing as nasal to avoid a gapped configuration. This analysis models the attested range of patterns, and extends to Kyrgyz liquid harmony. We derive the harmony patterns using an existing framework, which is advantageous over previous analyses which encode the generalizations directly as markedness constraints. This work contributes to Surface Correspondence Theory by demonstrating the need for Corr constraints specified for syllable position.

In Kazakh, when harmony does not apply, suffix-initial sonorants exhibit alternations at morphological boundaries (Baertsch & Davis 2001, 2004; Davis 1998; Eulenberg 1996; Gouskova 2004; Washington 2010). Examples are shown in (1); capital letters represent vowels that can be analyzed as unspecified for certain features. /n/ surfaces as [d] in all clusters (1b), and other underlying sonorants surface as obstruents after consonants of equal or lower sonority (1c-d). Data is drawn from various printed sources and has been verified by one of the authors' fieldwork.

(1)

		a. /-dA/ 'LOC'	b. /-nI/ 'ACC'	c. /mA/ 'INT'	d. /-lI/ 'ADJ'
/ɑlmɑ/	'apple'	[ɑɫmɑ-dɑ]	[ɑɫmɑ-nə]	[ɑɫmɑ mɑ]	[ɑɫmɑ-ɫə]
/qɑɾ/	'snow'	[qɑɾ-dɑ]	[qɑɾ-də]	[qɑɾ mɑ]	[qɑɾ-ɫə]
/qɑn/	'blood'	[qɑn-dɑ]	[qɑn-də]	[qɑn bɑ]	[qɑn-də]

While these alternations apply without exception to the CV suffixes in (1), the CVN suffixes in (2b-c) resist desonorization with nasal-final stems; the relevant segments are underlined. CVN suffixes surface with initial nasals when attached to nasal-final stems like /qɑn/ 'blood' (2a-c), overriding any syllable contact pressures (cf. 1a-c) (Anderson 2005; Davis 1998; Eulenberg 1996; Washington 2010). These data show nasal harmony applying at root-suffix boundaries; it also applies between suffixes, e.g., with the nasal-final first person possessive /-Im/: /qɑz-Im-nIŋ/ → [qɑz-əm-<u>n</u>əɴ] 'goose-POSS.1SG-GEN', cf. /qɑz-Im-nI/ → [qɑz-əm-də] 'goose-POSS.1SG-ACC'.

(2)

		a. /-dAn/ 'ABL'	b. /-nIŋ/ 'GEN'	c. /-miən/ 'INS'	d. /-lAɾ/ 'PL'
/ɑlmɑ/	'apple'	[ɑɫmɑ-dɑn]	[ɑɫmɑ-nəɴ]	[ɑɫmɑ-miən]	[ɑɫmɑ-ɫɑɾ]
/qɑɾ/	'snow'	[qɑɾ-dɑn]	[qɑɾ-dəɴ]	[qɑɾ-miən]	[qɑɾ-ɫɑɾ]
/qɑn/	'blood'	[qɑn-<u>n</u>ɑn]	[qɑn-<u>n</u>əɴ]	[qɑn-<u>m</u>iən]	[qɑn-dɑɾ]
/qɑz/	'goose'	[qɑz-dɑn]	[qɑz-dəɴ]	[qɑz-biən]	[qɑz-dɑɾ]

Nasal harmony only holds between codas in adjacent syllables. Stems with nasal codas further away and stems with nasal onsets take the obstruent-initial allomorphs of the CVN suffixes in (2) in environments conditioning desonorization. For example, /dɑmbɑl/ 'pantalettes' has a nasal coda in the penult, and surfaces as [dɑmbɑɫ-dɑn] 'ABL' and [dɑmbɑɫ-dəɴ] 'GEN'. Likewise, /mɑl/ 'livestock' has a nasal onset, and surfaces as [mɑɫ-dɑn] 'ABL' and [mɑɫ-dəɴ] 'GEN'. In these words, nasal harmony does not apply, and the surface forms obey the syllable contact preferences.

Tableau (3) illustrates the basic interaction using /qɑn-dɑn/ → [qɑn-nɑn] 'blood-ABL'; for each candidate, corresponding segments are underlined. The constraint Corr-Word-Coda[+nasal] requires nasal codas in the word to correspond with each other; this rules out candidates (a) and (d), in which no segments correspond. When two segments are linked to the same feature, No-Gap penalizes intervening segments that can bear that feature (Itô et al. 1995). In Kazakh, only

(3)

/qɑn-dɑn/ ‘blood-abl’	NoGap	CC-Ident-[nasal]	Corr-Word-Coda[+nasal]	CC-SRole	SyllContact	Ident(Son)
a. qɑn-dɑn			W1	L	L	L
b. qɑn̲-dɑn̲	W1			L	L	L
c. qɑn̲-d̲ɑn̲		W2		2	L	L
d. qɑn-nɑn			W1		1	1
e. qɑn̲-nɑn̲	W1			L	1	1
→ f. qɑn̲-n̲ɑn̲				2	1	1

[-continuant] segments can be [+nasal]; fricatives do not undergo nasal harmony: /siɘn-sA-ŋ/ → [siɘn-siɘ-ŋ] *[siɘn-niɘ-ŋ] ‘believe-cond-2.sg’. We interpret NoGap as requiring intervening segments to correspond; this rules out candidates (b) and (e). CC-Ident-[nasal] compels correspondents to bear the same [nasal] feature, ruling out candidate (c). Candidate (f) wins despite violating the low-ranked markedness constraint SyllContact, a cover constraint that encapsulates the restrictions on heterosyllabic clusters. Without the conflicting demands of nasal harmony, this constraint motivates the alternations in (1), e.g. /qɑn-nI/ → [qɑn-də] ‘blood-acc’.

CC-SRole requires correspondents to have the same syllable role, prohibiting harmony in words like [mɑɫ-dən] ‘livestock-gen’, where one nasal is an onset and one is a coda. In [qɑn-nɑn] ‘blood-abl’, CC-SRole is overridden by the conflicting demands of NoGap. Though not shown in the tableau, nasal harmony in words like [dɑmbɑɫ-dən] ‘pantalettes-gen’ is ruled out by CC-SyllAdj, which requires correspondents to belong to adjacent syllables.

The Corr constraint in (3) specifies that [+nasal] segments in coda position correspond. Building syllable roles directly into Corr constraints has been proposed before (Hansson 2001, §4.3.3), but was later rejected (Hansson 2010, p. 283). The data presented here provide strong empirical motivation for syllable-role-specific Corr constraints. Using only the general Corr constraint Corr-Word[+nasal], correspondence cannot be limited to codas, and words like /mɑl/ ‘livestock’ would be predicted to trigger nasal harmony, resulting in ranking paradoxes.

Our analysis successfully models the Kazakh data and is straightforwardly adapted to model variations in other Turkic languages. For example, in the parallel Kyrgyz liquid harmony, suffix-initial laterals surface as [d] after rhotics and consonants of equal or lower sonority, e.g., /qɑɾ-lU:/ → [qɑɾ-du:] ∼ [qɑɾ-ɫu:] ‘snow-adj’, cf. /ɑlmɑ-lU:/ → [ɑɫmɑ-ɫu:] ‘apple-adj’, unless syllable-adjacent rhotic codas induce correspondence, blocking desonorization, e.g., /qɑɾ-lAɾ/ ‘snow-pl’ → [qɑɾ-ɫɑɾ], cf. /ɑlmɑ-lAɾ/ → [ɑɫmɑ-ɫɑɾ] ‘apple-pl’, /qɑn-lAɾ/ → [qɑn-dɑɾ] ‘blood-pl’. Kyrgyz requires replacing the constraints specified for nasality with CC-Ident-[liquid] and Corr-Word-Coda[+rhotic] in its analysis, but otherwise maintains the same relative rankings as Kazakh.

Previous analyses of Turkic nasal harmony have relied on idiosyncratic markedness constraints that state the generalizations directly (Davis 1998; Eulenberg 1996; Washington 2010); for example, Davis (1998) proposes the constraint NasHarm defined as “C is nasalized in the environment of NCVN.” Our analysis has the advantage of deriving the generalizations using an existing framework, thus maintaining a formal link between Turkic nasal harmony and other long-distance phenomena. Our analysis also provides evidence for syllable-role-specific Corr constraints, contributing to the theoretical understanding of long-distance phonological processes.

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Variable Word-Final Schwa in French: An OT Analysis

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Introduction: Variable word-final schwa in French is an interesting phenomenon whose patterns of variation have not yet been fully described. It can occur in all otherwise consonant-final French words, even where there is no word-final orthographic *e*. For example, *page* ('page') is [paʒ] or [paʒə], and *lac* ('lake') is [lak] or [lakə]. In addition, stop-liquid-final words (e.g. *table* [tabl(ə)] 'table') also exhibit variation, despite the infelicitous syllable structure – a sharp increase in sonority within the coda – without schwa. Where several separate processes have been proposed to account for this phenomenon in the past (Hansen, 1997; 2003), the present study provides a unified Stochastic OT account of variable word-final schwa in contemporary Parisian French.

Methods: 2,667 tokens from 8 native speakers of Parisian French were coded for speaker, word, and phonological environment of the potential schwa site. The data come from 2 corpora, ETAPE (Gravier *et al.* 2012) and BREF80 (Lamel *et al.*, 1991), from a TV debate and readings of passages from *Le Monde* respectively. Each token is a consonant-final word – when it appears without schwa – and is coded for speaker, word, and the phonetic environment of the potential schwa site. Words ending in orthographic *e* appear with schwa more than twice as frequently (18%) as words without orthographic *e* (7%).

Analysis: In this analysis, schwa is characterized as a featureless vowel slot, so schwa epenthesis does not violate the constraint DEPF, while the insertion of any features does violate it. The locus of variation is the relative ranking of ALIGNSTRESSR, which constrains against a word-final schwa, and various constraints with lower values that can be perturbed to overtake it in ranking. A full list of relevant constraints used in the analysis is found in (1–9).

(1)	*STRESS(ə)	Schwa is not stressed
(2)	DEPF	Do not insert features
(3)	MAXC	Do not delete consonants
(4)	ALIGNSTRESSR	The rightmost syllable is stressed
(5)	MAXV	Do not delete vowels
(6)	NOCODA	Syllables do not have codas
(7)	$C]_{Phr}$	No consonant at a phrase boundary (pause)
(8)	SONSEQ	Sonority increases to the nucleus, then decreases
(9)	ANCHORL(PWd)	Anchor the leftmost segment to the left edge of PWd

The basic pattern exhibited between words with and without orthographic *e* is elegantly captured if we assume that words ending in orthographic *e* have an underlying word-final schwa, whereas words without *e* do not. Thus, word-final schwa occurs in all cases when NOCODA overtakes ALIGNSTRESSR (10), and additionally in words with orthographic *e* when MAXV overtakes ALIGNSTRESSR (11). Additionally, $*C]_{Phr}$ ensures that variable schwa occurs most frequently prepausally, so that word-final schwa mediates between consonants and pauses when it ranks above ALIGNSTRESSR, while ANCHORL(PWd) prevents repairs by word-initial epenthesis.

(10)

***Lac* /lak/**	***STRESS(ə)**	**DEPF**	**MAXC**	**ALIGNSTRESSR**	**NOCODA**
☞ ˈlak					*
☞ ˈla.kə				*	
laˈkə	*!				
ˈla			*!		
laˈki		*!		*	

(11)

Page /paʒə/	*STRESS(ə)	DEPF	MAXC	ALIGNSTRESSR	MAXV	NOCODA
☞ ˈpaʒ					*	*
☞ ˈpa.ʒə				*		
paˈʒə	*!					
ˈpa			*!			
pa.ʒəˈta		*!				
paˈʒi		*!		*		

Complicating the picture, schwa appears much less frequently when a word-final coda can be resyllabified as the onset of a following word (5%) than when this is not possible (17%). The rates of schwa appearance are summarised in (12), with stop-liquid-final words separated out from other *e*-final words, and prepausal contexts separated out from other contexts where resyllabification across a word boundary is impossible.

(12)

	Possible Resyllabification	**Impossible Resyllabification**	**Prepausal**	***Totals***
Stop-liquid	9/42 (21%)	99/141 (70%)	12/33 (36%)	*120/216 (56%)*
Other *e*	24/384 (6%)	105/855 (12%)	84/372 (23%)	*213/1611 (13%)*
No orthographic *e*	0/177 (0%)	12/504 (2%)	45/159 (28%)	*57/840 (7%)*
Totals	*33/603 (5%)*	*216/1500 (14%)*	*141/564 (25%)*	*390/2667 (15%)*

Stop-liquid-final words exhibit particularly high rates of schwa, which can be attributed to a dispreference for infelicitous codas, captured in a constraint like SONSEQ. Ranking this above ALIGNSTRESSR uniquely targets infelicitous stop-liquid codas for schwa epenthesis. Further, stop-liquid-final words show a huge rate of schwa presence when resyllabification is impossible, compared to other categories that most frequently have schwa prepausally. This necessitates an additional constraint against the kind of cluster that appears across word boundaries in specifically this scenario.

Conclusions: This analysis of variable word-final schwa in Parisian French is a striking example of the Richness of the Base phenomenon. All word types have schwa-ful and – more commonly – schwa-less variants, but underlying schwa is only likely for some word types and not for others. In addition, the viability of the analysis presented here is reinforced by the fact that it is learned, producing near-identical distributions of 100,000 tokens as in natural data, after training a Stochastic OT grammar with the same constraint set on 1,000,000 tokens with the observed distribution.

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Phonological constituents in Armenian: When cyclicity misaligns

Keywords: Armenian, morpho-phonology, stress, strata, cyclicity, misalignment

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The morphology-phonology interface is rife with interaction [4]. To handle this, multiple competing theories have been proposed , including lexical phonology [6] and prosodic phonology [8]. But the question is: *Which theory is correct and needed?* Using Armenian, I show that the same morpho-phonological processes are simultaneously accessing lexical and prosodic mechanisms. Armenian thus requires that lexical and prosodic phonology be combined into one interface system [3].

Armenian is a primarily-suffixing agglutinative language with two main dialects, Western (WA) and Eastern Armenian (EA) [9]. I analyze two prosodic phenomena: **stress assignment** and **destressed high vowel reduction**. I show that in order to explain the behavior of these processes, we need one model that incorporates (unbounded) cyclicity, stem-level vs. word-level domains (from lexical phonology), and misalignment (from prosodic phonology).

In both dialects, stress falls on the word's rightmost full vowel (1). This vowel can be part of the root (1a), a derivational suffix (1b), or an inflectional suffix (1c) as long as it's a full vowel (1d).

(1)
a. kórd͡z — 'work'
b. kord͡z-avór — 'worker'
c. kord͡z-avor-nér — 'workers'
d. kord͡z-avor-nér-ə — 'with workers'

In both dialects, stress is assigned and reassigned cyclically as each suffix is added. Evidence is the reduction of destressed high vowels [2, 5, 9]. Only a high vowel that **was** stressed in a previous cycle can be reduced (2, 3, not 1). This vowel is deleted (2) unless deletion would create a complex onset; in that case, the vowel instead reduces to a schwa (3).

(2)
a. irigún — 'evening'
b. irign-anál — 'to become evening'

(3)
a. kír — 'letter'
b. * kr-ít͡ʃ — 'writer'
c. kər-ít͡ʃ — 'writer'

Like stress assignment, reduction applies cyclically as shown by sequences of multiple destressed high vowels (4). This is a case of unbounded cyclicity.

(4)
a. d͡zín — 'birth (esp. of animals)'
b. d͡zən-únt — 'birth'
c. d͡zən-ənt-agán — 'generative'

However not all suffixes trigger both stress shift and vowel reduction. In both dialects, derivational suffixes trigger stress shift and reduction (5a). However inflectional suffixes behave differently in the two dialects. In WA, inflectional suffixes trigger stress shift but *not* reduction (5b,5c). In EA, inflectional suffixes trigger stress shift. But vowel reduction is triggered by vowel-initial inflectional suffixes (5d) and not by consonant-initial inflectional suffixes (5b).

(5) a. amusín → amusn-agán 'husband' → 'marital' (WA & EA: reduction)
b. amusín → amusin-nér 'husband' → 'husband-PL' (WA & EA: no reduction)
c. amusín → amusin-í 'husband' → 'husband-DAT' (WA: no reduction)
d. amusín → amusn-í 'husband' → 'husband-DAT' (EA: reduction)

In WA, there is a derivation-vs-inflectional split: derivation triggers stress shift and reduction (5a), inflection triggers only stress shift (5b,5c). This can be modeled as lexical strata: stems vs words. Together with the root, derivational suffixes form a morphological stem (MStem) that gets mapped to a phonological stem (PStem). Stress assignment and reduction apply cyclically in this domain (6). In contrast, inflectional suffixes form a morphological word (MWord) with the MStem. The MWord maps to a phonological word (PWord) where only stress shift is active (7).

(6) /amusin-agan/ → $(\text{amusín})_{PS}$ /-agan/ → $(\text{amusn-agán})_{PS}$ → $((\text{amusn-agán})_{PS})_{PW}$

(7) /amusin-i/ → $(\text{amusín})_{PS}$ /-i/ → $((\text{amusin})_{PS}\ \text{-í})_{PW}$

In EA however, cyclicity isn't enough. The word-level (WLevel) vowel-inflectional suffixes exceptionally trigger stem-level (SLevel) reduction as if they were part of the PStem (5d) [1]. This is because EA's PStem and MStem to misalign by incorporating vowel-initial inflectional suffixes into the PStem as in (8). This misalignment can be modeled using different rankings of alignment constraints [7]: ALIGN(MStem,R,PStem,R) and ALIGN(PStem,R,σ,R). The former outranks the latter in WA (thus isomorphism) while the reverse ranking is in EA (thus non-isomorphism).

(8) /amusin-i/ → $(\text{amusín})_{PS}$ /-i/ → *misalign* → $((\text{amusn-í})_{PS}\ )_{PW}$

The Armenian data thus provide evidence for combining lexical phonology (cyclicity & strata) and prosodic phonology (misalignment) into one interface module.

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MATCH WORD does not discriminate between functional and lexical categories

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Summary. In work on the syntax-prosody interface, there is a prevalent idea that while lexical categories are preferentially mapped to prosodic words (ω), no such pressure exists for functional categories (Selkirk 1984, 1995, 2011, Selkirk & Shen 1990, Truckenbrodt 1999, Elfner 2012). Under Match Theory (Selkirk 2011), where syntax-prosody isomorphism is enforced by a series of violable constraints, this pressure is built into the system with the claim that MATCH WORD 'ignores' functional categories. I argue that this is misguided, and that MATCH WORD does not discriminate between lexical and functional heads. The pervasive phonological reduction of function words, rather than being a consequence of Match Theory, is instead a fact about the lexical entries of those function words, implemented using prosodic subcategorization frames (Inkelas 1990, Zec 2005). This approach explains particular interactions that would be unexpected if MATCH WORD were genuinely indifferent to functional categories, and fits in with a large body of evidence suggesting that functional elements can behave in prosodically idiosyncratic ways (Nespor & Vogel 1986, Zec 2005, Bennett et al. to appear). The evidence comes from several classes of English function words: prepositions, auxiliaries, oblique (object) pronouns and clitic negation *-n't*.

Prepositions and auxiliaries. These function words are typically reduced (Selkirk 1996):

(1) a. Súe tálked [tə] Máry
b. Jóhn [kən] wálk

Ito & Mester (2009), following Selkirk's similar proposal, argue that they form a prosodic word (ω) with the phonological material to their right (I ignore higher-level prosodic phrasing for now):

(2) a. ($_\omega$ Sue) ($_\omega$ talked) ($_\omega$ to ($_\omega$ Mary))
b. ($_\omega$ John) ($_\omega$ can ($_\omega$ walk))

This behavior can be accounted for by assuming that *to* and *can* have the prosodic subcategorization frame in (3). It states that the element (Fnc) must combine with something to its right, and be dominated by a category ω.

(3) (3) [$_\omega$ Fnc [...]]

Adherence to this frame is enforced by a high-ranked constraint SUBCAT (Bennett et al. to appear):

(4)

[$_{PP}$ to Andy]	SUBCAT	MATCH WORD	MATCH PHRASE
☞ ($_\omega$ to ($_\omega$ Andy))		∗∗	∗
($_\phi$ ($_\omega$ to)($_\omega$ Andy))	∗!		

In contrast, prepositions and auxiliaries in phrase-final position are stressed and unreduced:

(5) a. Who was Mary talking [tu]/*[tə]?
b. I won't help you, but John [kæn]/*[kən].

The ranking in (4) derives this behavior: SUBCAT is *necessarily* violated, as there is no (phase-mate) phonological material to the right of the function word, so Match constraints break the tie:

(6)

Who was Mary [$_{VP}$ talking [$_{PP}$ to]]	SUBCAT	MATCH WORD	MATCH PHRASE
☞ ($_\phi$ ($_\omega$ talking)($_\omega$ to))	∗		
($_\omega$ ($_\omega$ talking) to)	∗	∗!∗	∗

We can also account for the behavior of certain high-register English prepositions which do form ωs: they simply lack a subcategorization frame (another candidate is determiner/pronoun *that*):

(7)

[$_{PP}$ via Andy's]	SUBCAT	MATCH WORD	MATCH PHRASE
☞ ($_\phi$ ($_\omega$ via)($_\omega$ Andy's))			
($_\omega$ via ($_\omega$ Andy's))		∗!∗	∗

Note that the presence of intrusive r after via in non-rhotic dialects is, according to Ito & Mester

(2009), evidence that its complement forms a maximal ω (compare with *'[tə ɹ]Andy's).

Finally, the prosodic subcategorization account explains the behavior of function words when they take ϕ complements. According to Ito & Mester's diagnostic, we should assume that function words form a recursive ω with adjacent material, rather than a recursive ϕ. Yet the recursive-ω candidate gets more MATCH WORD violations than the recursive-ϕ candidate, and so we require some higher-ranked constraint to rule out the recursive-ϕ candidate. SUBCAT does just this:

(8)

[PP to [DP Andy's house]]	SUBCAT	MATCH WORD	MATCH PHRASE
☞ (ϕ (ω to (ω Andy's)) (ω house))		*	(*?)
(ϕ to (ϕ (ω [ɹ]Andy's) (ω house)))	*!		

Note that if we assumed that MATCH WORD ignored functional categories, we would still require some lexical information to tell us that the recursive-ω candidate is preferred to the recursive-ϕ candidate. It is therefore unclear how much work a lexical-only MATCH WORD constraint would do in explaining the prosodic behavior even just of auxiliaries and prepositions. Next, I present evidence for the importance of lexically-specified prosodic subcategorization frames in explaining the behavior of a second type of English functional element—those that cliticize to their *left*.

Oblique pronouns and clitic negation *-n't*. A corollary of the idea that MATCH WORD ignores function words is the idea that function words should all behave alike—functional categories should be integrated into prosodic structure in whatever way is *least marked* for the language. However, this is not the case, as different function words within one language display idiosyncratic prosodic behavior (Zec 2005). Within English, Selkirk (1996) shows that oblique pronouns, unlike auxiliaries and prepositions, encliticize onto material to their left:

(9) a. Sarah wants [əm]. (= them)
b. I need [ə]. (=her)

This behavior can be simply captured by assuming they have the subcategorization frame in (10):

(10) [ω [...] Pro]

This derives a previously-unnoticed symmetry: just as prepositions and auxiliaries stranded at a right edge become full ωs, and may not be reduced, so too do oblique pronouns 'stranded' at a left edge become non-reducible, as in (11). Satisfying SUBCAT isn't possible, so they map to ωs.

(11) a. [hɜː]/*[ə] showing up at all was a surprise to me.
b. It's nice, [ðɛm]/*[əm] all together at last

Furthermore, if we assign the same frame to clitic negation *-n't* (*pace* Zwicky & Pullum 1983), we can derive the interaction between auxiliaries and *-n't* in (12a-b), where the addition of *-n't* forces the use of the non-reduced auxiliary.

(12) a. Émily [əd] léft.
b. Émily [ˈhædn̩t]/*[ədn̩t]/ left.

In (12b), hadn't forms its own ω, satisfying the prosodic subcategorization frames of had ([ω had [...]]) and *-n't* ([ω [...] -n't]). In summary, reduced function words do not behave uniformly, even within one language, and their behavior can be explained with prosodic subcategorization frames.

Conclusions. Function words map to prosodic words some of the time (e.g. phrase-final prepositions), and some function words map to prosodic words all of the time (e.g. *via*, determiner *that*). The model here assumes that these cases are the rule, rather than the exception. The underlying reasoning is that all cases where function words do not map to prosodic words can be accounted for with a fairly restricted view of how prosodic information projects from the lexicon – prosodic subcategorization – leaving essentially no work for a lexical-only formulation of MATCH WORD to do. Consequently, we end up in the happy position of being able to maximally simplify our formulation of MATCH WORD, to one which treats lexical and functional categories equally.