

On the Formal Relationship Between the Synthetic Past Tenses in Macedonian and Its Role in the Evolution of the Conjugational Unit

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1. Introduction

All contemporary Macedonian dialects have two synthetic past tense formation-paradigms¹, *aoist* and *imperfect*, differing in aspect. This paper is concerned with the evolution of the desinential strings of these paradigms, the Middle Macedonian etyma of which I give in (1)², where D_i denotes the desinence-initial segment. The realiza-

¹ By *formation-paradigm*, I mean, for verbal systems, paradigms based on event categories, individually or in combination. These categories (e.g., tense and aspect in the Macedonian past tenses) constitute the *formational meaning* of the paradigm. In this paper, I limit myself to the Macedonian categories relevant to my discussion, which are *tense*, *aspect*, *mood*, and *status*. For detailed discussion of the event categories defining the indicative of Standard Macedonian, see FRIEDMAN 1977.

The Macedonian conjugational unit comprises four finite formation-paradigms (i.e. *present*, *aoist past*, *imperfect past*, and *imperative*, all of which are inflected for person and number), and four nonfinite (i.e., *l-participle* and *n-participle*, which are inflected for gender and number; *noun*, which is inflected for number, and *adverb*, which is uninflected). For discussion of their use and morphological composition, see LUNT 1952. For more detailed discussion, see FRIEDMAN 1977 for use, and ELSON 1989 for composition. Although I follow LUNT 1952 in using the label *l-participle*, it should be noted that the formation in question is not, in its function, participial (i.e., it is not used attributively), although it is in its morphological composition (i.e., it is inflected for gender and number).

² I use the designation *Middle Macedonian* to refer to the language of the 12th, 13th, and 14th centuries, and *New Macedonian* to refer to the language thereafter. The desinential strings of the past tenses in Middle Macedonian are not the earliest realizations attested, but those which I assume were common to East Balkan dialects immediately preceding the changes with which I am concerned. For the earliest strings, see VAILLANT 1966: 45–73 and LUNT 2001: 100–108.

Following tradition, I cite verbs in the third person singular of the present tense. Verbal and other forms are transcribed phonemically, with phonemes reflecting surface contrast except in positions attesting the neutralization of [voice], where I transcribe the segments which appear preceding a sonorant. The following verbs are used for illustrative purposes: *bie* (stem: *bi-*) ‘strike’, *grebe* (stem: *greb-*) ‘scratch’, *ide* (stem: *id-*) ‘go’, *ima* (stem: *im-*) ‘have’, *nosi* (stem: *nos-*) ‘carry’, *piše* (stem: *piš-*) ‘write’, and *umre* (stem: *umr-*) ‘die’. Note the following abbreviations: f = feminine singular, m = masculine singular, n = neuter singular, p = plural, s = singular, al = aorist l-participle, ap = aorist past, il = imperfect l-participle, ip = imperfect past, iv = imperative, lp = l-participle, pa = past, pr = present, cp = compare. In compound abbreviations, person/number and gender/number precede paradigm designation; e.g., 1sap = first person singular aorist past; mal = masculine singular aorist l-participle. The notation $A < B$ denotes the status of A as a reflex of B resulting from *phonological* change. The notation $A << B$ denotes the status of A as a remade reflex of B, a form resulting from *morphological* change.

tion of this segment was consistently *e* in the imperfect past, but in the aorist, had the lexically conditioned variants *a* (e.g., 1sap *grebax* from *grebe*; stem: *greb-*), *o/e* (e.g., 1sap *idox* from *ide*; stem: *id-*)³, *i* (e.g., 1sap *nosix* from *nosi*; stem: *nos-*), *e* (e.g., 1sap *umrex* from *umre*; stem: *umr-*), and \emptyset (e.g., 1sap *bix* from *bie*; stem: *bi-*)⁴:

(1) Desinential strings of the past tenses in Middle Macedonian

| | 1s | 2s | 3s | 1p | 2p | 3p | |
|----|------------------|-------------------|-------------------|--------------------|--------------------|-------------------|--|
| ap | D _i x | D _i | D _i | D _i xme | D _i xte | D _i xa | D _i = a, o/e, e, i, \emptyset |
| ip | D _i x | D _i še | D _i še | D _i xme | D _i xte | D _i xa | D _i = e |

These strings are attested in two contemporary patterns, which I give in (2), where *X* denotes an overt reflex of *x*, i.e., *x* or *v*, and the absence of *X* denotes a non-overt, or zero, reflex. The first pattern is attested in northeastern dialects (i.e., in Kumanovo, as described in VIDOESKI 1962: 200–209), henceforth Area 1⁵, and the second, elsewhere (i.e., in western dialects and the remaining eastern), henceforth Area 2⁶.

(2) Contemporary desinential strings of the past tenses

| Area 1 | 1s | 2s | 3s | 1p | 2p | 3p | |
|--------|-------------------|-------------------|-------------------|---|---|---|--|
| ap | D _i | D _i | D _i | D _i mo | D _i te | D _i Xa | D _i = a, e, i, \emptyset |
| ip | D _i še | D _i še | D _i še | D _i emo D _i amo D _i šemo | D _i ete D _i ate D _i šete | D _i a D _i a D _i šeja | D _i = e |

| Area 2 | 1s | 2s | 3s | 1p | 2p | 3p | |
|--------|------------------|-------------------|-------------------|--------------------|--------------------|------------------|--|
| ap | D _i X | D _i | D _i | D _i Xme | D _i Xte | D _i a | D _i = a, o/e, e, i, \emptyset |
| ip | D _i X | D _i še | D _i še | D _i Xme | D _i Xte | D _i a | D _i = e |

³ Verbs with desinence-initial *o/e* in the aorist past attest *e* in the second and third persons singular, and *o* elsewhere; e.g., 1sap *idox*, 2/3sap *ide*, etc. in Middle Macedonian.

⁴ I follow LUNT 1952 and others in classifying Macedonian verbs on the basis of the dominant desinence-initial vowel of the present tense into three groups, or *conjugations*: E (e.g., *ide*), I (e.g., *nosi*), and A (e.g., *ima*). I am concerned only with verbs of the E- and I-conjugations, i.e., only with those verbs in which the desinence-initial vowel was available, in principle, to oppose forms of the aorist and imperfect.

⁵ VIDOESKI 1954 provides additional attestation of Area 1.

⁶ Macedonian dialects are traditionally divided into an *eastern* and a *western* group, with the Vardar and Crna rivers marking the division. Subgroups (e.g., *northeastern* dialects, with which this paper is concerned) are recognized within each group. For a comprehensive survey of dialectal divisions and traits, see VIDOESKI 1983.

The contemporary realizations are the result of phonological and morphological change in early New Macedonian as follows⁷:

1. Phonologically, *x* was eliminated in Area 1⁸, where it was reinterpreted as *v* inter-vocally (e.g., 3pap *nosiva* < *nosixa*), and lost elsewhere (e.g., 1sap *nosi* < *nosix*). In Area 2, *x* was retained, but only in eastern dialects. In western, it was lost inter-vocally (e.g., 3pap *nosia* < *nosixa*), and reinterpreted as *v* elsewhere (e.g., 1sap *nosiv* < *nosix*)⁹.

2. Morphologically, Area 1 underwent three innovations¹⁰:

- a. elimination, in the aorist past, of desinence-initial *o/e* in favor of *e* (e.g., 1sap *ide* << *idox*; cp 1sap *idoX* in Area 2);
- b. extension, in the imperfect past, of the third person singular as a base to other forms of the singular, to other forms of the singular and personal forms of the plural, or throughout the paradigm (e.g., 1sip *noseše* << *nosex* and 1pip *nosešemo* << 1pip *nosexmo*; cp 1sip *noseX* and 1pip *noseXme* respectively in Area 2);
- c. extension, in the imperfect past, of the third person of each number as a base to other persons of its sub-paradigm (e.g., 1sip *noseše* << *nosex* and 1pip *noseamo* << *nosexmo*; cp 1sip *noseX* and 1pip *noseXme* respectively in Area 2)¹¹.

⁷ It is clear that Area 1 has been subject to Serbian influence (e.g., terminal *-mo* in the first person plural; cp terminal *-me* elsewhere in Macedonian). With regard to the past tenses, we may divide dialects in Area 1 into two groups: those with *-smo* and *-ste* respectively in the first and second persons of the plural, and those with a reflex of *-xmo* and *-xte*. The former attest the Serbian reflexes of earlier *-xmo* and *-ste*, while the latter attest the Macedonian and Bulgarian reflexes. I ignore the former for purposes of this paper, assuming that Serbian reflexes are indicative of Serbian evolution, which did not include the innovations under consideration in this paper.

⁸ By the *elimination* of a segment, I mean either its *reinterpretation* as another segment, or its *loss*. Thus, *x* was eliminated in many Macedonian dialects, where it was reinterpreted as *v*, or lost.

Note that I transcribe the consonantal reflex of *x* as *v* even though it is consistently *f* in the past tenses of the contemporary language. Earlier, *v* occurred where *x* had preceded a sonorant (i.e., in the first person plural, where it preceded *m*), and *f* occurred where it had not (i.e., in the first person singular, where it was word-final, and the second person plural, where it preceded the voiceless obstruent *s*). The realization *f* replaced *v* in the first person plural. I nevertheless transcribe *v* as a reminder that it, not *f*, was the immediate reflex of *x*.

⁹ The distributional statements I make for reflexes of *x* are simplified for convenience, including only those details that are relevant to *x* in the desinential strings of the past tenses. With regard to my statement that, in Area 2, *x* was lost inter-vocally, it should be noted that *x* yielded *v* inter-vocally after *u* in some western dialects. For comprehensive consideration of the fate of *x*, see KONESKI 1983: 81–85. The segment *j* occurs facultatively between *i* and *a* in the third person plural of the aorist (e.g., 3pap *nosi(j)a*).

¹⁰ For (a), see VIDOESKI 1962: 202–203; for (b) and (c), see 204–209, and especially 208. The exact extent to which these traits are attested is not clear from Vidoeski's presentation. In any case, it should be noted that, although attested with some frequency, they are not attested throughout northeastern dialects.

¹¹ Note that the imperfect past pattern *D,emo*, *D,ete*, *D,a* (e.g., 1pip *noseemo*, 2pip *noseete*, 3pip *nosea*) of Area 1 is *not* the result of morphological innovation, but of compensatory length-

Area 2 maintained the status quo, but underwent an innovation in which the past tenses played a role: extension of the aspectual opposition to the l-participle. Area 1 did not undergo this innovation.

In this paper, I will argue that:

1. the morphological changes in Area 1 versus the status quo in Area 2 were the result of differences between them in the *formal* relationship of the past tense formation-paradigms, and
2. the differences between Area 1 and Area 2 in this relationship can be attributed to a difference between them in the morphological status of the initial segment in past tense desinences, itself a reflection of differences in the details of the phonological evolution of *x* and the morphological status of *X*, its overt reflex.

I will also argue that the formal relationship between the aorist and imperfect pasts was relevant to the fate of the aspectual opposition, i.e., confinement to the past tenses in Area 1, but extension to the l-participle in Area 2.

2. The Formal Relationship of the Past Tenses

We begin by taking note of a desinential difference between Areas 1 and 2 that is of relevance to the evolution of the past tenses but has gone unnoticed. This difference is the morphological status of desinence-initial segments. Dialects in Area 2, henceforth exemplified by the standard language, use this segment to represent the aspectual component of the formational meaning of the past tenses, which, in its entirety, is tense and aspect. That is, speakers in this area assign aspect *inter-paradigmatically*: they consider the realizations of the desinence-initial segment of the aorist past and imperfect past simultaneously, and represent this category privatively as *aorist* versus *non-aorist*¹², assigning the realizations *a*, *o*, *i*, and *ø*, which occur only in aorist forms, ‘aorist’ (e.g., in 1sap *grebav*, etc., 1sap *idov*, etc., 1sap *nosiv*, etc., and 1sap *biv*, etc.) and the realization *e*, which occurs in imperfect forms as well as aorist, ‘non-aorist’ (e.g., 1sip *grebev*, etc., 1sip *idev*, etc., 1sip *nosev*, etc., and 1sip *biev*, etc.)¹³. Such

ening in response to the loss of *x* pre-consonantly (e.g., 1pip *noseemo* < *nose:mo* < *nose*mo* < *nosexmo*). I will therefore ignore it henceforth. For discussion, see VIDOESKI 1962: 206 and elsewhere.

¹² A *privative* opposition is a two-place (i.e., binary) opposition in which one of the terms signals *presence* of the meaning in question while the other signals nothing (i.e., neither presence nor absence of this meaning, although more often than not it is associated with absence). The former is termed *marked*, and the latter, *unmarked*.

¹³ I am therefore claiming that, *morphologically*, the aorist is *marked* with respect to the imperfect, which is *unmarked*. I make this claim fully cognizant of the belief of many (e.g., FRIEDMAN 1977: 24–33 and 90) that, on the basis of *usage*, it is the reverse: the imperfect is marked with respect to the aorist. Although further consideration of these claims is beyond the scope of this paper, I note that there is no reason in principle why form **must** evolve in tandem with usage. It frequently does, but it need not. Thus, for example, there is no difficulty with the widely accepted claim that the third person is unmarked for person and the fact that many languages have an overt marker of third person (e.g., English and a number of the Slavic languages). Form and usage are closely related, but ultimately, I maintain, independent, components of the linguistic sign.

employment of desinence-initial segments, which links the past tenses formally, is clear from the extension in Area 2 of the aspectual opposition to the l-participle, which, historically, was neutral with respect to this opposition. In the contemporary system of Area 2, however, the l-participle expresses *aorist* versus *non-aorist*, attesting two sets of forms differing in their desinence-initial segment exactly as the aorist past differs from the imperfect past (e.g., *mal nosil* versus *mil nosel* like 1sap *nosiv* versus 1sip *nosev*). The chain of events leading to the extension of the opposition, taking as its point of departure the desinential compatibility of the past tenses¹⁴, may be reconstructed as follows:

1. The desinence-initial segment of the past tenses was associated with aspect¹⁵. There were five realizations of this segment: *a*, *o*, *i*, \emptyset and *e*. Four of them (i.e., *a*, *o*, *i* and \emptyset) were restricted to the aorist past, while one occurred in the imperfect past as well. Systemically, therefore, the opposition was instantiated as *aorist* versus *non-aorist*, with *a*, *o*, *i* and \emptyset assigned the marked value 'aorist', and *e* assigned the unmarked value 'non-aorist'.
2. Subsequently, the desinential strings of the l-participle, which were compatible with those of the aorist past in attesting an initial vowel with the same realization, were also associated with aspect. Accordingly, desinence-initial *a*, *o*, *i* and \emptyset of the l-participle were assigned the value 'aorist', while desinence-initial *e* was assigned the value 'non-aorist'¹⁶.
3. In response, unmarked, imperfect l-participial forms with desinence-initial *e* evolved to complement aorist forms. If the inherited l-participial form had desinence-initial *e*, a new form did not evolve¹⁷.

Perhaps the most noticeable feature of dialects in Area 1 suggesting that desinence-initial segments in them are *not* associated with aspect in the same way as they are in Area 2, or perhaps at all, is that the dialects in question have *not* extended aspect to the l-participle, of which they retain a single, aspect-neutral form. The innovations attested by these dialects support this view:

1. The leveling of aorist past desinence-initial *o/e* in favor of *e* (e.g., 1sap *ide* << *idox* in some dialects of Area 1; cp 1sap *idov* in Area 2), which rendered the aorist past identical to the imperfect in this segment (e.g., 1sap *ide* and 1sip *ideše*,

¹⁴ I assume that desinences are compatible (i.e., can be considered simultaneously in the assignment of grammatical meaning) to the extent their configurations of consonantal units with respect to vocalic are the same. The desinences of the past tenses were therefore compatible, beginning with a vowel which could be absent (e.g., in the past tenses of *bie*; stem: *bi-*) followed by a consonant which was consistently absent in the second and third persons singular.

¹⁵ This was itself an innovation. See footnote 24 for brief clarification.

¹⁶ This evolution is less evident in the n-participle, noun and adverb, but can be argued for them as well. See ELSON 1981 and 1990: 101–109 for discussion.

¹⁷ I am assuming that the existence of a *marked* form implies that of an *unmarked*, but not conversely, because the former is restricted in occurrence by virtue of its markedness, but the latter, in principle at least, is not. Thus, a marked form which lacks an unmarked partner will tend to evolve one, but not conversely.

both with desinence-initial *e*, in these dialects), suggests that the segment in question did not, by itself, have morphemic status.

2. The extension in the imperfect past of the third person singular and/or the third person plural as a base within their sub-paradigms or, in the case of the third person singular, to forms of the plural as well (e.g., 1/2/3sip *noseše*, 1pip *noseše-mo/noseamo*, 2pip *nosešete/noseate*, 3pip *nosešeja/nosea*), which resulted in a string unique to the imperfect past (i.e., a string including *š* or *ea*) occurring in each of its forms, suggests that the formational meaning 'imperfect past' in Area 1 is conveyed, in whole or in part, either by segments beyond the desinence-initial segment, or by strings including the desinence-initial segment and segments beyond¹⁸.

Thus, we have a systemic difference in the initial segment of desinential strings in Areas 1 and 2, and, as a result, a difference between them in the formal relationship of the past tenses (i.e., *morphologically opposed* versus *morphologically unopposed* in the desinence-initial segment) which correlates with the evolutionary differences between them that we wish to explain, including the confinement of aspect to the past tenses in Area 1 versus its extension to the l-participle in Area 2. In fact, the failure of aspect to be assigned inter-paradigmatically to the desinence-initial segment in Area 1, and the resulting absence of formal, aspectual opposition in this segment, has explanatory potential for all of the evolutionary peculiarities of Area 1 because each of the innovations in this area, as well as the confinement of aspect, can be seen not only as a correlate, but as a consequence or result, of it (e.g., *o/e* was vulnerable to elimination in Area 1 *because* the desinence-initial vowel was morphologically nonfunctional, and *o* was therefore not required to oppose the aorist past to the imperfect; aspect was not extended to the l-participle in Area 1 despite desinential compatibility *because* it was unassociated with desinence-initial segments in the past tenses). However, the difference between Areas 1 and 2 in the status of desinence-initial vowels can itself be motivated with respect to the phonological fate of *x* and the morphological status of its overt reflex, i.e., *X*, thereby providing further insight into the organization of word-level units in Macedonian conjugation and, by extrapolation, the nature of innovations in question. This is possible if we assume as a working hypothesis that, in the assignment of grammatical meaning to desinential form, simultaneous consideration of two or more formation-paradigms requires, in addition to desinential compatibility, unification in an upper-level, or *super*, paradigm (i.e., a paradigm comprising two or more formation-paradigms)¹⁹. With regard to the evolu-

¹⁸ VIDOESKI (1962: 206), mistakenly in my judgment, attributes forms like 1pip *noseamo* to influence of the A-conjugation (e.g., 1pip *noseamo* like 1pip *imaamo*, the imperfect past of *ima*). There is no corroborating evidence to support influence of this conjugation. The use of the third person as a base for reformation, however, is well attested. Thus, I assume 1pip *noseamo* << 3pip *nosea* + *mo*, etc.

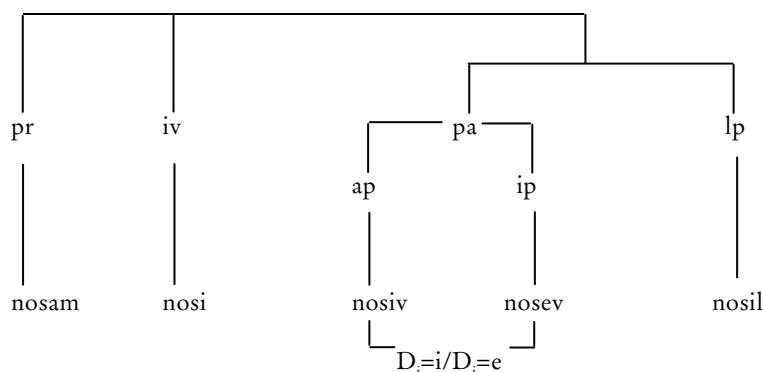
¹⁹ I am also assuming that the elimination of *x* preceded the morphological changes with which we are concerned. KONESKI (1983: 81) notes that the elimination was no earlier than the sixteenth century. Assigning it to the beginning of the sixteenth century, we can be reasonably certain it preceded the extension of aspect in Area 2 since the emergence of imperfect l-participial forms is attested in the seventeenth (see ELSON 1990: 172). However, no comment is

tion of the past tenses and l-participle in Area 2 of Macedonian, this means, as illustrated in (3) with the first person singular present, aorist past, and imperfect past; the second person singular imperative; and the masculine singular l-participle of *nos-* (stem: *nos-*), that:

1. the assignment of aspect to the desinence-initial segment of the past tenses required, as a prerequisite, their unification into a super-paradigm, and
2. the extension of aspect to the l-participle required, as a prerequisite, the unification of the l-participle and the super-paradigm comprising the past tenses into yet another super-paradigm²⁰.

Within this framework, we may further assume that, in Area 1, these super-paradigms did *not* exist, or ceased to exist, as illustrated in (4), making decisions regarding the morphological representation of aspect in the aorist past independent of those in the imperfect, and inquire into the defensibility of this interpretation.

(3) Paradigmatic organization in Area 2

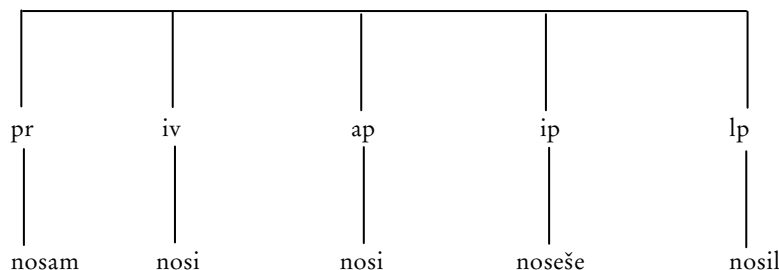


offered on the chronology of the morphological changes by VIDOESKI, nor are they mentioned at all by Koneski. Hence, assigning chronological priority to the elimination of *x* with respect to the morphological innovations we are considering is, at present, justified only by its ability to provide a defensible motivation for these innovations.

The super-paradigms I posit are unrecognized in the analyses of others. For additional discussion, see ELSON 1989 and 1990.

²⁰ Each assumption reflects a more general one: the first that the value of strings with grammatical potential in word-level forms is determined by their distribution within well-defined domains, or *paradigms*, and the second that, over time, forms tend to become more similar (i.e., undergo analogical leveling) within such domains. These assumptions are implicit in morphological analyses although rarely acknowledged, and most likely adopted as a matter of procedure, without appreciation of their theoretical relevance. Even when acknowledged, they are not applied beyond formational paradigms, i.e., the paradigms which, I have assumed, are defined by grammatical meaning relevant to a lexical category (e.g., *tense*, *aspect*, *mood*, and *status* for the category *verb*).

(4) Paradigmatic organization in Area 1



3. The Paradigmatic Organization of the Past Tenses and l-Participle

Following tradition, I have assumed that Macedonian verbal forms are organized into paradigmatic entities, which I have termed *formation-paradigms*, on the basis of grammatical meaning which characterizes events. This organization can be supported with historical evidence, and, in particular, morphological innovations implemented within domains defined by these meanings. Thus, for example, it is argued in ELSON 1983 that dialectal innovations in the desinence-initial segment of the present paradigm are the result of transferral to the present of distributional peculiarities of this segment in the imperative paradigm. Implicit in this argument is the paradigmatic status of forms sharing the meaning 'present' and of forms sharing the meaning 'imperative', and, by extrapolation, the paradigmatic relevance of tense and other event-characterizing categories.

Despite the indisputable relevance of shared grammatical meaning as the basis of Macedonian formation-paradigms, it cannot be argued as the basis of the super-paradigms we wish to assume for Area 2. It is true that the past tenses shared 'past', but this meaning did not characterize the l-participle, and therefore would not provide a basis for paradigmatic unification with it leading, eventually, to the extension of aspect. Nor is there any other meaning which readily suggests itself as a candidate. Instead, we must assume that there was something about the desinential morphology of the past tenses – presumably connected with the elimination of *x*, before which Areas 1 and 2 were desinentially uniform – which in some dialects promoted their unification with each other and, as a super-paradigm, with the l-participle, but in others impeded it. The identification of this *something* is not a simple matter because the past tenses are not transparent morphologically. They are typical of paradigms in fusional languages, where the distribution of form does not make obvious the assignment of grammatical meaning. The aorist past and imperfect past of *nosi* (stem: *nos-*), given in (5) as they occurred in Middle Macedonian, are illustrative:

(5) The past tenses of *nosi* in Middle Macedonian

| | ap | ip | | ap | ip |
|----|-------|--------|----|---------|---------|
| 1s | nosix | nosex | 1p | nosixme | nosexme |
| 2s | nosi | noseše | 2p | nosixte | nosexte |
| 3s | nosi | noseše | 3p | nosixa | nosex |

Observation reveals that some desinences comprise only a vowel (e.g., *-i* in 3sap *nosi*). Others comprise *x* as well (e.g., *-ix* in 1sap *nosix*), and still others comprise segments beyond *x* (e.g., *-ixme* in 1pap *nosixme*). Thus, it is not clear how to assign grammatical meaning to desinential form, or what strategies are used by native speakers in this endeavor. However, the *l*-participle is potentially a valuable source of insight into the morphology of the past because, first, we have assumed from the extension of the aspectual opposition to it that, in Area 2, it and the past constituted a domain (i.e., a super-paradigm), and, second, its desinential structure is canonically more uniform permitting principled speculation on the assignment of meaning to form. Examining this formation, illustrated in (6) where it is represented by the aspect-neutral *l*-participles of *nosi* (stem: *nos-*) and *grize* (stem: *griz-*) in Middle Macedonian, we are able to hypothesize a strategy of assignment which can be applied to the past:

(6) The *l*-participles of *nosi* and *grize* in Middle Macedonian

| | | |
|---|--------|--------|
| m | nosil | grizol |
| f | nosila | grizla |
| n | nosilo | grizlo |
| p | nosile | grizle |

We note that, desinentially, *l*-participial forms consistently comprise an internal consonant, i.e., *l*, throughout. Although we know comparatively little about the assignment by speakers of grammatical meaning to form²¹, we may reasonably assume that any segment occurring *throughout* a paradigm, and *restricted* to that paradigm, is associated with its formational meaning. We therefore assign *l* morphemic status with the meaning which characterizes the *l*-participle, i.e., ‘distanced’ instantiating the category of status. Since, within the desinence, *l* could be preceded and followed by at most one phoneme, a vowel, we can be certain that we have a maximum of three desinential morphemes: the first comprising the initial vowel or its absence, and compatible with aspect; the second comprising *l*, and expressing formational meaning; and the third comprising the final vowel or its absence and expressing relevant inflectional categories (i.e., gender and number), a conclusion inferable from its realization, which is unique to each form.

The same desinential structure can be argued for the past tenses in Middle Macedonian, although it is less obvious because there is no string common to all forms (i.e., with a distribution in them parallel to that of *l* in the *l*-participle). Returning to the past tenses as they occurred in Middle Macedonian, we note that although they did not have a consonantal unit occurring in *all* forms, they did have one occurring in four of the six: *x* in the first person singular (e.g., 1sap *nosix*), first person plural (e.g., 1pap *nosixme*), second person plural (e.g., 2pap *nosixte*), and third person plural (e.g., 3pap *nosixa*). Could *x* have been assigned the temporal component of formational meaning, i.e., ‘past’, making it functionally parallel to *l*, although it did not occur in all forms of either past tense formation-paradigm? We may say, at least, that there was no meaning compatible with its distribution other than ‘past’. Nor can there be any doubt that a string *S* can be assigned a grammatical meaning *G* although *S* does

²¹ I discuss the assignment of inflectional meaning to form in ELSON, to appear.

not occur in all forms with G (e.g., *t/d* in the past tense of English verbs, which speakers undoubtedly assign the meaning ‘past’ despite its absence in the past tense of so-called *strong* verbs). Finally, this interpretation contributes to an understanding of two innovations in Middle Macedonian:

1. elimination of the inherited difference between the aorist and imperfect pasts in segments following the desinence-initial one via generalization of imperfect *-xa* in the third person plural (e.g., 3pap *nosixa* << *nosiše*), and
2. elimination of *x/s* via extension of *x* to the second person plural (e.g., 2pap *nosixte* << *nosiste*; 2pip *nosexte* << *noseste*)²².

The telos of these innovations can be seen as enhancement of the already existing partial formal identity between the past tenses in the segments following the desinence-initial vowel since the result was identity in these segments in the first person singular and all forms of the plural. This interpretation is possible if we assume that the segments in question represented meaning common to the pasts in two components: a non-terminal suffix comprising *x*, representing formational meaning, i.e., ‘past’, and a terminal one, comprising *me*, *te*, or *a*, representing the relevant inflectional categories (i.e., person and number). The enhancement was implemented via extension of *x* to replace *s* in the second person plural, and extension of imperfect past *xa* to replace aorist past *še* in the third person plural. We are assuming, in effect, that it was the assignment of ‘past’ to *x*, a segment shared by the aorist and imperfect pasts, which made possible, via its extension and, in the third person plural, that of the segment beyond it, heightened desinential identity between the past tenses.

The analysis of *x* in the aorist and imperfect pasts of Middle Macedonian as a morpheme expressing tense instantiated as ‘past’ made possible the fulfilment of the prerequisites established above for the assignment of aspect to the desinence-initial vowel of the past tenses, and the extension of the aspectual opposition from the past tenses to the l-participle despite the absence of grammatical meaning common to them. With this analysis, these prerequisites could be met *morphologically*, on the formal basis of a *shared constituent type*, specifically, a consonantal constituent expressing formational meaning, or part thereof, realized in the case of the past tenses as *x* expressing the category tense instantiated as ‘past’, and, in the case of the l-participle, as *l* expressing the category status instantiated as ‘distanced’. This constituent united the past tenses with the l-participle and, at the same time, united the past tenses with each other by virtue of the occurrence in both of a single instantiation, i.e., *x*. Such a constituent was absent in the present and imperative, and thus was unique to the past tenses and the l-participle, where its result, beyond paradigmatic unification, was a uniform tripartite desinential structure including an initial component comprising a vowel and a terminal constituent expressing relevant inflectional

²² Prior to the realizations I have taken as my point of departure, the second person plural had as its terminal suffix *-ste*, and the third person plural had *-še* in the aorist but *-xa* in the imperfect. Other northern dialects generalized *s* and maintained *-še*, following the Serbian pattern.

categories (i.e., person/number in finite paradigms, gender/number in nonfinite)²³. The paradigmatic linkage of the pasts, and of the pasts with the l-participle, together with the distribution and realization of desinence-initial vowels in the pasts vis-à-vis their distribution and realization in the l-participle, provided the basis for inter-paradigmatic identification of these vowels with aspect²⁴.

We may now consider the relevance of the fate of *x* as a segment for the maintenance of these paradigmatic unities, and, ultimately, for the occurrence of morphological innovation in the past tenses of Area 1, but for the status quo in Area 2.

4. The Elimination of *x* and Its Consequences

The voiceless velar fricative, i.e., *x*, was unstable in Macedonian, many dialects of which have eliminated it in some or all of its historical instantiations. It was inherited in three environments: word-finally, pre-consonantly, and inter-vocally. In Area 1, we have noted, it was reinterpreted as *v* inter-vocally, but lost word-finally and pre-consonantly. In Area 2, it was retained in the east. In the west, however, it was lost inter-vocally, but not word-finally or pre-consonantly, where it was reinterpreted as *v*. All three environments occurred in the past tenses (e.g., 1sap *nosix* with word-final *x*, 2pap *nosixte* with pre-consonantal *x*, and 3pap *nosixa* with intervocalic *x*), which are repeated in (7) with the aorist and imperfect pasts of *nosi* (stem: *nos-*) as they occurred in Middle Macedonian, i.e., before the elimination:

(7) The past tenses of *nosi* in Middle Macedonian

| | ap | ip |
|----|---------|---------|
| 1s | nosix | nosex |
| 2s | nosi | noseše |
| 3s | nosi | noseše |
| 1p | nosixme | nosexme |
| 2p | nosixte | nosexte |
| 3p | nosixa | nosexxa |

²³ Such a constituent also occurred in the n-participle, noun, and adverb. ELSON 1981 argues, on that basis, that the super-paradigm in question comprised the past tenses and **all** of the nonfinite formations.

²⁴ As I have defined them, the conditions for the assignment of aspect to desinence-initial vowels and the extension of aspect to the l-participle existed long before the seventeenth century, when the extension of aspect occurred, and may reasonably be assumed to have existed throughout East Balkan Slavic and, more generally, South Slavic. The lateness of the extension and its restriction to East Balkan Slavic may be connected with an innovation unique to East Balkan: loss of the infinitive in the sixteenth century. I argued in ELSON 1990: 101–109 that the desinence-initial vowel of the aorist past was not available to represent aspect as long as the infinitive existed because the latter necessitated interpreting the vowel in question as part of the verbal stem. With loss of the infinitive, this vowel was assigned to the desinence as its initial segment, and thenceforth available to represent aspect.

It should be noted that the assignment of ‘past’ to *x*, although involving both the aorist and imperfect pasts, did not require the prior existence of a super-paradigm comprising them. The distribution of *x* within each of the past tense paradigms justified the assignment of ‘past’ to it independently of its occurrence in the other. Subsequently, *x* could serve as a morpheme type uniting the past tenses with each other, and with the l-participle.

The elimination of *x* in Area 1 yielded the paradigms in (8), and in Area 2, those in (9):

(8) The past tenses of *nosi* in Area 1 after the elimination of *x*

| | ap | ip |
|----|--------|--------|
| 1s | nosi | nose |
| 2s | nosi | noseše |
| 3s | nosi | noseše |
| 1p | nosime | noseme |
| 2p | nosite | nosete |
| 3p | nosiva | noseva |

(9) The past tenses of *nosi* in Area 2 after the elimination of *x*

| | ap | ip |
|----|---------|---------|
| 1s | nosiv | nosev |
| 2s | nosi | noseše |
| 3s | nosi | noseše |
| 1p | nosivme | nosevme |
| 2p | nosivte | nosevte |
| 3p | nosia | nosea |

The paradigms of (8) were presumably the point of departure for the analogical changes that gave rise to the contemporary forms of Area 1 as well as its confinement of aspect to the past tenses. We may view all changes in Area 1 and its confinement of aspect as the result of a single peculiarity of (8): the absence of *X* in the first person singular (e.g., 1sap *nosi* < *nosix* in Area 1; cp 1sap *nosiv* in Area 2)²⁵. Prior to the elimination of *x*, all dialects attested *x* in four forms of the past tenses: the first person singular and all forms of the plural. After the elimination, Area 1 attested an overt reflex of *x* only in the plural (i.e., in only one of the two sub-paradigms of the past tenses). This was apparently sufficient to make impossible, or lessen the likelihood of, the identification of *X* as a morpheme with the meaning ‘past’. That is, we may assume that, although a string *S* need not occur in all forms of a formation-paradigm to represent formational meaning (i.e., the grammatical meaning common to its members), it must occur in at least one form of each sub-paradigm²⁶, here, *singular* and *plural*. Thus *x* was available to mean ‘past’ in Middle Macedonian, as was its reflex *X* in contemporary dialects of Area 2, but *not* in those of Area 1.

The absence of a string assigned the meaning ‘past’, in turn, meant the absence of a super-paradigm comprising the aorist and imperfect pasts in Area 1, and, so, no possibility of interaction in the assignment of grammatical meaning to desinential

²⁵ It cannot be assumed that retention of *X* in at least one form of each sub-paradigm guaranteed the extension of aspect. That is, speakers were not obligated to innovate, and there may therefore be dialects in Area 2 which maintained the inherited system in which aspect was confined to the past tenses. For further discussion of *X* in the broader context of South Slavic, see ELSON 2002.

²⁶ Thus even before the Middle Macedonian changes noted above, when *x* in the aorist past occurred only in the first person singular and first person plural, it could be assigned ‘past’ because it occurred in each sub-paradigm of the aorist past, although in only one form of each.

form in them – in particular, no interaction of the type attested in Area 2 in the assignment of aspect. It also meant the absence of a super-paradigm comprising the past tenses and the l-participle, and, as a result, no morphological interaction between them and it. The result was, first, and perhaps most importantly with respect to the conjugational unit as such, the failure of aspect to be extended to the l-participle, as it was in Area 2. In addition, the past tense paradigms in Area 1 were free to evolve independently of each other, i.e., as paradigmatic entities each left to its own devices. In this context, the extension in the imperfect past of third person forms as bases to personal forms (e.g., 1pip *noseamo* < 3pip *nosea* + *mo*), we may speculate, was more than an attempt to provide a common paradigmatic base either to sub-paradigms or the formation-paradigm as whole. We infer this from the fact that dialects in Area 1 which extended the third person plural to other forms of the plural did this only in the imperfect past, not in the aorist (i.e., we do not find aorist past forms like 1pap **nosiamo* < 3pap *nosia* + *mo*). In view of this, it seems more likely that the telos of extension was to establish a string or strings unique to the imperfect past to which its entire formational meaning could be assigned, thus opposing it equipollently (i.e., positively, as [+imperfect past]) to other formation-paradigms with a string unique to them (e.g., the l-participle, with *l* occurring in each of its forms, but nowhere else). This was in contrast to Area 2, in which the imperfect past was, morphologically, opposed only to the aorist past, and then privatively (i.e., negatively, as [-aorist]), via desinence-initial *e*, which was not restricted to it, but occurred, although not frequently, in aorist forms as well; e.g., the aorist past of *umre*. It was the occurrence of desinence-initial *e* outside the imperfect past which made it unsuitable, by itself, to convey all of the formational meaning of the imperfect past in Area 1. However, a string including *š* (i.e., *š* or *eš*; e.g., in 3sip *noseše*) and the string *ea* (e.g., in 3pip *nosea*) were restricted to the imperfect past, and therefore able to convey its entire formational meaning optimally. In this regard, we note that the aorist past required no adjustment to optimize the expression of its formational meaning because it included, in each form, a stressed desinence-initial vowel, unique to it among formation-paradigms, and therefore available to represent ‘aorist past’, and thereby to oppose it to other formation paradigms with a unique string. Since, in Area 1, the aorist past was not opposed via its desinence-initial vowel to the imperfect past, the allomorphic relationship *o/e* in the desinence-initial segment of verbs like *ide* was no longer functional, and was eliminated.

5. Conclusion

The assumption which served as our working hypothesis, that, provided there is desinential compatibility and unification in a super-paradigm, two or more formation-paradigms can interact in the assignment of grammatical meaning to form, is supported by the morphological evolution of aspect in Macedonian because it provides a principled basis for the evolutionary differences between Areas 1 and 2 in the past tenses and l-participle. Within the framework of this assumption the evolution of the aorist and imperfect pasts in Macedonian provides an unusually good example of the relevance of the distribution of desinential segments in the representation of grammatical meaning, and of the potential effect of sound change on the representa-

tional potential of desinential strings through its ability to produce changes in the distribution of these segments. The presence of *x*, and later *X*, in the singular as well as the plural sub-paradigm of the past tenses, I have argued, was central to their initial and continued paradigmatic unification with each other, and to their unification in a super-paradigm with the l-participle resulting, eventually, in the extension of aspect to the latter. In the absence of *X* in the singular sub-paradigm of the past tenses, these unifications were not possible.

However, these findings are important for another reason. Our knowledge of the evolution of the Slavic imperfect past is scanty. It was not of Indo-European origin, and its structure is clearly different from that of the imperfect pasts of other Indo-European languages (e.g., Latin and Greek), which are themselves not cognate. There has been a persistent view among Slavists that the imperfect past in Macedonian and Bulgarian is properly described, in opposition to the aorist past, as the *past of the present*, and this arises in part from the view that, whatever its origin, it was, in Middle Macedonian, remade to include the stem-variant which characterized present forms in those instances where, historically, it had included the variant of the stem which characterized the aorist past. Thus, for example 1sip *pisax*, etc. with stem-variant *pis-* (cp 1sap *pisax*, etc. in the aorist past) was replaced by 1sip *pišex* << *pišēx*, etc. with stem-variant *piš-* (cp 1spr *piša(m)*, etc. in the present). This view is supported, some claim, by the stress of the imperfect past, which, in East Balkan dialects with mobile stress, Bulgarian as well as Macedonian, typically attests the stress of the present, and is thus accentually opposed, with the present, to the aorist past. Despite the claim of affinity with the present, the evolution I have described supports a connection between the imperfect past and the aorist past since speakers exploited the option, when it was available (i.e., in Area 2), of uniting the aorist and imperfect pasts through the string representing common meaning (i.e., *x*, and subsequently *X*, representing 'past'), and then strengthened the morphological link by exploiting the availability of the desinence-initial segment to represent aspect (i.e., the category opposing the past formations)²⁷. That is, the formal identification of the imperfect past with

²⁷ VAILLANT (1966: 68) mentions the possibility that the occurrence of the *present-stem* in the imperfect past of Macedonian and Bulgarian is a Balkanism traceable to Romanian and Greek, which are members of the Balkan Sprachbund like Macedonian and Bulgarian, and in which a formal relationship between the imperfect past and the present is indisputable. For additional discussion of the Slavic imperfect past and uncertainties relating to its origin and synchronic interpretation, see DARDEN 1994.

Although full discussion is beyond the scope of this paper, it should be noted that the reference of the term *present-stem* as used by Vaillant and others in discussions of the imperfect past of Macedonian and Bulgarian is unclear in the absence of a segmental definition of this unit, which is never provided other than implicitly as the string preceding nonterminal *e* and *i* in forms of the present (e.g. *piš* in the present of *piše*). While it is true that, historically, the imperfect past of some verbs incorporated the stem-variant which occurred in the aorist past (e.g., the imperfect past of *piše*, which originally incorporated *pis*, the stem-variant occurring in the aorist past of *piše*), and that such verbs typically remade that formation on the stem-variant that occurred in the present (e.g., 1sip *pišev*, etc. in the standard language), it is not true that the latter variant was restricted to the present. Nor does it help to extend the notion of *stem-variant* to include the segment immediately following the lexical morpheme. This segment in remade forms of the imperfect past was, at the time of the innovation result-

the present in Balkan Slavic, whether inherited or the result of reformation, has not impeded what may be seen as the tendency of this formation to maintain, if possible, a formal relationship with the aorist past on the basis of a morpheme expressing the grammatical meaning common to them. Thus the imperfect past in Slavic was systematically different from that of the imperfect past in Latin and Greek, where it was indisputably related formally and in usage to the present. This difference played a crucial role in determining its fate and that of the l-participle in the conjugational unit of Balkan Slavic.

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ing in its reformation, *ě* (e.g., 1sip *pišěx*, etc.), and thus distinct from *e* and *i*, which followed the lexical morpheme in forms of the present. It remains distinct in verbs of the I-conjugation, which attest *e* < *ě* in the imperfect past, but *i* in the present. In view of these facts, it is difficult to justify the notion of *present-stem* morphologically and, accordingly, its relevance to the view that the imperfect past is properly understood as the past of the present.