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Morphological and Prosodic Alignment at Work: The Case of South-Slavic Clitics*

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1. Introduction

Closely related Bulgarian (B) and Macedonian (M) share a basic inventory of clausal clitics. This includes auxiliary clitics, pronominal clitics, a negative particle and a yes-no question particle, some of which are given in (1).

(1) Clausal Clitics: *go* 'it-accusative'; *ti* 'you-dative'; *mu* 'him-dative'; *ne* 'negative'; *li* 'Q particle'; B *sŭm*/M *sum* 'be-1sg'; B *šte*/M *ḱe* 'future'.

B and M clitics share a number of properties. Auxiliary and pronominal clitics are syntactically inactive, compared to their non-clitic counterparts -- as argued in Legendre (1998, in press). Second-position effects are detectable in both null-subject languages. Yet, two clitics systematically evade second-position effects: *ne* and *šte*/*ḱe*. Stressed clitics are possible in both languages. Finally, prosodic constraints play a role in both languages as well: *li* cannot precede the first stressed word. Stressed syllables/clitics are represented in uppercase.

A closer look, however, reveals a markedly different distribution.

(2) B a. poKAzax *mu go*.
'(I) showed it to him'
b. *ne MU go* POkazax.
'(I) didn't show it to him'
c. *šte sŭm* PROčel.
e. VI□dal *li go e*?
'Has (he) seen him?'
f. *ne ŠTE li go* VI□daš?
'Will (you) not see him?'
g. *šte go* VI□daš *li*?

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'(I) will read'
d. *ne ŠTE sŭm* PROčel.
'(I) will have read'
'Will (you) see him?'
h. *ne MU li* IZpratix KNIgata?
'Didn't (I) send him the book?'

As shown in (2), the B perfect auxiliary *sŭm* and pronominal clitics *mu go* cluster in second position (P2), regardless of context. B *ne* and *šte* can serve as hosts for P2 clitics which then precede the verb rather than follow it. B *ne* and *li* may not be stressed. Any clitic immediately following *ne* must be stressed (Hauge (1976)). B *ne* systematically affects the prosody, yielding two stress domains. Finally, in the absence of a focused element, B *li* must immediately follow the first stressed element, verbal head or clitic (Hauge (1976)).

(3) M
a. *ti go* DAde.
'(He) gave it to you'
b. *ne ti GO* dade.
'(He) did not give it to you'
c. NAjaden *sum*.
'(I) have come'
d. *NE sum* NAjaden.
'(I) have not come'
e. *sum ti go* KAzal.
'(I) have told it to you'
f. *ne sum ti GO* kazal.
'(I) have not told it to you'
g. *ti go* DAde *li*?
'Did (he) give it to you?'
h. *ne ti GO* dade *li*?
'Didn't (he) give it to you?'
i. NAjaden *li sum*?
'Am (I) fed (=full)?'
j. *NE sum li* NAjaden?
'Ain't (I) fed?'
k. dajTE *mu go*!
'Give it to him!'
l. *ne* davajTE *mu go*!
'Don't give it to him!'

In M, however, the perfect auxiliary and pronominal clitics cluster in pre-verbal position in some contexts, in post-verbal position in others. Like in B, M *ne* (and *ḱe*) can serve as hosts for P2 clitics. Yet, encliticization persists in negative imperatives. M *li* is the only clitic that cannot be stressed. But unlike in B, M *ne* can be stressed and M clitics following *ne* need not be stressed. Nor does the presence of *ne* systematically result in two stress domains in M, though it sometimes does (e.g. 3b vs. 3d). Finally, M *li* does not necessarily immediately follow the first stressed element either, though it sometimes does (e.g. 3h vs. 3j).

This descriptive summary highlights the complex nature of clitic distribution in the two languages. I shall argue here that a comparatively simple account of this distribution in terms of a small set of universal constraints is possible if these constraints are assumed to be violable within and re-rankable across languages.

2. The Role of Morphology

In recent work (Legendre (1997, 1998, in press)), I have argued that Balkan clausal clitics are not syntactic elements subject to syntactic constraints; rather they are PF realizations of functional features attached to verbal nodes in the syntax. In other words, following Anderson (1992), I take clitics to be phrasal affixes or morphological categories.

In Optimality Theory (OT, Prince and Smolensky (1993)), morphology is grounded in universal alignment constraints. One important job of morphology is to align bound affixes with the edge of a particular domain. Because affixes typically occur in a sequence, alignment constraints must be individualized. Thus alignment is a universal schema (Align (αCat, E(dge); βCat, E(dge); McCarthy and Prince (1993a,b)) which yields families of constraints.

OT's theory of morphology can be straightforwardly extended to phrasal affixes or clitics (See also Anderson (1996)). Alignment immediately explains why clitics, like bound affixes, cluster. It is simply because they compete for the same position. Given several features which all seek to be aligned with the same (say, left) edge of a single domain, the ranking of individualized alignment constraints predicts their respective order of PF realization. This approach naturally captures the fact that clitics do not get re-ordered within a given language based on context, even in languages with fairly free word order such as B and M. The OT implementation is as follows: clitics are subject to a set of individualized EDGEMOST(F) constraints which align the left edge of the PF realization of [F] with the left edge of a particular domain D.

The second most important property of clitics pertains to where they cluster. In our terms, clustering results from the interaction of EDGEMOST(F) with another (negative) alignment constraint called NONINITIAL(F). The latter requires that any feature [F] be realized in a non-initial position in a domain D.

In OT terms, two constraints always yield two possible rankings. Assuming the domain D to be identifiable with null-subject clauses like (2)-(3) for the moment, consider the consequences of the two rankings. If NONINITIAL(F) outranks EDGEMOST(F), [F] is realized in P2. That is, [F] is realized as close as possible to the left edge of the domain D without violating NONINITIAL(F). If, on the other hand, EDGEMOST(F) outranks NONINITIAL(F), [F] is realized domain-initially (i.e. P1). That is, it is more important for [F] to be realized in P1 than to satisfy NONINITIAL(F).

2.1 Bulgarian

Both rankings are in fact found within B, for different instantiations of [F].

(4) a. poKAzax *mu go*.
'(I) showed it to him'
b. *ne MU go* POkazax.
'(I) didn't show it to him'
c. *šte sŭm* PROčel.
'(I) will read'
d. *ne ŠTE sŭm* PROčel.
'(I) will have read'

As shown in (4), some B clitics are P2 clitics (perfect auxiliary and object pronouns) while others are P1 clitics (negative particle and future auxiliary.) This distribution straightforwardly follows from a ranking in which some EDGEMOST(F) constraints outrank NONINITIAL(F) while other EDGEMOST(F) constraints are outranked by NONINITIAL(F). The competition is formalized in T1.

T1. BULGARIAN PARTICIPLES[1]

I: [fut] [perf]	E(FUT)	NIN(F)	E(PERF)
☞ a. [$_V$ *šte sŭm* pročel knigata]		⊛	⊛
b. [pročel *šte sŭm* knigata]	*!		**
c. [*šte* pročel *sŭm* knigata]		*	**!

Consider what the domain of these alignment constraints is, turning to EDGEMOST first. Note that *šte and ne* satisfy EDGEMOST, despite the fact that they do not carry stress. The fact that a P2 clitic can be hosted by a phonologically weak element is evidence that the left edge requirement is not prosodic in nature. Rather it pertains to a phrase structure constituent. The precise characterization of this syntactic constituent largely depends on one's assumptions about clausal structure. A central concept in OT is economy, including economy of structure (Legendre et al. (1995, 1998)). Under the VP-internal subject hypothesis this means that a simple clause need not involve more than a VP. Another relevant assumption concerns null subjects. If null subjects do not exist -- as proposed in Grimshaw and Samek-Lodovici (1995) -- then a subjectless clause is a V'.

Empirical evidence for a V' domain comes from sentences containing an overt subject.

(5) B Az *šte sŭm* pročel knigata.

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[1] All tableaux incorporate standard OT conventions: ☞ = optimal candidate; * = individual violations of a given constraint; *! = fatal violations; ⊛ = violations incurred by optimal candidates. Leftmost constraints = highest ranked; rightmost constraints = lowest ranked. The input (I) consists of lexical items and their propositional structure, plus functional features like [perfect], [negation], etc. In the interest of space, only the best candidates for a given input are being considered.

I fut perf read book-the
'I will have read the book'

As (5) shows, the domain-initial clitic *šte* follows rather than precedes the overt subject, *az*. This shows that the domain is V' rather than VP. Otherwise, *šte* would precede *az*.

Consider next the fact that EDGEMOST(F) is a gradient constraint. That is, violations of EDGEMOST(F) increase as [F] is realized further away from the left edge of V'. As T1 shows, EDGEMOST(PERF) is fatal to candidate (c) because of its gradiency. Degree of violation of EDGEMOST(F) could in principle be measured in terms of morphological or prosodic units. As it turns out, both are relevant to B and M.

Note that a non-stressed clitic like *ne, šte* may serve as host for auxiliary and pronominal clitics, as shown in (2-3). This means that degree of violation of EDGEMOST(F) for these clitics is measured in terms of the number of morphemes that separate the PF realization of [F] from the left edge of V'. As we will see later, it is Prosodic Words that count for *li*.Thus EDGEMOST(F) is clearly an interface constraint, connecting on the one hand the morphology to the syntax and the morphology to the prosody, on the other.

Finally, consider the domain of NONINITIAL(F). Simple sentences offer no evidence for a prosodic or phrase structure characterization because the two domains are conflated. Complex sentences, however, show that the relevant domain is the Intonational Phrase.

(6) B Knigata, Penka *ja* *e* dala na Petko. (Tomić (1996))
book-the Penka it-acc be-3 given to Petko
'As for the book, Penka gave it to Petko'

Note that the fronted topicalized object in (6) is separated by an intonational break from the rest of the sentence. Note also that no word-order change affects the subject, the verb, and the clitics. For the purpose of counting second position, it is as if the topicalized NP doesn't exist. This follows if the domain of NONINITIAL(F) is the Intonational Phrase.[2]

2.2 Macedonian

In M, clitics precede finite verbs (7a,b) while they follow non-finite structures -- such as predicative and presentative constructions (7c,d).

[2] See additional evidence in Tagalog (Legendre (1998)) and Serbo-Croatian (Radanović-Kocić (1996)).

(7) M a. *Ti go* dade.
'(He) gave it to you'
b. *Ḱe* dojdam.
will come
'(I) will come'
c. Mil *si mi*.
'(You) are dear to me'
d. Ene *go* čovekot.
here him man-the
'Here is the man'

In Legendre (in press), I argue that the core M pattern is a verb-second (V2) pattern. This can be interpreted in terms of the constraints proposed above if NONINITIAL is decomposed into two alignment constraints: NONINITIAL(T) -- where T stands for tense/finiteness -- and NONINITIAL(F) for all remaining features. V2 in (7a,b) results from NONINITIAL(T) outranking (>>) EDGEMOST(T).

Clitics, however, follow non-finite verbs/predicates, as shown in (7c,d). This suggests that M clitics favor P2 as well: NONINITIAL(F)>>EDGEMOST(F). The outcome is a competition for P2. If present in the input, [T] prevails with the result that [T] is realized on the verb in P2 while clitics are not (7a,b). This reveals the relative ranking of the constraints pertaining to [T] and those pertaining to other features: NONINITIAL(T) >> NONINITIAL(F). That is, NONINITIAL(F) will be violated in order for NONINITIAL(T) to be satisfied. Clitics appear in P1 because the P2 requirement on [T] outweighs that of other features.[3] This is formally represented in T2.

T2. MACEDONIAN FINITE VERBS

I: [dat] [acc] [T]	NIN(T)	NIN(F)	E(DAT)	E(ACC)
☞ a. [$_{V'}$ *ti go* dade]		⊛		⊛
b. [dade *ti go*]	*!		*	**
c. [ti dade go]		*		**!

Of particular interest in M are the deviations from the core pattern, exemplified in (8). (8a) contains an *l*-participle while (8b) contains a past participle usually referred to as a verbal adjective. Both (8a,b) are non-finite -- see Legendre (in press) for evidence. The only difference is that *l*-participles carry an evidentiality feature/suffix *-l* conveying an unwitnessed event.

(8) M a. *Sum ti go* kazal.
b. Najaden *sum*.

[3] In B, the distribution of clitics is not sensitive to finiteness. This means that NONINITIAL(T) is low-ranked in B.

‘(I) have told it to you’ ‘(I) am fed’

Note that clitic auxiliaries like *si, sum* are special from the perspective of the present feature-based approach. They instantiate two separate features, [perfect] and [T]. Suppose that M [perf] is basically like B [fut], that is, it is a P1 clitic in an otherwise P2-clitic language. In terms of constraint ranking, this means that EDGEMOST(PERF) outranks NONINITIAL(F). This leads to a conflict: on the one hand, *sum* seeks P1 because it instantiates [perf]; on the other, *sum* seeks P2 because it instantiates [T].

This conflict can be resolved by ranking EDGEMOST(PERF) equally with NONINITIAL(T) -- see the dotted separations in tableaux T3-T5. As a consequence, EDGEMOST(PERF) and NONINITIAL(T) violations cancel out and the optimal candidate is determined by lower ranked constraints.

In the case of verbal and predicate adjectives, the next constraint on the hierarchy is NONINITIAL(F), which precludes clitics in P1. There is one way and one way only to satisfy it: by encliticization. This is shown in T3.

T3. MACEDONIAN VERBAL ADJECTIVES

I: [T] [perf]	E(PERF)	NIN(T)	NIN(F)
☞ a. [$_{V'}$ najaden *sum*]	⊛		
b. [*sum* najaden]		*	*!

In the case of *l*-participles, all elements carry at least one feature, hence NONINITIAL(F) is violated by all candidates, as shown in T4.

T4. MACEDONIAN *L*-PARTICIPLES

I: [T][perf][dat][acc][ev]	E(PERF)	NIN(T)	NIN(F)	E(DAT)	E(ACC)	E(EV)
☞a.[$_{V'}$*sum ti go* kazal]		⊛	⊛	⊛	⊛⊛	⊛⊛⊛
b. [*ti go sum* kazal]	*!*		*		*	***
c. [kazal *sum ti go*]	*		*	**!	***	
d. [*sum* kazal *ti go*]		*	*	**!	***	*
e. [*sum ti* kazal *go*]		*	*	*	***!	**

The optimal candidate in T4 is the one which minimizes violations of lower-ranked constraints, hence the one in which the dative clitic is in P2 and the accusative clitic in P3: candidate (a).

Negation in M is interesting because it affects the position of clitics, in a superficially non-systematic way. Enclitics surface as proclitics in participle and predicative constructions but they remain as verbal enclitics in imperatives.

(9) M a. Najaden *sum*.
'(I) am fed'
b. Mil *si mi*.
'(You) are dear to me'
c. *Ne sum* najaden.
'(I) am not fed'
d. *Ne si mi* mil.
'(You) are not dear to me'

(10) M a. Daj *mu go*!
'Give it to him!'
b. *Ne* davajte *mu go*!
'Don't give it to me!'

In fact, both patterns naturally follow from the present analysis. Given a high-ranking of EDGEMOST(NEG), all candidates violate NONINITIAL(F).

T5. MACEDONIAN NEGATIVE VERBAL ADJECTIVES

I: [neg] [T] [perf]	E(N)	E(PERF)	NIN(T)	NIN(F)
a. [*ne* dojden *sum*]		**!		*
☞ b. [*ne sum* dojden]		⊛		⊛

The decision falls to EDGEMOST(PERF) in T5, which favors realizing [perf] as close as possible to the edge but not quite at the edge, hence in P2.

In the case of imperatives -- argued to be finite in Legendre (in press)--, the decision falls to EDGEMOST(IMP) in a parallel fashion, under the assumption that EDGEMOST(IMP) occupies the same relative ranking as EDGEMOST(PERF). But because [imp] is also a word-level affix, it results in the verb seeking P2.

T6. MACEDONIAN NEGATIVE IMPERATIVES

I:[neg] [T][imp][dat][acc]	E(N)	E(IMP)	NIN(T)	NIN(F)	E(DAT)	E(ACC)
☞a. [*ne* davajte *mu go*]		⊛		⊛	⊛⊛	⊛⊛⊛
b. [*ne mu go* davajte]		*!**		*	*	**

To summarize the discussion of M, all features favor P2. The outcome of the competition depends on which features compete for a given input.

Note that the position of clitics under the present analysis results from morphological alignment with V'. But some clitics carry stress, as illustrated in (2)-(3). Hence, it is imperative to investigate next the role of prosody in B and M.

3. The Role of Prosody

3.1. Bulgarian

That B *ne* and *li* obey prosodic constraints has been known since Hauge

(1976)[4].
I shall argue below that the prosodic parsing of B clitics is as in (11), where curly brackets {} are used to represent Prosodic Words (PrWds).

(11) B a. *Šte go* $\{_{\text{PrWd}}$ VI□das$\}$.
'(You) will see him'
b. $\{_{\text{PrWd}}$ *Ne ŠTE*$\}$ *go* $\{_{\text{PrWd}}$ VI□das$\}$.
'(You) will not see him'

Clitics, unlike lexical heads, are in general stressless. In our terms, this follows from a constraint, PARSE(F, PRPH), which requires them to be parsed directly in the higher unit of prosodic structure called Prosodic Phrase (PrPh). Hence, they are not parsed into PrWd and receive no word-level stress. Lexical Heads, on the other hand, are assumed to be left-aligned in the PrWd they head (Selkirk (1995)): ALIGN(LEXHEAD, L; PRWD, L).

Obviously, at least some B clitics do get parsed into a PrWd in a negative context, as (11b) above shows. Stress on the future clitic *ŠTE*, I propose, results from the interaction of two constraints. One is PARSE(F, PRPH) which both *ne* and *šte* violate. In light of Hauge's generalization, the other constraint pertains to *ne*. It can be stated as another instantiation of prosodic alignment: ALIGN(NEG, R; PRWDHD, L). That is, [neg] is right-aligned with the left edge of the head of PrWd or stressed syllable.[5] Finally, these prosodic constraints interact with a general constraint on economy of prosodic structure ,*PRWD, a member of the *STRUCTURE constraint family proposed in Prince and Smolensky (1993:25).

The resulting competition is formalized in the double tableau T7, with the positive context at the top and the negative context at the bottom.

[4] Working within a standard transformational approach, Hauge states that '*ne* always moves its stress over to the following word, also when this word is a clitic'(p. 18) and '*li* is placed immediately to the right of the first stressed element within the verb constituent' (p. 20).

[5] The alignment constraint on *ne* refers to alignment with the PrWd Head in B but with PrWd in M. As far as I can tell, this is the simplest way of capturing the fact that B *ne*, unlike its M counterpart, may never be stressed.

T7. PROSODY OF BULGARIAN *NE*

	A(N)	A(LEXHD)	P(F, PRPH)	*PRWD
☞ a. [$_{V'}$ *šte go* {VI□das}]				⊛
b. [{*šte go* VI□das}]		*!*	**	*
c. [{*ŠTE go*} {VI□das}]			*!*	**
☞ d. [{*ne ŠTE*} *go* {VI□das}]			⊛⊛	⊛⊛
e. [{*ne ŠTE go*} {VI□das}]			***!	**
f. [{*ne ŠTE*} {*go* VI□das}]		*!	***	**
g. [{*NE šte*} *go* {VI□das}]	*!		**	**

In the presence of *ne* (bottom competition), the two highest-ranked constraints -- A-R(NEG) and A-L(LEXHD) -- can both be satisfied if the sequence is parsed into two prosodic words and *go* is not parsed within the second PrWd (candidates (d) and (e)). This, in turn, suggests that *PRWD is relatively low-ranked in B. In T7 then, the decision falls to PARSE(F, PRPH) which favors parsing the clitic *go* outside of either PrWd.

Recall Hauge's generalization according to which *li* must immediately follow the first stressed element. In our terms, *immediately* is the consequence of ALIGN(Q, L; PRWD, R) while *after the first stressed element* is the consequence of EDGEMOST(Q). But here is the twist: while the EDGEMOST constraints governing other P2 clitics are evaluated on the basis of the number of morphemes that separate them from the left edge of V', the EDGEMOST constraint governing *li* is evaluated on the basis on the number of PrWds that separate it from the left edge of V'. This is shown in T8.[6]

If the units relevant to violations of EDGEMOST(Q) were the same as those of EDGEMOST(ACC), then candidate (b) would win the top competition -- *li* is closer to the left edge of V' in terms of morphemes (two) than candidate (a) (three). In terms of PrWds, however, *li* is equally close to the left edge of V'in candidates (a) and (b). As T8 shows, the decision falls to lower-ranked EDGEMOST(ACC) which favors realizing [acc] in P2. Note that the relative ranking EDGEMOST(Q) >> EDGEMOST(ACC) is independently supported by the competition between candidates (f) and (g).[7]

[6] Constraints A(N) and A(LexHd) are omitted in T8 for space considerations. They do not affect the outcome of the competitions though they are fatal to other candidates omitted in T8.

[7] If EDGEMOST(ACC) outranked EDGEMOST(Q), then candidate (f) would lose to (g): two violations of EDGEMOST(ACC) for (g) vs. three for (f).

T8. PROSODY OF BULGARIAN *LI*

	A(Q)	P(F, PRPH)	*PRWD	E (Q)	E (FUT)	E (ACC)
☞ a. [$_{V'}$ *šte go* {VI□das} *li*]			⊛	⊛		⊛
b. [*šte* {VI□das} *li go*]			*	*		*!**
c. [*šte li go* {VI□das}]	*!**		*			**
d. [*šte go li* {VI□das}]	*!*		*			*
e. [*go šte* {VI□das} *li*]			*	*	*!	
☞f.[{*ne ŠTE} li go* {VI□das}]		⊛⊛	⊛⊛	⊛	⊛	⊛⊛⊛
g.[{*ne ŠTE*} *go* {VI□das} *li*]		**	**	**!	*	**
h. [{*ne šte li go* VI□das}]	*!**	****	*		*	***
i.[{*ne GO*} *li šte* {VI□das}]		**	**	*	**!*	*

3.2 Macedonian

With respect to prosody, M differs from B in two important respects. One is its stress system. While B has lexical word stress, M has antepenultimate stress (AP), a fairly unusual system discussed in Franks (1987). Though AP ultimately results from the interaction of several constraints (Prince and Smolensky (1993)), I will treat it here as a single constraint 'AP' because I am only interested in the interaction between stress and the alignment constraints pertaining to clitics.

M also differs from B with respect to the prosody of *ne*. The data is organized into subpatterns, labelled A , B, C , etc. in (12). The prosodic bracketing reflects the outcome of optimization.

(12) Macedonian Stress Patterns (*AP = AP is violated)

Pattern A *AP
a. *ti go* {DAde}
b. *sum ti go* {KAzal}

Pattern B AP
a. {*ne ti GO* dade}
b. {*ne sum ti GO* kazal}

Pattern C AP
a.{dajTE *mu go*!}
b.{doNEsi *go*!}

Pattern D AP
a. {*ne* davajTE *mu go*!}
b. {*ne* doneSUvaj *go*!}

Pattern E *AP
a. {TATko} *mi e*
b. {NAjaden} *sum*

Pattern F
a. {*NE*} *mi e* {TATko} *AP
b. {*NE*} *sum* {NAjaden} AP

In the absence of *ne*, the sequence of clitics and its host carries one word-level

stress (e.g. patterns A, C, E). In the presence of *ne*, however, patterns B and D carry one stress while pattern F carries two. This suggests that *PRWD is higher-ranked in M than B: it is violated only in a subset of cases.

Looking briefly at the patterns in (12), one may observe some broad effects of AP. In some cases it results in stressed clitics (pattern B); in other cases it results in movable stress on the root, depending on the number of enclitics present (as is the case with imperatives in patterns C and D).

But note the complexity of the stress pattern. Note first that satisfaction of AP does not correlate with either encliticization or procliticization. That is, AP is satisfied in some patterns of encliticization (C, D), but violated in others (E). With respect to procliticization, AP is satisfied in (B) and (Fb) but violated in (A, Fa). Nor does satisfaction of AP correlate with either presence or absence of *ne*: AP is satisfied in some negative patterns (B, D) but violated in others (Fa). Finally, AP is satisfied in some positive patterns (C) but violated in others (A, E).

The OT approach, however, allows us to make sense of this complexity in a straightforward fashion. First, the alignment constraint on *ne* is clearly high-ranked in M, based on (B,D). This, in turn, results in parsing *ne* within the PrWd headed by the verb, allowing AP to be satisfied. As a consequence, P(F,PrPh) is violated. In the absence of *ne*, however, AP is violated but P(F,PrPh) is satisfied, as (A) shows. This suggests that P(F,PrPh) outranks AP.

Consider next the two encliticization cases in (C) and (E). Suppose that there is another alignment constraint at work whose effects were undetectable in B: ALIGN(PRPH, R; PRWD, R). It aligns the right edge of PrPh with the right edge of PrWd. This constraint is in fact satisfied in every case where AP is satisfied, including B, C, D, and F. It's clearly violated in pattern E, however. Otherwise AP would prevail (clitics encliticize to their host in E).[8]

The explanation of M patterns C and D is simple: M clitics are parsed within PrWd rather than PrPh becasue it makes the right alignment of PrPh and PrWd possible. This is turn shows that P(F,PrPh) can be violated within M, despite the fact that it often is satisfied, as shown in Patterns A ,E, and F. This explanation in formalized in T9. Note that A(NEG) -- omitted for space considerations -- is satisfied by all candidates.

[8] Note that ALIGN(PRPH, R; PRWD, R), while generally satified in M, is systematically violated by *li* in positive B contexts. This suggests that its relative ranking in B is low.

T9. PROSODY OF MACEDONIAN IMPERATIVES (Patterns C and D)

	*PRWD	A(PRPH, PRWD)	P(F, PRPH)	AP	A(LEXHD)
☞a. {dajTE *mu go*}	⊛		⊛⊛		
b. {DAJte} *mu go*	*	*!		*	
☞c. { *ne* davajTE *mu go*}	⊛		⊛⊛⊛		⊛
d. {*NE*} {davajTE *mu go*}	**!		***	**	
e. {*NE*} {davajTE} *mu go*	**!	*	*	*** *	
f. {*ne* davajTE} *mu go*	*	*!	*	**	*
g. {*ne* DAvajte} *mu go*	*	*!	*		*

Turning to patterns A and B, clitics are parsed outside of PrWd in positive contexts as expected, given P(F, PHPR). They are, however, parsed within PrWd in the presence of *ne* because *ne*'s requirement to be parsed within PrWd outweighs the general constraint on parsing clitics outside of PrWd. The formal competition is displayed in T10. Note that A-R(PrPh,PrWd) -- omitted for space considerations -- is satisfied by all candidates.

T10. PROSODY OF MACEDONIAN L-PARTICIPLES (Patterns A and B)

	A(N)	*PRWD	P(F,PRPH)	AP	A(LEXHD)
a. {*sum ti GO* kazal}		*	*!**		***
b. *sum ti* {*GO* kazal}		*	*!		*
☞ c. *sum ti go* {KAzal}		⊛		⊛	
☞ d.{*ne sum ti GO* kazal}		⊛	⊛⊛⊛		⊛⊛⊛
e. *ne sum ti* {*GO* kazal}	*!	*	*		*
f. {*NE*} {*sum ti GO* kazal}		**!	****	**	***
g. {*NE*} *sum ti* {*GO* kazal}		**!	**	**	*
h. {*NE sum ti*} {*GO* kazal}		**!	****		*
i. {*ne SUM ti go*}{KAzal}		**!	****	*	

What remains to be explained is the odd pattern of past participles (patterns E and F).[9] Clearly, *PRWD is doubly violated in negative verbal adjectives. This suggests that there is a higher-ranked constraint at work which is not present

[9] Pattern F is omitted in Franks' (1987) discussion of M prosody.

in other verbal forms. Note that the pattern is limited to forms that are verbal, but in a limited sense. In fact, these past participles are typically referred to in the Slavic literature as *verbal adjectives*. This is because they share several fundamental properties of adjectives. They are inflected for gender and number and they are the only participles that can function as attributes (Lunt (1952)). The third person copula can never be omitted with adjectives including verbal adjectives while its homophonous perfect counterpart must be omitted with *l*-participles (which can never function as attributes).

Thus, I propose that there are additional alignment constraints on [+N] categories: predicative adjectives and nouns as well as verbal adjectives. One, ALIGN(+N, L; PRWD, L) requires alignment of the left edge of a [+N] Lexical Head with the left edge of PrWd. The other, ALIGN(+N, R;PRWD, R) requires alignment of the right edge of a [+N] Lexical Head with the right edge of PrWd. Together, these two constraints have the effect that [+N] categories form their own PrWd. This shows that the prosody is sensitive to features, including [neg], [Q], and [+N].

As T11 shows, in the absence of *ne*, oprimal M verbal adjectives violate a constraint otherwise satisfied: A-R(PrPh,PrWD).

T11. PROSODY OF MACEDONIAN VERBAL ADJECTIVES (PATTERNS E AND F)[10]

	A-L(+N)	A-R(+N)	*PRWD	A(PRPH, PRWD	P(F, PRPH)
☞ a. {NAjaden} *sum*			⊛	⊛	
b. {naJAden *sum*}		*!	*		*
c. {NAjaden *sum*}		*!	*		*
d. {*NE sum*} {NAjaden}			**		**!
☞ e. {*NE*} *sum* {NAjaden}			⊛⊛		⊛
f. {*ne sum* NAjaden}	*!*		*		**

I have omitted *li* from the M discussion simply because its behavior is completely regular. The interaction of A-L(Q) and EDGEMOST(Q) results in *li* being placed immediately after the first PrWd. In the case of M, this means, for example, the pattern in (13). In B, however, this means the pattern in (14).

(13) M a. *Sum ti go* {KAzal} *li*? 'Have (I) told it to you?'

b. {*Ne sum ti GO* kazal} *li*? 'Haven't (I) told it to

[10] Note that candidates (c), (d), and (e) also violate low-ranked AP, omitted for space considerations.

you?'

(14) B a. {izPRAtix} *li mu* {knigata}? 'Did (I) send him the book?'
b. {*ne MU* } *li* {izPRAtix}...? 'Didn't (I) send him ...?'

Leaving aside the morphological alignment of other clitics which provides the input to the prosody, my proposal is that the difference results from different constraint rankings in M and B. Of particular relevance to B is the high-ranking of A-L(LEXHD), which together with P(F,PRPH), result in a default parsing of clitics outside of PrWd. The marked case in B is *ne*. In M, on the other hand, the default parsing of clitics is inside PrWd. Interestingly enough, the present analysis reveals that this state of affairs is not due to AP-- since AP is lower ranked than P(F,PRPH). Rather, the default parsing of M clitics within the PrWd results from a stronger aversion for building prosodic structure and a stronger desire to right-align PrPhs with PrWds. Crucially, the constraints are the same. This means that the distribution relies on constraint re-ranking. The rankings of M and B prosodic constraints are given in (15).

(15) Rankings of Prosodic Constraints:

a. M: A-L(Q) >> A-L(NEG) >> A-L(+N, PRWD), A-R(+N, PRWD) >> *PRWD >> A-R(PRPH,PRWD >> P(F, PRPH) >> AP >> A-L(LEXHD)

b. B: A-L(Q), A-R(NEG) >> A-L(LEXHD) >> P(F, PRPH) >> *PRWD >> A-R(PRPH,PRWD)

4. Conclusion

To sum up, this paper has argued that the complex distribution of clausal clitics in B and M is greatly simplified if (a) it is viewed as the product of both morphological and prosodic alignment and (b) the relevant constraints bear different weight in the two languages, as OT leads us to expect. The immediate consequence of this approach is that all constraints are assumed to be violable. As the reader may verify, an impressive number of constraints -- those which receive a ⊛ mark in any B or M tableau -- are indeed violated by optimal candidates.

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