The evolution of fixed stress in Slavic

Matthew Baerman

1999

Acknowledgments

Table of Contents

Chapter III: Kashubian

Chapter IV: Ukrainian

Chapter V: Conclusion

Chapter I. Free stress and fixed stress

1 Introduction
The stress systems of the contemporary Slavic languages are typically characterized as either fixed or free. In the fixed stress systems, word stress is predictable on the basis of word boundaries and rhythmic principles, such as the type of foot, and whether or not footing is iterative. In the free stress systems other factors—morphological or grammatical—contribute significantly to stress assignment. In the contemporary Slavic standard languages fixed stress characterizes West Slavic: Polish has penultimate stress, while the remaining (Czech, Slovak and Sorbian) have initial stress; and also one South Slavic language, Macedonian, which has antepenultimate stress. The remaining South Slavic languages (Bulgarian, Serbo-Croatian, Slovenian) and the East Slavic languages (Russian, Ukrainian and Byelorussian) have free stress systems. Kashubian, a West Slavic language, does not enjoy the status of an official language and lacks a fixed orthoepic norm; the southern dialects have initial stress and the northern free stress.

The difference between free and fixed stress can be illustrated with some examples contrasting parallel forms in Russian and in Polish:

(1)   *Russian (free stress)*   *Polish (fixed penultimate stress)*
      muk'a   m'ąka   'flour'
      m'uka   m'ęka   'torment'
      v'ypuklost'   wyp'uk ość   'protuberance'
      v'ypuklosti   wypukł'ości   'protuberances'
      v'ypuklostjami   wypukłości'ami   'protuberances (INSTR)'

      remesl'o   rzemi'osło   'trade'
      rem'ësla   rzemi'osła   'trades'

      d'uši   d'uszy   'souls'
      duš'ax   d'uszach   'souls (LOC)'

      piš'u   p'iszę   'I write'
      p'išeš   p'iszesz   'you (SG) write'

      rozdal'a   rozd'ała   'distributed (FEM SG)'
      r'ozdalo   rozd'ało   'distributed (NEUT SG)'

As is clear from the examples, in Russian stress may be a property both of individual words (*muk'a* vs. *m'uka)* and of grammatical categories, such as case (*d'uši* vs. *duš'ax*), number (*remesl'o* vs. *rem'ësla*), person (*piš'u* vs. *p'išeš*) and gender (*rozdal'a* vs. *r'ozdalo*). In Polish stress simply falls on the penultimate syllable of the word; the sort of lexical and grammatical contrasts found in Russian are absent in Polish.

The regular correspondences among the contemporary Slavic languages indicate that their common ancestor, Common Slavic, had free stress. Fixed stress, therefore, represents an innovation. Although this represents in part a phonological development, it clearly has profound significance for the morphological and grammatical systems of the language so affected. The details of the process are not usually treated in historical studies of Slavic accentology, which have as their goal the reconstruction of the proto-system. From that standpoint fixed stress represents a purely tangential development. The goal of this study is to examine this issue from the reverse perspective. It asks the questions: (i) What are the

prosodic motivations behind the rise of fixed stress? (ii) Where does stress assignment originate, in morphology or the grammar? (iii) What are the morphological and grammatical categories affected by the loss of free stress? In the proto-language stress distinctions permeate the lexicon and grammar, participating in lexical oppositions among stems and affixes, as well as oppositions of number, person, tense, mood and so on. Accent could be said describe its own mini-grammar, reflecting a subset of the grammatical categories that obtain in the language. Where fixed stress prevails this system is wholly absent. In the course of the dismantling of free stress, how is the shape of this mini-grammar altered? Are certain kinds of accentual oppositions more salient than others? (iv) The loss of free stress occurred independently in various parts of Slavic. Are there any regularities to be observed? If so, can any kind of implicational hierarchy be seen among them.

2 Approaches to free stress

Although different formalisms have been applied to the analysis of fixed stress, they all perform the same task: word boundaries are defined, and some phonological device orients stress with respect to these boundaries. The differences among approaches consist in the mechanics of the phonological devices employed. In the case of free stress, on the other hand, where the burden of stress assignment should rest is not so clear. Clearly there is a purely lexical component, but stress interacts with inflection as well. Do the accentual attributes of inflection reside in the lexicon? in grammar? in the interface between the two? Not surprisingly, there is a variety of fundamentally different approaches. I divide these, roughly, into two camps: (i) the morphemic approach, whereby accent is a prespecified property of individual morphemes; and (ii) the paradigmatic approach, whereby accent assignment is construed as an autonomous plane of representation.

2.1 The morphemic approach

On this approach individual morphemes have their own accentual characteristics (cf. Garde (1976), Dybo (1981), Dybo et al. (1990, 1993), Zaliznjak (1985), Halle and Kiparsky (1981), Halle and Vergnaud (1987); cf. also Lehfeldt (1993) for a review of various approaches). The accentual alternations that may accompany inflection, for example, are construed as the result of the differing accentual properties of the inflectional morphemes themselves. However, this cannot be construed in a purely additive sense, because there is not necessarily a one-to-one relationship between inflectional morphology and stress. In order to account for this two assumptions are made:

(i)   All morphemes are inherently unaccented or accented.

(ii) Where a word contains a single inherently accented morpheme, it bears stress. In case there are either no inherently accented morphemes, or more than one, some principle will determine which syllable will bear surface stress. The Basic Accentuation Principle (BAP) of Kiparsky and Halle (1977) is representative:

(2)   *Basic Accentuation Principle*
       Stress the leftmost accented vowel or, in the absence of accented vowels, the leftmost vowel.

The upshot of this principle is that if a word contains more than one inherently accented morpheme, it is the leftmost one which will actually bear stress in the surface form. Words with no inherently accented morphemes get default initial stress.

This can be illustrated with some sample paradigms. Given the division of morphemes into accented and unaccented, and the fact that inflectional morphology in Slavic takes the form of endings, inflectional paradigms will logically follow two accentual patterns: (i) accented stems will display columnar stress on some stem syllable (i.e. stress on the same morphemic component in all inflectional forms), regardless of the accentual properties of the endings; or (ii) with unaccented stems, the place of stress will be determined by the accentual properties of the endings. This is what is recognized for early Balto-Slavic. Let us take two nouns in their reconstructed Common Slavic forms — *l'ava* 'bench', with an accented stem, and *golva* 'head', with an unaccented stem—and observe their behavior with the accented endings -'a and -oj'ǫ and the unaccented ending -ǫ (adapted from Lehfeldt 1993: 47):

(3)a. *Accented stem*
      /l'av + 'a/   →   l'ava   NOM SG
      /l'av + ǫ/   →   l'avǫ   ACC SG
      /l'av + oj'ǫ/ →   l'avojǫ   INSTR SG

   b. *Unaccented stem*
      /golv + 'a/ →   golv'a   NOM SG
      /golv + ǫ/ →   g'olvǫ   ACC SG
      /golv + oj'ǫ/ →   golvoj'ǫ   INSTR SG

In (3a) the BAP causes stem accent, which is leftmost, to prevail in the nominative and instrumental, where underlying accent is marked on two different syllables. In (3b) stress falls on the accented endings of the nominative and instrumental singular, since no accented elements fall to the left of them, while in the accusative default stress falls on the initial syllable.

Although this system can serve both as a diachronic and conceptual model for lexical approaches to free stress, as one moves closer to historical reality it must be modified, by: (i) expanding the range of accentual specifications available to morphemes; (ii) introducing phonological rules that can modify the place of stress; or (iii) allowing stems to manifest different accentual allomorphs.

2.1.1 Expanded range of accentual specifications

In late Common Slavic a shift of stress off of root syllables that were short or had circumflex pitch (Illych-Svitych's Law) produced a third accentual type, one where stress fell on the syllable following the root.[1] Stems affected by this shift can be construed as post-stressing, assigning stress to the first syllable of endings. This can be illustrated by looking at a third reconstructed Common Slavic noun (*kosa* 'scythe'), declined in the same cases as in (3):[2]

---

[1] In Dybo et al. (1993), in contrast to earlier works, this shift is seen as being phonologically conditioned; see Section 3.2.1.

[2] Note that I employ the underline to indicate any following syllable within the Lexical Word (LexWd), so that /kos'_/ is to be read "the stem /kos/ assigns stress to the following syllable within the LexWd".

(4)   /kos'_ + 'a/   →   kos'a   NOM SG
         /kos'_ + ǫ/   →   kos'ǫ   ACC SG
         /kos'_ +oj'ǫ/ →   kos'ojǫ   INSTR SG

In *kos'a* accent is redundantly specified by both the root and the ending. In *kos'ǫ* the stem alone specifies stress the ending, which is itself inherently unaccented. In *kos'ojǫ* the stem specifies stress on the first syllable of the ending, while the ending itself is inherently accented on the second syllable; by the BAP it is the prior syllable which prevails. Note how this form contrasts with *golvoj'ǫ* above, where the inherent accent of the ending surfaces. Even though in this accentual pattern stress always falls on an ending, it is nevertheless a property of the stem itself.

    Just as it is possible to allow morphemes to assign stress to following syllables, it is also possible to have them assign stress to preceding syllables. For example, Garde (1976) proposes a pre-stressing morpheme in order to account for the accentual behavior of the l-participle of certain verb stem classes in Common Slavic. At the stage in question stems will have belonged to only two accentual types: accented and unaccented. Accented stems display columnar stem stress, while unaccented stems have stress on the accented endings, here represented by -'et 3SG present and -'a FEM SG past, and default initial stress elsewhere. This is illustrated here with the reflexes found in contemporary Russian:

(5)   a.   *Accented stem (kr'ikn(u)- 'shout')*
              /kr'ikn + 'et/   →   kr'iknet   3SG PRESENT
              /kr'iknu + l + 'a/   →   kr'iknula   FEM SG PAST
              /kr'iknu + l + i/   →   kr'iknuli   PL PAST

         b.   *Unaccented stem (ži(v)-'live')*
              /živ + 'et/   →   živ'ët   3SG PRESENT
              /ži + l + 'a/   →   žil'a   FEM SG PAST
              /ži + l + i/   →   ž'ili   PL PAST

Verb stems ending in an obstruent, however, appear to alternate between being unaccented in the present and accented in the l-participle forms; i.e. stress falls on the ending in the present and on the stem in the l-participle forms:

(6)   gryz'ët   3SG   'gnaw'
         gr'yzla   FEM SG
         gr'yzli   PL

Garde suggests that obstruent stem verbs are all underlyingly unaccented. The l-participle suffix -l- has the property of being pre-stressing if preceded directly by an obstruent, and thus assigning stress to the final syllable of the verb stem. When not preceded by an obstruent the suffix is unaccented. Unlike the post-stressing morphemes described above, this pre-stressing morpheme is sensitive to phonological characteristics of the preceding element.

    The notion that the accentual properties of morphemes may be sensitive to the phonology of *other* morphemes may be construed in an even more abstract fashion. For example Zaliznjak, in his account of Old Russian, assumes that the accentual specifications of one morpheme may be contingent on the accentual specifications of another morpheme. Assuming the division of morphemes into accented, post-stressing or unaccented, he proposes an additional type, called Re, possible only with suffixes and endings. Re stipulates that a

morpheme so marked cannot serve as the host for accent assigned by a post-stressing morpheme. Stress is shunted back onto the post-stressing morpheme itself. For example, the locative plural adjectival ending *-yxŭ* is construed both as inherently accented as well as Re-marked. Because it is inherently accented, it bears stress when attached to an unaccented stem:

(7)   /sux + ˈyxŭ/   →   suxˈyxŭ   'dry' LOC PL

But because it is Re-marked, when attached to a post-stressing stem, it rejects the stress that the stem tries to assign, which then reverts to the stem itself. By the BAP this emerges as the surface stress:

(8)   Re
                         |
            /dobrˈ_ + ˈyxŭ/   →   dˈobrˈyxŭ   →   dˈobryxŭ   'good' LOC PL

Thus Re does not mean that the morpheme so specified is unstressed or unstressable, but rather that it has a particular relationship to preceding post-stressing constituents.

2.1.2 Phonological rules

Provided the conditioning factors are sufficiently transparent, certain perturbations in the place of stress may also be accounted for by ascribing them to general phonological rules, rather than expanding the repertoire of underlying accentual specification. One of the more well-known examples of this is the use of Saussure's and Leskien's Laws (sound changes that affected Proto-Baltic) as elements in the synchronic phonology of contemporary Lithuanian (e.g. in Ambrazas 1997). These laws account for the anomalous appearance of stress on endings, both in cases where the stem itself is underlyingly accented (and thus by the BAP should bear stress, even if the ending is underlyingly accented), and in cases where the ending in question is simply not underlyingly accented. The operation of the rule depends on the assumption that pitch distinctions on long vowels (acute vs. circumflex), which are overt only under stress, are underlyingly present even in unstressed position. Saussure's Law stipulates that stress is advanced from long vowels with circumflex pitch and from short vowels (which do not distinguish pitch) to a following long vowel with acute pitch. Leskien's law then stipulates that final acute vowels are shortened, erasing the conditions that brought about the stress advancement in the first place. Figure (9) shows a word composed of a root with an inherently accented short vowel and an ending which is inherently unaccented. Saussure's law draws the stress onto the ending and Leskien's Law shortens the final vowel (v¤ = vowel with acute pitch).

(9)   *Saussure's Law*   *Leskien's Law*
            /rˈat + ú:s/   →   /rat + ˈú:s/   →   rat + ˈus   'wheels (ACC)'

Thus on this view the inherent specification of pitch on vowels may play a supplementary role in stress assignment.

   A more transparent example is the unstressability of weak jers (cf. Zaliznjak 1985). In late Common Slavic the vowels known as jers (ĭ and ŭ, respectively) were unstressable ("weak") unless the nucleus of the following syllable itself was a weak jer. Wherever stress assigning rules would target a weak jer, stress falls instead on the preceding syllable (or following, in the absence of a preceding syllable). Thus, e.g. the genitive singular of the post-stressing

root */stol'_/ is *stol'a, but the nominative singular is *st'olŭ, because the final jer is unstressable. Jers themselves may even be underlyingly accented, though unstressable on the surface: e.g. in the verb *nes'etŭ 'bears', it is the final jer which is assumed to be underlyingly accented, i.e. */neset'ŭ /.   Its accent is realized as stress on the preceding syllable.

2.1.3 Accentual allomorphy

It may still be the case that a given accentual alternation within a paradigm cannot be treated as the result of a combination of elements with static accentual properties, even taking into consideration the modifications outlined in Section 2.1.2 above. As an obvious example one may take the contrast of singular and plural in the nominative-accusative case of neuter nouns in Russian. All four logically possible patterns are displayed, here illustrated with the forms of the nominative-accusative: (i) stem-stressed in both numbers: g'orlo ~g'orla 'throat/-s'; (ii) end-stressed in both numbers: veščestv'o ~ veščestv'a 'substance/-s'; (iii) stem-stressed in the singular and end-stressed in the plural: sl'ovo ~ slov'a 'word/-s'; and (iv) end-stressed in the singular and stem-stressed in the plural: pjatn'o ~ pj'atna 'spot/-s'. If morphemes are construed as bearing static accentual specifications, no combination of these will produce all these patterns. Although the first two patterns are unproblematic (in (i) the stem is underlyingly accented, and in (ii) it is post-stressing), problems arise in the analysis of the two alternating patterns, sl'ovo ~ slov'a and pjatn'o ~ pj'atna. If these alternations are attributed to the accentual characteristics of the endings, then these characteristics must be somehow reversible. The key to distinguishing these two alternating patterns is to be found in the behavior of polysyllabic stems. With the stem (SG) ~ ending (PL) stress alternation, stress alternates between the *initial* syllable and the ending, while with the ending(SG) ~ stem(PL) stress alternation, it alternates between the *stem-final* syllable and the ending; thus z'erkalo ~ zerkal'a 'mirror/s' vs. koles'o ~ kol'ësa 'wheel/s'. The initial ~ ending alternation of z'erkalo ~ zerkal'a can be construed as representing an unaccented stem: the stem and the ending -o are unaccented, while the ending -a is accented. In the singular, default stress falls on the initial syllable, while in the plural it falls on the inherently accented ending. The ending ~ stem-final alternation of koles'o ~ kol'ësa, on the other hand, involves an alternation in the accentual properties of the stem itself. Specifically, there is a class of stems which has two accentual allomophs: one is post-stressing, and is used in the singular, and the other is accented on the stem-final syllable, and is used in the plural. Such stems must be assumed to undergo a purely morphological alternation between singular and plural.

2.2 The paradigmatic approach

Kenstowicz (1997) points out that the Russian accentual class represented by *koleso*, which has stem-final stress in the plural, displays an anomalous pattern in some stems. Take for example the plural forms of *remesl'o* 'trade':

(10)   rem'ësl-a   NOM–ACC
         rem'ësel-Ø   GEN
         rem'ësl-am   DAT
         rem'ësl-ami   INS
         rem'ësl-ax   LOC

If this accentuation is defined as stem-final stress, the genitive plural is anomalous, with stress falling instead on the stem-penultimate syllable. Nevertheless, in morphological terms stress falls on the same syllable in all forms, namely on the vowel -ë-. Kenstowicz (1997)

attributes this to the effects of a purely *accentual* paradigm, one which requires neuter nouns to have columnar stress within the plural.

The notion that there can be paradigms which consist of accentual specifications is extremely powerful. Once admitted into the analysis, it can take over the role attributed to inflectional morphemes in the morphemic approach. Thus in the case of the four accentual patterns discussed above for neuter nouns in Russian, we might abandon altogether the notion that endings are accentually marked, and say that each noun is keyed to an accentual paradigm, which demands a certain type of accentual behavior. The assumption that accent may be encoded in the form of an accentual paradigm is present in many works; e.g. Alexander (1975, 1978, 1983), Brown et al. (1996), Schallert (1984), Stang (1957), Stankiewicz (1993). These works do not reject the lexical marking of stress per se. However, the relationship between a given morphological paradigm and a given accentual paradigm is typically taken as one which is at most implicational. That is, inflectional morphology may imply membership in a given accentual paradigm, but does not itself assign stress.

The treatment of the relationship of inflectional morphology and accent on a paradigmatic approach can be illustrated by an example from Brown et al. (1996). Among a-stem nouns in Russian, there is a group which displays stress on the ending in all cases of the singular except the accusative:

(11)   borod'a   NOM
        borod'y   GEN
        borod'e   DAT
        b'orodu   ACC
        borod'e   LOC
        borod'oj   INS

This pattern, with initial stress in the accusative only, is not displayed by other declensions, e.g. neuters:

(12)   očk'o   NOM
        očk'a   GEN
        očk'u   DAT
      *'očko   ACC
        očk'e   LOC
        očk'om   INS

The distribution of this pattern is interpreted as the result of the relationship between the structure of the accentual paradigm and that of the inflectional paradigm. The accentual paradigm is construed as assigning stress to the ending in all forms but the accusative, where default initial stress occurs. In neuter nouns, however, the accusative is formally identical with the nominative. Within the framework of Brown et al. (1996), this is held to be a result of the neuter accusative inheriting all the characteristics of the nominative; that is, as far as its morphology is concerned, the accusative *is* the nominative. The accusative can only display features that are also characteristic of the nominative. Thus, an accentual paradigm which targets the accusative alone cannot operate among neuter nouns.

This can be contrasted with the sort of treatment found in a morphemic approach. Here it is assumed that the stem *borod-* is inherently unaccented, and that all the endings of the singular other than the accusative are inherently accented. Thus, by the BAP stress on the

ending will appear in all the cases except the accusative, which, because neither the stem nor the ending is inherently accented, receives default initial stress. The absence of this alternation among other declensions is due to the absence of the ending *-u*. Although both approaches make the same prediction, in the morphemic approach the accentual alternation is associated with the ending itself, while in the paradigmatic approach it is autonomous, depending merely on the existence of *some* morphologically distinct accusative ending. In that sense it is a property of the accusative case itself, and not of the accusative case ending.

2.3 Summary
The two different approaches towards the representation of accentual alternations make different claims—explicit or implicit—about the status of accent within morphology and phonology. In an uncompromising morphemic approach, such as that employed by Zaliznjak in his account of Old Russian, accentual alternations have no autonomous status. Accent is a static underlying feature of the individual morphemes that comprise the different forms of a paradigm, so that alternations fall out as the automatic by-product of entirely lexical features.[3] The fact that within an inflectional paradigm some endings are inherently accented and some are not has no more meaning than the fact that some contain high vowels and some do not; this opposition does not comprise an autonomous system. On a strict paradigmatic approach the opposite is true: all alternations are determined by the accentual paradigm, which exists as an autonomous component of the grammar, assigning stress in conjunction with inflectional categories. Every perturbation in the place of stress is thus the expression of some morphological or grammatical opposition.

   Although conceptually distinct, the two approaches should not really be seen as competing theoretical frameworks, but rather as ways of representing the different roles that stress may play. Within the bounds of one system one can find examples both of stress correlated with individual morphemes, and with grammatical or inflectional categories. In the present work the validity of both approaches is assumed, with the understanding that these different analyses represent not competing interpretations so much as different typologies of stress assignment, which may characterize different languages (or different diachronic stages of one language), or may coexist within one language. It will be assumed here that stress can have the following sources:

(i)   Phonology: stress may be assigned by phonological principles. This may entail the direct assignment of stress, as in the assignment of default initial stress to accentually unmarked underlying forms per the BAP. It may also involve rules which mediate between underlying representation and surface form, for example selecting one of multiple underlyingly accented syllables to bear surface stress, or the attraction or rejection of stress by certain syllable types, as with acute vowels under Saussure's Law or weak jers in Common Slavic.

(ii) Morphology: stress may be a property of individual morphemic constituents, e.g. affix, root or stem.

---

[3] Zaliznjak does in fact recognize the paradigmatic origin of some of the accentual specifications on morphemes (1985: 165), but the formalism he employs does not acknowledge this overtly.

(iii) Grammar: the grammatical structure of a language may contribute to stress assignment in two ways, directly and indirectly:

  (a) Stress may be assigned directly by some grammatical or inflectional category, as e.g. in Brown et al. (1996) where the accusative case itself assigns stress.

  (b) The paradigm as such may assign stress, as in Kenstowicz (1997), where the plural does not assign stress as such, but rather forces columnar stress, the source of stress being in fact the stem.

3 Analytical tools

Much of the analysis in the subsequent sections employs the tools of Optimality Theory (Prince and Smolensky 1993, McCarthy and Prince 1995). Optimality Theory (OT) constitutes a static model of the relationship of input and output, which, in essence, comprises two functions, namely GEN and EVAL:

(i) GEN generates output forms. Unlike rule-based derivation, GEN by itself is indiscriminate. It does not transform underlying representation, it simply generates output without reference to any criteria whatsoever. Thus the number and range of output forms is presumably infinite.

(ii) EVAL looks critically at the output forms produced by GEN, selecting one as the correct surface form. It may also be that EVAL selects more than one—resulting in variation.

The meat of OT lies in the criteria—or constraints—that EVAL uses in order to select the actual surface form. Constraints fall into two groups:

(i) Faithfulness/correspondence constraints, which look at how well the output form corresponds to some other form. This other form may be either some abstract underlying representation ("input-output correspondence"), or another surface form ("output-output correspondence").

(ii) Well-formedness constraints, which look at the output alone, without respect to the input; for example, ALIGN constraints which orient consituents with respect to each other.

Constraints are construed as being arranged in a hierarchy, with some more important than others. Output forms are evaluated with respect to whether or not they violate the constraints, with higher-ranked constraints counting more than lower-ranked.

   The evaluation of output forms is presented in the form of tableaux, which are thus the graphic representation of EVAL. Tableaux consist of cells. In the upper left hand cell the relevant input information is shown, be it the underlying representation or some surface form. To the right of it the constraints are displayed, each constraint heading a column. Adjacent columns are separated either by a dotted line or a solid line: a dotted line means that the adjacent constraints are unranked with respect to each other, while a solid line means that the constraint to the left dominates the constraint to the right. Below the input cell, going down the lefthand edge of the tableau, the various output forms ("candidates") produced by GEN are displayed. Since GEN is unconstrained, it should in theory produce an infinite number of

output forms; because of this it will typically be assumed that a sort of triage has been performed, with undominated constraints already having eliminated all but a few forms. Thus any tableau is itself a fragment, illustrating only the workings of those constraints that interest us at the moment.

The purpose of the tableaux is to represent constraint violations, and how these are ranked with respect to each other. The basic workings are shown in the abstract tableau below:

(13)

input	Constraint A	Constraint B
candidate 1	*!	*
+ candidate 2		*

There are two candidates, namely 1 and 2, and two relevant constraints, namely A and B. Constraint A dominates Constraint B. Constraint violations are represented by asterisks within the blank cells. Reading across from the candidates we see that candidate 1 incurs one violation of constraint A and one of constraint B. Candidate 2 incurs no violations of Constraint A and one of Constraint B. Evaluation proceeds from the highest-ranking constraint downwards, i.e. from left to right, so that the form with the lowest number of violations within each column wins that round. A fatal violation, i.e. a violation which knocks a candidate out of the running completely, is indicated with an exclamation point; cf. candidate 1 under Constraint A. This leaves candidate 2 the winner, indicated by the plus (+) sign. Since a clear winner was already found under Constraint A, there is no need to consider what happens with respect to lower-ranked constraints. To indicate this the cells in columns which have been rendered irrelevant because of fatal violations are shaded. However, just because Constraint B was irrelevant in this tableau does not necessarily mean we can ignore it completely. Consider the tableau in (14), which compares candidate 1 with a different output form, candidate 3:

(14)

input	Constraint A	Constraint B
candidate 1	*	*!
+ candidate 3	*	

Here both candidates incur a violation of constraint A, so that nothing is decided at that level. Now we have to look at how the candidates fare with the lower-ranking constraints in order to find a winner. Here we see that candidate 1 once again loses, but this time it was the violation of Constraint B that proved fatal.

As noted above, a strict hierarchy of dominance need not obtain among all the constraints. Thus in (15), Constraint A and Constraint C are unranked with respect to each other:

(15)

input	Constraint A	Constraint C	Constraint B
candidate 1	*		*!
+ candidate 4		*	

When two or more candidates are unranked they act as one column for the purposes of assessing constraint violations, functioning as a sort of super-column, which I will refer to henceforth as a tier (cf. Anttila (1995) for the concept of "crucial nonranking" between

constraints). Thus in (15) candidates 1 and 2 incur one violation each in the first tier, so that its structure is essentially the same as that of (14).

It is also possible for one candidate to incur multiple violations of a single constraint, or likewise to incur multiple violations within a tier. Here the principle of minimal violation is in effect: the candidate with the *fewest number* of violations within one constraint or tier is the winner. This is illustrated below:

(16)

input	Constraint A	Constraint B
+ candidate 1	*	*
candidate 5	**!	

Both candidate 1 and candidate 5 incur violations of Constraint A, while only candidate 1 incurs a violation of Constraint B. Yet unlike (15) above, where both candidates violated Constraint A and the tie was broken by constraint B, here the winner is picked by Constraint A, because candidate 5 incurs two violations, while candidate 1 incurs only one.

The preceding example demonstrates the operation of conflicting constraints, a notion permitted within the framework of OT. That is, the two alignment constraints are mutually exclusive: they stipulate incompatible things. However, since they are ranked differently there is no real contradiction. As will have been obvious, constraints are construed as absolute, unconditional stipulations. The sorts of dependencies otherwise expressed via "if...then..." are instead portrayed through ranking. This allows us to isolate each factor and assess its relative importance.

3.1 OT and stress assignment

The analytical tools provided by OT lend themselves ideally to the description of complex accentual systems, such as are characteristic of much of Slavic, where stress may be the result of the interaction of various components of language. What makes OT appropriate is its ability to simultaneously compare the various contributions and to assess their relative contribution according to a common measure. The relationship of OT to the various aspects of stress assignment described in Section 2 is laid out below.

(i) Phonology:
    Stress is assigned through the alignment of prosodic constituents. In the present context this will typically be a matter of aligning the edges or heads of metrical feet with the edges of larger prosodic constituents. For example, the initial stress prescribed by the BAP can be said to result from the alignment of a trochaic foot with the left edge of the word; likewise penultimate stress comes from the alignment of the righthand edge of a trochaic foot with the righthand edge of the word.

(ii) Morphology:
    Stress may be marked as an element in the input, and realized in the ouput through faithfulness constraints.

(iii) Grammar:

    (a) Grammatical categories may themselves be construed as constraints, dominating faithfulness constraints and thereby superceding lexically specified stress. Alternatively, or additionally, certain grammatical categories may be associated with

dominance cophonologies (cf. Garde 1976, Kiparsky 1976, Inkelas et al. 1995, Inkelas 1994, 1997, Inkelas and Orgun 1998 and Orgun 1996), whereby the underlying accentual properties of stems are deleted, and stress is assigned by other principles.

(b) The bonds that tie together the various members of an inflectional (or derivational) paradigm can be expressed as constraints that tie together different output forms; cf. Benua (1997), Burzio (1996), Kenstowicz (1997), Steriade (1997). That is, some part or parts of the paradigm may serve as the input against which all the other output forms are evaluated.

Within such a model, different grammars can be most parsimoniously described in terms of a common set of constraints, differing in their relative ranking. Variation and change will then be seen to result from reranking of constraints (cf. Anttila 1995, Kiparsky 1993, Reynolds 1994).

4 The data
The demise of free stress, where it occurred, was not recorded. The notation of stress is found in older documents within systems that have preserved some kind of free stress, but not in those with fixed stress, so that the transition cannot be directly traced through texts. However, though the standard languages may be neatly divided into those with free stress and those with fixed stress, the same is not true of their dialects. One can find areas where the transition between the two types of system is played out across otherwise closely related dialects, forming a typological continuum. In West Slavic this occurs within Kashubian. In South Slavic it occurs within Macedonian, with adjacent Štokavian dialects of Serbo-Croatian being caught up in this continuum as well.[4] In East Slavic it occurs within Carpathian dialects of Ukrainian, though there the transitional zone is quite narrow. It is these dialect continua that will serve as the primary material for the present study.

The rest of the book will take the form of three case studies: (i) Macedonian, where, besides fixed antepenultimate stress, penultimate and initial stress are also found in small areas. The eastern dialects have free stress. (ii) Kashubian, with initial stress in the South and free stress in the North. (iii) Carpathian dialects of Ukrainian, which have penultimate stress in the West, as do the neighboring Polish and Slovak dialects, and free stress to the E. These not only represent the three main branches of Slavic, they represent three different end points in the development of fixed stress in Slavic, viz. initial, antepenultimate and penultimate.

The data themselves are drawn from dialect atlases—both published works as well as unpublished material — and from published dialect descriptions of varying degrees of scope, as well as more purely analytical works, which often contain data not found elsewhere. The primary sources are given below; this is not the complete biography of works consulted, but rather a list of those works that provided the actual forms used in the text and in the construction of the maps.

4.1 Macedonian
Descriptions of individual dialects or dialect areas of Macedonia (including dialects in Greece and Bulgaria) are: Belić (1935), Bojkovska (1981, 1992), Drvošanov (1993), Dumev

---

[4] There are also isolated examples of Čakavian and Kajkavian dialects with fixed stress (Ivić 1987). The transitional zones here are smaller than in the other cases.

(1943), Filiposki (1952), Gabor (1979), Gołąb, (1960-63), Groen (1977, 1981-2), Hendriks (1976), Hill (1990), Ivanov (1932), Ivanov (1977), Ivić (1981), Ivković (1921-24), Karanfilovski (1992), Kepeski (1941), Koneska (1951), Koneski (1949), Kuševski (1958), Kuzov (1921), Małecki (1933a, 1993b, 1934a, 1934-36), Mazon (1923, 1936), Mirčev (1936), Mixajlov (1954), Mladenov (1977), Molerovi (1954), Oblak (1896), Peev (1979, 1988), Reiter (1964), Ristujčin (1994), Schallert (1984), Seliščev (1929), Stamatoski (1956), Stoilov (1904), Šklifov (1973, 1979, 1995), Ugrinova (1952) and Vidoeski (1950, 1954, 1962, 1977, 1978, 1979), 1982, 1983, 1984a, 1984b, 1985, 1987, 1989a, 1989b, 1990, 1991, 1994b).

Studies devoted primarily or solely to accentual phenomena in Macedonian dialects are Hill (1981), Ivanov (1971), Ivković (1921-24), Molerov (1905), Schallert (1984), Stoilov (1905), Todorov (1937), Vidoeski (1952, 1970, 1985-86), Popova (1974) treats accent in the context of other morphological alternations. Macedonian and Bulgarian dialects are addresed in Popova and Velčeva (1974), Vodeničarov (1989), while Balkan Slavic as a whole is treated in Alexander (1978, 1983, 1993), Schallert (1988) and Vasiliev (1969). Studies of older manuscripts are: Ničev (1987) and Vaillant and Mazon (1938).

Two of the volumes of the *Bâlgarski dialekten atlas* ('Bulgarian Dialect Atlas') namely Ivanov (1972) and Stojkov (1975) cover eastern Macedonia. No volumes of the Macedonian Dialect Atlas have yet been published, but I was able to consult the field notes for it that are housed at the Krste Misirkov Institute for the Macedonian Language in Skopje. I took material from 80 points.

Data for adjacent Serbo-Croatian dialects were taken from Alexander (1975), Ivić (1958), Pavlović (1939), Remetić (1996) and Vidoeski (1994a), and for adjacent Bulgarian dialects from Bojadžiev (1991) and Božkov (1984).

4.2 Kashubian
An overall picture of Kashubian accentuation is gleaned from the surveys found in Lorentz (1925, 1958-59), Lehr-Spławiński (1913) and volume XV of the *Atlas językowy kaszubszczyzy i dialektów sąsiednich* ('Linguistic Atlas of Kashubian and Neighboring Dialects'); Topolińska (1958) discusses material which was later to be included in the Atlas. Further data is taken from studies of individual dialects, namely Bronisch (1896) and Lorentz (1905, 1959). Further data come from the texts found in Lorentz (1924).

4.3 Ukrainian
The only studies devoted exclusively to accent are Latta (1964), Lukasik-Szułkowska et al. (1989), Moravec (1975) and Stieber (1959). Paňkevič (1938) and Verxratskyj (1901) briefly treat accent. The only individual dialect study employed here is Broch (1900), which contains some material on stress, though this is not dealt with explicitly. Otherwise the material has been drawn from the four dialect atlases that cover the area in question: *Atlas gwar bojkowskich* ('Atlas of the Bojko Dialects'), *Lynhvystyčnyj atlas ukraïn'skyx hovoriv sxidnoï slovaččyny* ('Linguistic Atlas of the Ukrainian Dialects of Eastern Slovakia'; Hanudel' 1981-89), *Atlas ukraïn'skyx hovoriv sxidnoï slovaččyny* ('Atlas of the Ukrainian Dialects of Eastern Slovakia' Latta 1991) and *Atlas językowy dawnej Łemkowszczyzny* ('Linguistic Atlas of the Former Lemko Region'; Stieber 1956-64).

Chapter II: Macedonian

Section 1: Overview of the major accentual zones

Following Alexander (1994), Schallert (1984) and Vidoeski (1979, 1985-86), Macedonian dialects can be divided into four zones with respect to place of stress. Note that this is the only relevant prosodic feature: Macedonian, in common with Balkan Slavic as a whole (i.e. Macedonian, Bulgarian and southern dialects of Serbian, known as "Torlak"), lacks phonemic length and pitch. For ease of reference I refer to these accentual zones simply as Types 1-4.[5]

Type 1: ("morphologically mobile accent" (Vidoeski); "Eastern dialects" (Schallert); "B2" (Alexander)):   stress is not fixed with respect to word boundaries, and stress alternations are an important component of inflection.

Type 2: ("morphologically fixed accent" (Vidoeski); "Central dialects" (Schallert); "B1" (Alexander)): as in Type 1, stress is not fixed with respect to word boundaries, but the role of stress alternations in inflection is very small.

Type 3: ("limited free and limited fixed accent" (Vidoeski);   "Central-West dialects" (Schallert); "A/B" (Alexander)): stress does not fall on final syllables, and only rarely on pre-antepenultimate syllables. Thus stress is largely limited to a two-syllable antepenultimate-penultimate window.

Type 4: ("fixed accent" (Vidoeski);   "Western dialects" (Schallert);   "A" (Alexander)). Stress is fixed with respect to the beginning or end of word (depending on the dialect).

These zones are shown in map M1. The geographical distribution of the dialects resembles a wedge taken from a bull's-eye, with the Type 4 dialects forming the center. These are flanked to the N, E and S by a band of Type 3 dialects; this band is thicker in the N than in the S. These in turn are surrounded to the E by a band of Type 2 dialects, and still further to the E lie the Type 1 dialects. The borders of Macedonian speech territory as a whole are formed by four different languages: Albanian to the W, Greek to the S, Bulgarian to the E and Serbo-Croatian to the N. The accentual systems found in Macedonian are continued, roughly speaking, in the adjacent Slavic languages. Thus the equivalents of Macedonian Types 1-4 are found in southernmost Serbo-Croatian, while the neighboring Bulgarian represent a continuation of Type 1.

   The continuum from Type 1 to Type 4 is one of increasing restrictions on stress assignment, from maximally free to maximally fixed. In diachronic terms Type 1 represents the most archaic system, Type 4 the most innovative. The following sketch of the dialect zones is meant to serve as orientation for the ensuing discussion, and not as an exhaustive survey. The description should be taken as representing generalized types; details about the different dialects will be adduced later as needed. The examples in Section 1 are taken from Vidoeski (1970) unless otherwise noted.

---

[5] Since I will be using these terms repeatedly, Vidoeski's lengthy designations are too unwieldy. The geographical terminology employed by Schallert courts confusion with the terms usually found in the Macedonian linguistic literature (Eastern, Central and Western dialects), used to refer to a rather different distribution of dialect zones. The terms employed by Alexander ("A" vs. "B") imply typological subdivisions which will not be at issue here.

Type 1
Stress in the Type 1 dialects is lexically specified, and shows no positional restrictions. Nor are there any categorical morphological restrictions; stress may fall on prefixes, e.g. ˈot-kos 'swath', dˈo-karam 'I drive' (Mirčev 1936); on roots, e.g. raz-bˈoj 'loom', ob-lˈic-am 'I put on' (Mirčev 1936); on suffixes, e.g. kov-ˈa č 'smith', kup-ˈuv-am 'I buy' (Stoilov 1905); or on inflectional endings, e.g. žen-ˈa 'woman', jad-ˈe 'eats'.

    Stress alternations are a possible corollary of inflection. In nouns, this may entail the opposition of the singular and the plural (1) or the indefinite and the definite (2), with the place of stress alternating between the affix (ending or enclitic definite article) and stem (initial or stem-final syllable):

(1)   Singular ~ plural stress alternations

singular	*plural*		*loci of alternation*	
žen'a	ž'eni	'woman'	*ending ~ initial/stem final*	
ž'el'azu	žil'iz'a	'iron'	*initial ~ ending*	(Małecki 1934-36)
čuk'alu	čukal'a	'pestle'	*stem final ~ ending*	(Małecki 1934-36)
drv'ar	drvar'e	'woodsman'	*stem final ~ ending*	

(2) Indefinite ~ definite stress alternations

indefinite	*definite*		*loci of alternation*	
sv'ekor	svekor'o	'son-in-law'	*initial ~ article*	(Molerovi 1954)
pl'anina	planin'ata	'mountain'	*initial ~ ending*	(Gabor 1979)

In a few dialects, adjectives as well may display similar alternations, e.g. dobrˈa FEM INDEF SG ~ dˈobri PL INDEF ~ dobrˈie PL DEF 'good'.

    Stress alternations in verbs may oppose the major tense/mood categories (present,[6] aorist, imperative) to each other; within the present, the 1SG may be opposed to the other forms (3). Within the imperative, the singular may be opposed to the plural (4). The loci for alternating stress in verbs are the initial syllable (or prefix), stem-final syllable and the ending.

(3) Present ~ imperfect ~ aorist stress alternations

1sg pr	*3sg pr*	*2-3sg impf*	*2-3sg aor*		*loci of alternation*
d'oveda	doved'e	doved'eše	dov'ede	'bring'	*initial ~ ending ~ stem-final*
z'amina	zam'ine	zam'ineše	zamin'a	'depart'	*initial ~ stem-final* [7]

                          (all examples Popova 1974)

(4)   Imperative singular ~ plural stress alternation

IMP SG	*IMP PL*	*loci of alternation*	
z'amini	zamin'ete	initial ~ ending	(Popova 1974)

---

[6] The accentuation of the imperfect in these dialects always matches that of the present.

[7] Stress in the present/imperfect and aorist is consistently stem-final, in spite of the apparent stress shift; cf. Section 3.1.2.1.

The scope and productivity of stress alternations varies considerably. Some, e.g. the indefinite ~ definite alternation in nouns, are lexically specified and restricted to a small number of words. Others, e.g. the opposition of singular to plural in imperatives, may be associated with whole inflectional classes.

Type 2
The most striking feature that distinguishes the Type 2 dialects from Type 1 is the absence of stress on affixes in most inflectional categories. Among nouns stress does not fall on endings or on the article; thus the alternations shown in (1-2) above, which entail the alternation of stress between stem and affix, are absent. Instead, columnar stem stress is found throughout the paradigm, e.g. *ž'ena* 'woman' ~ *ž'eni* PL, *pl'anina* INDEF ~ *pl'aninata* DEF 'mountain'. Likewise, nouns which have columnar stress on the ending in Type 1 dialects have columnar stem stress in Type 2 dialects, e.g. *visočin'a* ~ *visočin'i* 'hill/-s' in Type 1 (Gabor 1979) vs. *visoč'ina* ~ *visoč'ini* in Type 2 (Vidoeski 1985-86). Within the stem, however, lexical specification of stress remains unrestricted. What can be said about nouns can also be said about adjectives, with the exception of pronominal/demonstrative adjectives, where stress on the ending may still occur, e.g. in the feminine singular forms *kakv'a* 'what kind of?', *takv'a* 'such', *koj'a* 'which?', *čij'a* 'whose?' (Vidoeski (1964)).

Among verbs, stress does not fall on inflectional endings in the present and imperfect. Instead, all verbs display columnar stem stress in these tenses; e.g. compare Type 1 *d'oveda* 1SG PR ~ *doved'e* 3SG PR ~ *doved'eše* 3SG IMPF 'bring' to Type 2 *dov'eda* ~ *dov'ede* ~ *dov'edeše*. As in nouns, prespecification of stress within the stem is still possible in these forms, e.g. on the stem-penultimate syllable, as in   *za-g'inuv-um* 'I perish', or on the stem-final syllable, as in *iz-ed'uv-um* 'I eat up' (Ivković 1921-24). In the aorist however a single stress pattern has been generalized for all verbs, with final stress in the singular and penultimate stress in the plural thus e.g. in place of *dov'ede* 2-3 SG, *dov'edoxme* 1PL found in Type 1, the Type 2 dialects have *doved'e* 2-3 SG, *doved'oxme*.   Imperative accentuation continues the patterns found in Type 1.

Although stress in Type 2 remains prosodically unrestricted, the loss of affix stress is often concomitant with the loss of final stress. Thus in verbs final stress is not found in the present or imperfect. In nouns the absence of stress on affixes is largely the equivalent of the absence of stress on final open syllables. In the aorist, however, final stress—on open as well as closed syllables—is maintained and even extended.

Type 3
The partial restrictions on final stress seen in Type 2 have been expanded to a complete ban on final stress in Type 3. Words which have final stress in Type 2 typically have penultimate stress in Type 3. In addition, stress on pre-antepenultimate syllables is rare. Thus stress is largely restricted to the penultimate and antepenultimate syllables.

In nouns and adjectives, lexical specification of stress within the stem has been largely eliminated, with stress falling on the penultimate syllable of the Lexical Word (LexWd), i.e., of the indefinite form, e.g. *'ezik* ~ *ez'ici* 'tongue/-s'. This accentuation is maintained in the definite forms, so that in these forms stress falls on the antepenultimate syllable, e.g. *'ezikot* ~ *ez'icite* (Vidoeski 1985-86). The only exceptions to this pattern are some nouns where stress falls on the antepenultimate syllable of the LexWd, e.g. *s'abota* 'Saturday', whereby pre-antepenultimate stress would be expected in the definite form, e.g. *s'abotata*. Some dialects allow this (Vidoeski 1985-86), while in others stress shifts to the antepenultimate syllable in the definite form, e.g. *sab'otata* (Hill 1990). The accentuation of adjectives is essentially the same as that of nouns. However, pre-antepenultimate stress is regularly found in association

with the possessive suffixes *-ov-* and *-in-*: stress always falls on the syllable preceding the suffix, which yields pre-antepenultimate stress in the definite forms, e.g. *b'uk-ov-oto* 'beech (adj.)' NEUT SG (Filiposki 1952).

Among verbs, all finite forms have penultimate or antepenultimate stress. The substitution of penultimate stress for final stress in the singular forms of the aorist yields penultimate stress in all aorist forms, e.g. *n'osi* 2-3SG ~ *nos'ixte* 2PL 'carried', as opposed to Type 2 *nos'i* ~ *nos'ixte* (Ivković 1921-24). In most dialects penultimate stress is found throughout the imperfect as well, e.g. *vik'aše* 2-3SG ~ *vik'a(x)te* 2PL 'was saying' vs. Type 2 *v'ikaše* ~ *v'ikaxte*. In the present, lexical specification of stress is absent: all verbs are stressed on the stem-final syllable. Since the present tense endings are mono- or disyllabic, stress is invariably penultimate or antepenultimate. Imperative accentuation continues the patterns found in Types 1 and 2, with initial (or prefix) stress in singular and plural being the most common pattern. A consequence of this is that pre-antepenultimate stress is frequently found in the imperative plural, e.g. *p'očekajte* 'wait a bit' (Filiposki 1952).

In non-inflected words (lexically specified) penultimate or antepenultimate stress is the norm.

Type 4
In the Type 4 dialects stress is fixed with respect to one end of the (prosodic) word. By far the most predominant type is antepenultimate stress, the pattern employed in Standard Macedonian. In the extreme SW, at the border between Types 3 and 4, some dialects display fixed initial stress, which in some dialects may be accompanied by secondary penultimate stress. Adjacent to these dialects, but constituting an island surrounded by Albanian, the dialect found near the city of Korçë has fixed penultimate stress.

In order to graphically illustrate the major differences between the four types, some partial paradigms are given below, with antepenultimate stress being taken as representative of Type 4. To facilitate comparison all forms have been regularized to match each other.[8]

(5) Accentual patterns in verbs in the four zones

	Type 1	*Type 2*	*Type 3*	*Type 4*		
a.	d'oveda(m)	dov'eda(m)	dov'eda(m)	d'oveda(m)	1SG PR	'bring'
	doved'e	dov'ede	dov'ede	d'ovede	3SG PR	
	doved'ete	dov'edete	dov'edete	dov'edete	2PL PR	
	dov'ede	doved'e	dov'ede	d'ovede	2-3SG AOR	
	dov'edoxte	doved'oxte	doved'oxte	dov'edoxte	2PL AOR	
	doved'eše	dov'edeše	doved'eše	dov'edeše	2-3SG IMPF	
b.	z'amina(m)	zam'ina(m)	zam'ina(m)	z'amina(m)	1SG PR	'depart'
	zam'ine	zam'ine	zam'ine	z'amine	3SG PR	
	zam'inete	zam'inete	zam'inete	zam'inete	2PL PR	
	zamin'a	zamin'a	zam'ina	z'amina	2-3SG AOR	
	zamin'axte	zamin'axte	zamin'axte	zam'inaxte	2PL AOR	
	zam'ineše	zam'ineše	zamin'eše	zam'ineše	2-3SG IMPF	

---

[8] Variation has resulted due to the historical development of certain sounds (affecting in particular the 1SG present tense ending, the tense marker of the non 2-3SG aorist and the masculine definite article; see Sections 3.1.1, 4.1); likewise in some dialects unstressed vowels may be reduced or even deleted under certain conditions.

(6) Accentual patterns in singular nouns in the four zones

	Type 1	*Type 2*	*Type 3*	*Type 4*		
a.	plˈanina	plˈanina	planˈina	plˈanina	INDEF	'mountain'
	planinˈata	plˈaninata	planˈinata	planˈinata	DEF	
b.	visočinˈa	visočˈina	visočˈina	visˈočina	INDEF	'hill'
	visočinˈata	visočˈinata	visočˈinata	visočˈinata	DEF	
c.	vodeničˈar	vodeničˈar	vodenˈičar	vodˈeničar	INDEF	'miller
	vodeničˈarot	vodeničˈarot	vodenˈičarot	vodenˈičarot	DEF	
d.	krˈastavica	krˈastavica	krastavˈica	krastˈavica	INDEF	'cucumber'
	krˈastavicata	krˈastavicata	krastavˈicata	krastavˈicata	DEF	

1.2 Double Accent

Some Type 1, 2 and 3 dialects exhibit a system of secondary stress; cf. Ivanov (1971), Małecki (1934), Molerov (1905), Todorov (1937), Vidoeski (1985-86). Following the usage employed in the Macedonian and Bulgarian literature (*dvojno udarenie* or *dvojno akcentuvane*), I will refer to this as Double Accent (DA). In general terms, DA can be characterized as follows: if three or more syllables intervene between the primary stressed syllable and the end of the word, a second stress will fall two syllables after the first. For example, the noun *krˈastavica* 'cucumber' in a dialect with DA would be *krˈastavˈica*. The precise domain over which DA operates is hard to specify. In as much as material beyond the LexWd may be included (e.g. enclitics), it seems that DA operates over the Prosodic Word (PrWd). However, the dialects differ as to how restrictive their definition of PrWd is. Enclitics may be calculated as part of it, or they may be ignored. On this basis the dialects can be roughly divided into three sorts:

(i) The most restrictive system is found in Negovan. DA applies to LexWds, while clitics, including the definite article, are ignored, e.g. *krˈastavˈica* but *grˈanicata* 'the border' (Vidoeski 1991). Such examples of apparently lexicalized DA are found sporadically in dialects which otherwise do not have a fully-fledged system of DA.

(ii) The type best represented in the Macedonian dialects — "classic" DA as it were— embraces the definite article and possessive clitics, hosted by nouns (7) and adjectives (8), as well as verbal clitics, which are hosted by the imperative (9). The effects of DA are especially apparent when one looks at cases where prespecified antepenultimate stress is put into pre-antepenultimate position through the addition of enclitics:

(7) *prespecified antepenult stress*   *prespecified pre-antepenult stress*
      trˈupove   'bodies'   trˈupovˈeto   'the bodies'
      gasˈenica   'caterpillar'   gasˈenicˈata   'the caterpillar'
      blagoutrˈobie   'belly'   blagoutrˈobiˈeto   'the belly'
      mˈomčeto   'the boy'   mˈomčetˈo=mu   'my boy'
                                                                  (all Todorov 1937)

(8) *prespecified antepenult stress*   *prespecified pre-antepenult stress*
     dr'ugata   'the other (one)'   dr'ugat'a=i (sestra)   'her other (sister)'
                                                                       (Todorov 1937)

     m'alkata   'the little (one)'   m'alkat'a=mu (moma) 'his little (woman)'
                                                                       (Małecki 1934-36)

(9) *prespecified antepenult stress*   *prespecified pre-antepenult stress*
     d'onesi   'bring'   d'ones'i=mi   'bring me'
                                                                       (Todorov 1937)

A similar system of secondary stress is found in Modern Greek. Although lexical stress itself is held to a three-syllable window at the end of the word, the addition of enclitics has the same effect as in Macedonian dialects with DA, e.g. *δy'avase* 'read!', *δy'avas'e=to* 'read it!', *δy'avas'e=tu=to* 'read it to him' (Joseph and Philippaki-Warburton 1987: 243, 252). Note that in some dialects, however, lexical stress is also found in pre-antepenultimate position, especially in mediopassive verb forms, in which secondary stress appears (cf. Newton 1972). Greek has in fact been suggested as the possible source (Alexander, 1993; Małecki, 1934) for DA in Slavic, though this has been disputed as well (e.g. Ivanov 1971). It is perhaps wrong to look for a single source for these prosodic effects; rather, one can recognize, along with Ilievski (1983), a pan-Balkan set of prosodic constraints, encompassing not only Greek and Slavic, but also Balkan Romance (i.e. Aromanian and Meglenoromanian) and Albanian, characterized by a tendency to require stress on one of the last three syllables of the word. It should be noted, however, that the parallels between Greek and Slavic are especially close.

(iii) At the NE extreme of Macedonian speech territory, in the dialect of Razlog, secondary stress may fall on PrWd-final syllables as well, provided these are closed:

(10)   *Final open syllable*   *Final closed syllable*
        (no secondary stress)   *(secondary stress)*
      a. n'ašenci   PL   b. n'ašen'ec   SG   'ours'
         z'inuva   3SG   z'inuv'am   1SG   'yawn' (Vidoeski 1987)

In the dialects described in (i) and (ii) above, secondary stress only falls on penultimate or antepenultimate syllables.[9] A possible interpretation of this phenomenon is outlined in Section 2.7.1.

---

[9] The dialect of Razlog shows another peculiarity in its system of DA, though this seems to be the result of differences in the prosodic constituency of clitics, and not in the system of stress assignment per se. Compare the sentences from Razlog (a) and Suxo (b), the latter representing "classic" DA:

    a.   m'ečkit'e go   fan'ali
            the bears him caught
            'the bears caught him'

            kr'avat'a mu   r'ekla
            the cow   him said
            'the cow said to him'   (Molerovi 1954)

1.3 Summary

The stabilization of stress seen from the Type 1 dialects to the Type 4 dialects can partly be described in prosodic terms: stress is first banned from final syllables, then from pre-antepenultimate syllables, and finally from the penultimate syllable (producing antepenultimate stress), or from the antepenultimate syllable (producing penultimate stress). How initial stress fits into this schema is not immediately apparent. As is apparent even from an abbreviated survey, the responsibility for all the innovations found within the dialects cannot be laid entirely at the doorstep of prosody. Much is grammatically or lexically conditioned, and some developments, e.g. the extension of end stress in the singular aorist, run counter to this prosodic schema. The development of fixed stress in Macedonian must be considered in the light of prosody and morphology developments. The following sections will address each of these factors in turn.

Section 2: Prosody

The prosodic restrictions on stress placement that characterize the different accentual zones can be described in terms of the following hierarchy (leaving aside for the moment fixed penultimate and initial stress):

(i)   Stress is unrestricted.

(ii)   Stress is barred from final syllables.

(iii) Stress is barred from final and pre-antepenultimate syllables.

(iv) Stress is barred from final, pre-antepenultimate and penultimate syllables.

---

      b.   d'jatoto   go   p'ita
              the child him asks'
              'the child asks him'

              k'ončeto mu   k'azuva
              the horse him says
              'the horse says to him'   (Małecki 1934-36)

In all the sentences the noun is followed by a VP containing a pronominal clitic. In Razlog this clitic is construed as part of the same PrWd as the noun, thus inducing secondary stress, while in Suxo it apparently belongs prosodically to the following verb, and so secondary stress is absent, thus:

     Razlog: kr'avat'a=mu r'ekla
     Suxo: k'ončeto mu=k'azuva

This interpretation is supported by clitic placement in the different dialects. In Razlog, as is typical also of Bulgarian dialects, the position of verb-headed clitics is partly sensitive to what precedes them. They cannot fall in initial position (though the further details of their placement may vary, with clitics being either verb adjacent, as in Standard Bulgarian, or in second position in the phrase, as in Standard Serbo-Croation; cf. Stojkov 1993: 268-271). This suggests some kind of dependence on the preceding word. In Suxo, as is typical of almost all Macedonian dialects, the position of verb-headed clitics is not dependent on the preceding material; they are invariably preverbal. Thus verb-headed clitics are both positionally and prosodically bound to the verb in Suxo, while in Razlog they are positionally sensitive to (if not bound to), and prosodically bound to the preceding word.

There is a striking parallel between these restrictions, which ultimately describe fixed antepenultimate stress, and the system of secondary stress represented by DA. In both cases a sequence of three unstressed syllables at the end of the word is avoided. In both cases stress is not assigned to final syllables. And while DA may assign stress to either the penultimate or antepenultimate syllable, it will be argued below that the antepenultimate syllable is the default position, which makes the parallelism between the two accentual phenomena complete. The difference is that in the case of fixed antepenultimate stress prosody alone is responsible for stress assignment, while in the case of DA prosody is a factor supplementary to prespecified stress. On this assumption the prosodic constraints responsible for the antepenultimate stress found in western Macedonian should be recoverable from Type 1 dialects with DA.

2.1 Type 1 with DA.

An analysis of the Type 1 system with DA (of the commonest sort; cf. (7-9) Section 1.2) must account for prespecified stress on the one hand and secondary stress on the other. The former can be handled by a faithfulness constraints of the MAX family (McCarthy 1995). MAX constraints stipulate that material present in the input is also present in the output. In this case the constraint must stipulate that if there is a prosodic prominence in the input, there is likewise a prosodic prominence in the output (cf. Alderete 1997, Inkelas 1994, McCarthy 1995). Since the only kind of prosodic prominence that is of significance here is stress, the constraint can be targeted specifically towards stress:

(11) MAX-STRESS:
       Every stress in the input must have a corresponding stress in the output.

However, this constraint only stipulates the fact that there is a stress somewhere in the output form, not that it is in the corresponding syllable. For that an additional constraint is necessary, one which stipulates faithfulness to the position of stress as well. Following Alderete (1997) this can be cast as NOFLOP, which requires features—in this case stress—to be associated with corresponding elements in both input and output; thus stress on a given syllable in the input must be on the same syllable in the output.

(12) NOFLOP-STRESS:
       Stress in the output is associated with the same syllable as stress in the input.

This is here construed as a non-gradient, categorical constraint; if stress falls on the wrong syllable, it incurs one violation, no matter how distant it is from the correct syllable. Again adapting the approach of Alderete (1997; cf. Smolensky 1995), I combine these into a single constraint, STRESS-FAITH, which stipulates simultaneously that the output correspond with respect both to the presence of stress and to its location:

(13) MAX-STRESS + NOFLOP-STRESS = STRESS-FAITH:
       Every stress in the input must have a corresponding stress in the output on the corresponding syllable.

Since NOFLOP-STRESS is construed as a categorical constraint, so is STRESS-FAITH. STRESS-FAITH can be assumed as undominated in all the Type 1 dialects, whether or not they evince DA, with the implication that stress may be prespecified on any syllable of the word,

unconstrained by prosody. Exactly *how* stress is specified in the input—whether through the lexicon or grammar — will not be a consideration here; such questions will be addressed in Sections 3-5.

The prosodic constraints that produce DA act as a supplement to prespecified stress. On the schematic five syllable word below, column "b" shows the sorts of patterns produced by DA. The first task will be to define what sort of feet these patterns can be broken down into. The alternating pattern that stressed syllables produce naturally suggests binary feet. Since DA seems to monitor the distance between stressed syllables and the end of the word, we shall want to establish some kind of fixed relationship between the edges of feet and the right-hand edge of the PrWd. No one foot type alone will suffice; however, if we allow final syllables to be extrametrical, the correlation between feet and the end of the word can be formulated as: words must end in disyllabic trochaic feet.

(14)   Secondary accent patterns (Double Accent)

a. *Prespecified stress alone*	b. *Prespecified stress + DA*	c. *Trochaic parse*
σσσσ'σ	σσσσ'σ	σσσσ'σ ?
σσσ'σσ	σσσ'σσ	σσσ('σσ)
σσ'σσσ	σσ'σσσ	σσ('σσ)<σ>
σ'σσσσ	σ'σσ'σσ	σ('σσ)('σσ)
'σσσσσ	'σσ'σσσ	('σσ)('σσ)<σ>

Final stress is not however covered by this generalization; I will return to this question below.

Since the assertion that the stress patterns seen above represent trochaic feet depends crucially on extrametricality, it must be made clear what is meant thereby. The non-parsing of peripheral constituents has typically been treated in the literature as phenomenon explicitly required by rule or constraint (e.g. in treatments of Macedonian antepenultimate stress such as Deevy 1995, Franks 1987, 1989, Halle & Kenstowicz 1991, Hammond 1989, Kager 1993). Such an approach is objectionable on conceptual grounds, in as much as it stipulates an otherwise unmotivated mismatch between Underlying Representation (UR) and surface form. It puts the whole notion of UR into question if the system is allowed to block its realization from the very outset. The concept of extrametricality offered here is one in which a certain degree of mismatch is tolerated—but not required—by the system.

The representation of extrametrical syllables — and of their mirror-image, catalectic syllables (Kiparsky 1991, Kager 1993) — demands the recognition of two distinct prosodic domains, one in which the metrical properties of syllables are assessed and one in which other prosodic properties are assessed. Accordingly, I adapt the concept of the "window" from Inkelas (1989, 1993), whereby invisibility (extrametricality) is construed as the result of a mismatch between overlapping domains. Thus domain in which metrical properties are assessed will be termed the Metrical Word (MetWd), as distinct from the PrWd. Where the MetWd is smaller than the PrWd, extrametricality results (15a); where it is larger, catalexis results (15b):

(15) a. *Extrametrical peripheral syllables* b. *Catalectic peripheral syllables*

$[σ[σσσ]_{MetWd} σ]_{PrWd}$ $[σ[σσσ]_{PrWd} σ]_{MetWd}$

Mismatch between the two domains is limited to the peripheral constituents, which in previous accounts was stipulated by the Peripherality Condition (Hayes 1995). Under the

present model, this can be expressed in terms of a gradient alignment constraint which requires that the edge constituents of the MetWd and the PrWd be at least adjacent to each other; the notion that constraints can refer specifically to edge constitents is taken from Beckman (1995). Following Ellison (1995) and Zoll (1996), gradient alignment will be effected through a NOINTERVENING constraint, which assesses the material which intervenes between two elements; in these case, between the initial/final syllable of the MetWd and the initial/final syllable of the PrWd:

(16) NOINTERVENING (MetWd, $\sigma_{\text{Initial/Final}}$ – PrWd, $\sigma_{\text{Initial/Final}}$):
      No syllables intervene between the initial syllable of the MetWd and the initial syllable of the PrWd; no syllables intervene between the final syllable of the MetWd and the final syllable of the PrWd.

Since this constraint is expressed in terms of the entire edge constituents and not the edges themselves, neither extrametricality nor catalexis incur any violations; e.g. in (15) above no syllables intervene between the peripheral syllables of the MetWd and the peripheral syllables of the PrWd. Thus, the NOINTERVENING constraint allows but does not require peripheral syllable extrametricality and catalexis. However, it may become necessary to further constrain extrametricality and catalexis; this is addressed below (Sections 2.2, 2.4).

     Having allowed for extrametricality, it is now possible to describe feet as trochaic. This can be expressed as the result of two constraints (McCarthy and Prince 1993, Hung 1995): (i) FOOT BINARITY, dictating that feet are composed of two syllables; and (ii) a rhythmic constraint dictating that these feet be left headed, for which the term "TROCHEE" will be used:

(17) FOOT BINARITY:
      Feet are binary under syllabic analysis; namely, they are composed of two syllables.

(18) TROCHEE:
      Feet are trochaic; namely, the initial syllable of a foot bears stress.

Feet greater or lesser than two syllables will be considered to be in violation of FOOT BINARITY (FB). Feet wherein the first (leftmost) syllable is unstressed will be considered to violate TROCHEE, with the number of syllables within the foot being irrelevant to this constraint.

     The relationship of feet to the end of the MetWd with a foot can be accounted for through an alignment constraint (McCarthy and Prince 1994, Hung 1995):

(19) ALIGN RIGHT (MetWd - Foot):[10]
      The right-hand edge of every MetWd is aligned with the right-hand edge of some foot.

ALIGN RIGHT is construed as a categorical constraint, i.e. it simply assesses whether or not there is a foot at the end of the MetWd, but it does not assess the relative distance of feet from the edge of the MetWd. As such there can be a maximum of one violation per MetWd.

---

[10] Zoll (1996), who employs the term NOINTERVENING to refer to gradient alignment constraints, renames categorical ALIGN constraints as COINCIDE. Although I likewise employ the term NOINTERVENING, I prefer here to maintain the more commonly used term, ALIGN, for categorical alignment. As long as it is clear which should be construed as categorical and which gradient, no confusion should result.

These four constraints, namely the faithfulness constraint STRESS-FAITH and the three prosodic constraints, will now describe the appearance of secondary stress in a word like *kr'astav'ica* 'cucumber', where primary stress falls on the fourth syllable from the end. Stress on the first syllable satisfies STRESS-FAITH, while stress on the penultimate syllable satisfies the prosodic constraints. Note that the prosodic constraints also govern the form of the foot containing the primary stress: it too is trochaic.

(20) Secondary penultimate stress

kr'astavica	FB	ALIGN RIGHT	STRESS- FAITH	TROCHEE
(kr'a.sta.vi.ca)	*!			
(kr'a.sta)vi.ca		*!		
+ (kr'a.sta)(v'i.ca)				
kra.sta(v'i.ca)			*!	

This set of constraints in this particular order fails however to address how prespecified final stress is treated. If the constraints are left unranked as in (20) above, they allow violation of of STRESS-FAITH, namely *slep'ota*, as one of the options:

(21) Constraints cannot handle prespecified final stress

slepot'a 'blindness'	FB	ALIGN RIGHT	STRESS- FAITH	TROCHEE
sle.po(t'a)	*			
sle(p'o.ta)			*	
sle(po.t'a)				*

Since this does not occur, some way must be found of ensuring that faithfulness to prespecified final stress is maintained. Various solutions are possible:

(i) STRESS-FAITH is in dominant position, whereby:

   (a) It dominantes all the other constraints, which are not crucially ranked with respect to each other. In this case the form of the foot is irrelevant; all that matters is that its head be the final syllable (22).

   (b) It crucially dominates TROCHEE alone, so that in order accommodate both STRESS-FAITH and FB the stressed syllable is parsed as the head of an iambic foot (23); cf. Hung (1995).

   (c) It crucially dominates FB, so that the final syllable will be parsed as the head of a monosyllabic foot (24).

(ii) Catalexis is permitted, so that the final syllable is parsed as the head of a well-formed trochaic foot (25).

(Note in all these examples that monosyllabic feet do not violate TROCHEE because their headedness is indeterminate; a monosyllabic foot could be left-headed or right-headed.)

(22) Foot form irrelevant

slepot'a 'blindness'	STRESS-FAITH	FB	ALIGN RIGHT	TROCHEE
+ slepo(t'a)		*		
sle(p'o.ta)	*!			
+ (sle.po.t'a)		*		
+ sle(po.t'a)				*

(23) Final stress as head of iambic foot

slepot'a	FB	ALIGN RIGHT	STRESS-FAITH	TROCHEE
slepo(t'a)	*!			
sle(p'o.ta)			*!	
(sle.po.t'a)	*!			*
+ sle(po.t'a)				*

(24)   Final stress as head of a monosyllabic foot

slepot'a	TROCHEE	ALIGN RIGHT	STRESS-FAITH	FB
+ slepo(t'a)				*
sle(p'o.ta)			*!	
(sle.po.t'a)	*!			*
sle(po.t'a)	*!			

(25) Catalexis allowed

slepot'a 'blindness'	FB	ALIGN RIGHT	STRESS-FAITH	TROCHEE
slepo(t'a)	*			
sle(p'o.ta)			*	
(sle.po.t'a)	*			
sle(po.t'a)				*
+ slepo(t'a.φ)				

In the context of the present discussion there is no principled way to choose between the four options. However, as will be seen below, certain phenomena are best accounted for by assuming the constraint ranking in (24), namely that TROCHEE dominates FB (see Section 2.7.2) and that catalexis is not permitted (see Section 2.2).   In subsequent tableaux undominated TROCHEE will typically be assumed; only candidates which satisfy it will be shown.

Monosyllabic words constitute a special case of final stress. Where these are prespecified as having stress, their analysis is identical to that of (24). However, not all monosyllabic words can be assumed to be underlyingly unaccented, even if they bear surface stress. Some other constraint besides STRESS-FAITH must be assumed in order to account for the viability of stressed monosyllabic words. Undominated Lex=PrWd (Prince and Smolensky, 1993) will

allow monosyllabic words to be parsed as monosyllabic feet;[11] this constraint requires all LexWds to be minimally PrWds, whereby a foot will be assumed to be a necessary component of a PrWd.

   The set of constraints so far adduced, namely TROCHEE, ALIGN RIGHT, STRESS-FAITH » FB, remains incomplete. If fails to account for cases where secondary stress falls on the antepenultimate syllable, e.g. *kr'astav'icata* 'the cucumber', *zak'oluv'əneto* 'the butchering', *k'ukav'ičino* 'cuckoo's' NEUT SG ADJ (Ivanov 1971). Where prespecified stress is on the fifth syllable from the end of the word, the constraints do not align the secondary foot, and thus cannot decide between secondary stress on the antepenultimate syllable or on the penultimate syllable:

(26)   Constraints fail to align secondary foot

k'ukavičino	ALIGN RIGHT	STRESS-FAITH	FB
(k'u.ka)(v'i.či)<no>			
(k'u.ka)vi (č'i.no)			

The explanation can be sought either in morphology or prosody. The morphologically significant factor is the fact that instances of secondary stress on the antepenultimate syllable typically involve the addition of monosyllabic affixes to forms which themselves have secondary stress on the penultimate syllable, e.g. *kr'astav'ica > kr'astav'icata*. We might suppose that secondary stress has been lexicalized in these forms, or that some kind of output-output correspondence constraint ties together the various instantiations of the same word. However, a purely prosodic explanation is available too: where the secondary foot has room to play it is oriented towards the left. This suggests that gradient alignment is in operation, for which I will again employ a   NOINTERVENING constraint (see (16) above); in this case, it is the relationship between the edge of the foot and the edge of the MetWd which is examined, assessed in terms of the number of syllables:

(27)   NOINTERVENING (Foot, Left - MetWd, Left):
       No syllables intervene between the left edge of a foot and the left edge of a MetWd.

This will henceforth be referred to as NOINTERVENE-LEFT. In contrast to the categorical constraint ALIGN RIGHT, NOINTERVENE-LEFT counts violations cumulatively in terms of the number of syllables that intervene between the edge of each foot and the edge of the MetWd. The closer the left edge of *each* foot is to the left edge of the MetWd, the better NOINTERVENE-LEFT is satisfied. This constraint must be ranked below FB in order to ensure that the multiple violations it induces do not lead to satisfaction of ALIGN RIGHT by a single ill-formed foot.

---

[11] There is some evidence that monosyllabic words in standard Macedonian should be analyzed as incorporating catalexis; see fn. 13. The phenomena being examined here do not depend on either interpretation.

(28) NOINTERVENE-LEFT forces leftward alignment of secondary feet

k'ukavičino	ALIGN RIGHT	STRESS- FAITH	FB	NOINTERVE NE-LEFT
+(k'u.ka)(v'i.či)<no>				**
(k'u.ka)vi (č'i.no)				***!
(k'u.ka.vi.či.no)			*!	

This prosodic account of the alignment of secondary stress will be adopted here. With secondary stress itself a prosodic matter, such an approach allows all the relevant phenomena to be treated as prosodically motivated.

However, this set of constraints as it stands is too powerful, since it allows secondary stress to appear to the left of the prespecified stress. Although NOINTERVENE-LEFT will prevent this in the case of word-internal syllables (such feet would incur NOINTERVENE-LEFT violations without satisfying any of the higher-ranked constraints), nothing prevents the occurrence of secondary stress on initial syllables, since in this case no NOINTERVENE-LEFT violations are incurred:

(29) Constraints fail to prevent secondary initial stress

nasel'enie to 'the population'	ALIGN RIGHT	STRESS- FAITH	FB	NOINTERVE NE-LEFT
(n'a.se)(l'e.ni)('e.to)				**,****
na.se(l'e.ni)('e.to)				**,****

What we want to assure is that stress appears only in order to satisfy STRESS-FAITH and ALIGN RIGHT, but not otherwise. Superfluous stresses can be prevented through a constraint of the DEP family. DEP constraints are the inverse of MAX constraints, and stipulate that material present in the output is also present in the input. The constraint needed here is the inverse of MAX-STRESS (cf. Alderete 1997):

(30) DEP-STRESS:
      Every stress in the output must have a corresponding stress in the input.

Through this constraint stresses in the output which are not licensed by a stress in the input are penalized. Each unlicensed stress incurs one violation of DEP-STRESS. If this constraint is ranked on the bottom tier, only those feet which are absolutely necessary to satisfy the other constraints will be are permitted. The candidate with the superfluous foot is rejected.

(31) DEP-STRESS bans secondary stress on initial syllable

nasel'enie to	ALIGN RIGHT	STRESS- FAITH	FB	NOINTERVE NE-LEFT	DEP- STRESS
(n'a.se)(l'e.ni)('e.to)				**,****	**!
+ na.se(l'e.ni)('e.to)				**,****	*

This completes the inventory of constraints needed to describe the prosody of a Type 1 dialect with DA of the common sort. To summarize: there are three tiers of constraints. The highest tier ensures that feet are left-headed, that the MetWd end in a foot, and that prespecified stress is realized on the surface. The tier below this ensures that feet are binary where possible. The bottom-ranked constraints ban feet which do not directly satisfy the

higher-ranked constraints, and stipulate that feet are as close as possible to the left edge of the MetWd. Peripheral syllable extrametricality is allowed. Thus in full:

(32) TROCHEE, ALIGN RIGHT, STRESS-FAITH » FB » DEP-STRESS, NOINTERVENE-LEFT

Note that the same set of constraints can be used to describe stress at the PrWd (or MetWd) level in Modern Greek (cf. Section 1.2).

These constraints will now be used to describe the continuum outlined at the beginning of Section 2, leading from free stress in Type 1 to fixed antepenultimate stress in Type 4.[12] The transition from Type 1 to Type 4 can now be portrayed as resulting from the demotion of the faithfulness constraint STRESS-FAITH below various components of the prosodic hierarchy. The deeper STRESS-FAITH is embedded in the hierarchy, the more the other constraints impose limitations on its satisfaction, and hence, limitations on the possible prespecification of stress. In this continuum the purely prosodic constraints remain in a fixed relationship to each other. In order to focus on prosody alone in the tableaux below I represent syllable structure only, and not actual word forms.

2.2 Stress barred from final syllables.

The restriction of stress from final syllables will result from the demotion of STRESS-FAITH below FB:

(33) a. TROCHEE, ALIGN RIGHT, **STRESS-FAITH** » FB » DEP-STRESS, NOINTERVENE-LEFT
      b. TROCHEE, ALIGN RIGHT, FB » **STRESS-FAITH** » DEP-STRESS, NOINTERVENE-LEFT

This constraint ranking makes violation of FB impossible. Since, with TROCHEE undominated, final stress could only be parsed as a monosyllabic foot, the new dominance of FB forces stress to retract in order to create a disyllabic foot:

(34) Stress barred from final syllables

σ'σ	FB	STRESS-FAITH
σ('σ)	*!	
+ ('σσ)		*

Note that if catalexis were to be allowed, this demotion would have no effect. I therefore assume that there is an undominated constraint that bars unlicensed—i.e. catalectic syllables—which could be expressed as DEP-SYLL.[13]

---

[12] This presentation could be seen as putting too much weight on DA. After all, DA only applies to a portion of the Macedonian dialects, yet a reshuffling of accentuation in apparent compliance with the prosodic constraints is seen in dialects far beyond the areas where DA has ever been attested. One possible interpretation is that this set of constraints is latent throughout all the dialects in question, whether their effects are seen or not. The crucial difference between dialects with and without DA would then be the relative ranking of ALIGN RIGHT, which is the primary motivating force behind DA. In dialects without DA ALIGN RIGHT is presumably ranked on the bottom tier. The implications of this alternative constraint ranking for the prosodic typology described in Section 2.5 are explored below in fn. 14.

[13] Kager (1993) and Burzio (1994) provide evidence that monosyllabic words in standard Macedonian contain a final catalectic syllable. The justification for this is the behavior of Enlarged Stress Domains (ESD; Franks 1987), which are PrWds formed, under certain syntactic and semantic

The restriction this imposes on STRESS-FAITH will imply a concomitant readjustment of underlying representation. According to the principle of Lexicon Optimization (Prince and Smolensky, 1993) the most economical underlying representation required to yield a given output is the preferred one. Given the output 'σσ, both 'σσ and σ'σ are possible as input forms, as the ranking TROCHEE » STRESS-FAITH will produce the same output regardless. What Lexicon Optimization stipulates is that, all else being equal, the one which avoids violating high-ranked constraints is to be assumed as the correct representation of the input; in this case, 'σσ. In the case of the possible input σ'σ, the correct output can only be arrived at through violation of both STRESS-FAITH and DEP-STRESS, while in the case of 'σσ, the only constraint violated will be DEP-STRESS. As a result, the input will be adjusted to match the output.

2.3 Stress barred from pre-antepenultimate and final syllables.

A ban on pre-antepenultimate stress will result if STRESS-FAITH is dominated by *both* ALIGN RIGHT and DEP-STRESS:

(35) a. TROCHEE, ALIGN RIGHT, FB » **STRESS-FAITH** » DEP-STRESS, NOINTERVENE-LEFT
      b. TROCHEE, ALIGN RIGHT, FB, DEP-STRESS » **STRESS-FAITH** » NOINTERVENE-LEFT

In the original system in (35a), namely free stress with DA, the low ranking of DEP-STRESS allowed two stresses within the word, one to satisfy STRESS-FAITH and an additional one to satisfy ALIGN RIGHT if necessary. The reversal in the rankings in (35b) means that only one stress is allowed, and that satisfaction of ALIGN RIGHT has priority, with the result that pre-antepenultimate stress is banned. Since final stress is also banned, stress is in fact held to a two-syllable window. STRESS-FAITH can only be satisfied only within this antepenultimate-penultimate window.

(36) Stress held to antepenultimate-penultimate window

'σσσσ	ALIGN RIGHT	FB	DEP-STRESS	STRESS-FAITH
('σσ)σσ	*!			
+ σ('σσ)<σ>				*
+ σσ('σσ)				*
('σσ)('σσ)			*!	

---

conditions, from either two Morphological Words (and any intervening clitics) or a preposition plus noun. These compounds typically display the expected antepenultimate stress, e.g. *kisel'o mleko* 'yogurt' < *kiselo* 'sour' + *mleko* 'milk'. However, when the final element is monosyllabic, penultimate stress typically occurs, e.g. *beli'ot dzid*. 'the white wall' < *beliot* ' the white' *dzid* 'wall'. Kager and Burzio both attribute this to an undominated disyllabic foot condition on LexWds. In the case of monosyllabic words, this condition is met via catalexis. Where the final element of an ESD is a monosyllabic LexWd, the catalectic syllable counts in the determination of antepenultimate stress, thus in /be.li.ot.dzid.∅/ what is the penultimate on the surface is underlyingly antepenultimate. Catalexis in monosyllabic words could be incorporated under the present account by assuming the constraint ranking Lex=PrWd (or rather Lex=MetWd) » DEP-SYLL » other constraints; i.e. catalexis is barred except in the case of monosyllabic words.

2.4 Fixed antepenultimate stress.
The final event is elimination of prespecified stress on the penultimate syllable, which will reseult from the demotion of STRESS-FAITH below NOINTERVENE-LEFT:

(37) a. TROCHEE » ALIGN RIGHT, FB, DEP-STRESS » **STRESS-FAITH** » NOINTERVENE-LEFT
       b. TROCHEE » ALIGN RIGHT, FB, DEP-STRESS » NOINTERVENE-LEFT » **STRESS-FAITH**

Note that in order for this demotion to have any effect, some constraints on extrametricality must be assumed. Up till this point extrametricality has been allowed both initially and finally; initial syllable extrametricality, however, will have been without effect. Now, with STRESS-FAITH bottom ranked, initial syllable extrametricality could be invoked to allow retention of prespecified penultimate stress:

(38)

σˈσσ	ALIGN RIGHT	TROCHEE	DEP-STRESS	NOINTER VENE-LEFT	STRESS- FAITH
* <σ>(ˈσσ)					
(ˈσσ)<σ>					*!

It must be assumed that initial syllable extrametricality is not allowed, which can be accounted for an undominated alignment constraint requiring perfect alignment of the lefthand edges of the MetWd and PrWd:

(39) ALIGN LEFT (MetWd - PrWd):
      The lefthand edge of every MetWd is aligned with the lefthand edge of some PrWd.

With initial syllable extrametricality barred, leftward alignment of a single foot takes precedence over the possible lexical specification of stress on the penultimate syllable, resulting in fixed antepenultimate stress:

(40)   Fixed antepenultimate stress

σσˈσσ	ALIGN RIGHT	FB	DEP-STRESS	NOINTERVE NE-LEFT	STRESS- FAITH
σσ(ˈσσ)				**!	
+ σ(ˈσσ)<σ>				*	*

2.5 Summary
The prosodic typology just outlined represents the incremental invasion of the system of stress assignment by the prosodic constraints, till the point where they become the sole factor that determines stress placement.   The various stages share the same set of prosodic

constraints, differing only in the ranking of Stress-Faith, i.e. the extent to which prespecified stress is mediated by prosody. This is illustrated in (41):[14]

(41) a. *Free stress with DA*
     Trochee, Align Right, **Stress-Faith** » FB » Dep-Stress, NoIntervene-Left

 b. *Stress banned from final syllables*
     Trochee, Align Right, FB » **Stress-Faith** » Dep-Stress, NoIntervene-Left

 c. *Stress limited to antepenultimate and penultimate syllables*
     Trochee, Align Right, FB, Dep-Stress » **Stress-Faith** » NoIntervene-Left

 d. *Stress limited to antepenultimate and penultimate syllables*
     Trochee, Align Right, FB, Dep-Stress » NoIntervene-Left » **Stress-Faith**

2.6 Promotion of Stress-Faith in Standard Macedonian

Throughout the dialects it is not unusual to see two or more strata in the lexicon—an older one showing the effects of a prior demotion of Stress-Faith, and a younger one in which the position of Stress-Faith is apparently higher-ranked. Thus e.g. in many dialects where final stress is not found in native words, it is nevertheless found in borrowed words that represent a more recent stratum. Such layering is also found in contemporary Standard Macedonian. Although default stress is antepenultimate, lexical marking of stress is possible within a three-syllable window at the end of the word. This is a result both of recent borrowings and of vowel contractions which have brought about the lexicalization of stress which was previously on the antepenultimate syllable.[15]

(42) a. *Borrowings*
        dep'o   'depot'
        kandid'at   'candidate'
        organiz'ira   'organizes'
        konzum'ator   'consumer'

 b. *Native vocabulary*
        nos'ejki (< nos'e.eki)   'carrying'
        let'ovo (< let'o.ovo)   'this summer'

---

[14] In dialects without DA, where Align Right is ranked on the bottom tier (see fn. 12), the equivalent constraints rankings would be:

a. *Free stress without DA*
   Trochee, **Stress-Faith** » FB » Align Right, Dep-Stress, NoIntervene-Left

b. *Stress banned from final syllables*
   Trochee, FB » **Stress-Faith** » Align Right, Dep-Stress, NoIntervene-Left

c. *Stress limited to antepenultimate and penultimate syllables*
   Trochee, FB, Align Right, Dep-Stress » **Stress-Faith** » NoIntervene-Left

[15] Clearly, the lexicalization of the place of stress must have taken place prior to the contraction, when it was still on the antepenultimate syllable; otherwise we should not expect stress to have remained fixed to a particular syllable.

Such prespecification is limited to a three-syllable window at the end of the word, so that if a syllable exceptionally marked in the citation form (43a) should find itself in pre-antepenultimate position through the addition of endings or enclitics, antepenultimate stress appears (43b):

(43)a. konzumꞌator   'consumer'   b. konzumatꞌorite   'the consumers'
        organizꞌira   'organizes'   organizirꞌajte=gi   'organize them!'

For limited prespecification of stress to be possible STRESS-FAITH must be seen as having been promoted above both NOINTERVENE-LEFT and FB:

(44)   TROCHEE, ALIGN RIGHT, FB, DEP-STRESS » NOINTERVENE-LEFT » **STRESS-FAITH**
        TROCHEE, ALIGN RIGHT, DEP-STRESS » **STRESS-FAITH »** FB, NOINTERVENE-LEFT

Promotion of STRESS-FAITH above allows NOINTERVENE-LEFT allows the prespecification of penultimate stress:

(45)   Prespecified penultimate stress

konzumꞌator	DEP-STRESS	STRESS-FAITH	NOINTERVENE-LEFT
kon(zꞌu.ma)<tor>		*!	*
+ kon.zu(mꞌa.tor)			**

Promotion above FB allows the prespecification of final stress:

(46)   Prespecified final stress

kandidꞌat	DEP-STRESS	STRESS-FAITH	FB	NOINTERVENE-LEFT
+ kan.di.(dꞌat)			*	*
(kꞌan.di)<dat>		*!		
kan(dꞌi.dat)		*!		*

Note that STRESS-FAITH is still ranked below both ALIGN RIGHT and DEP-STRESS. This forces primary stress to satisfy ALIGN RIGHT; i.e., holds it to a final three-syllable window. This ranking thus prevents faithfulness to prespecified stress in pre-antepenultimate position; instead, default antepenultimate stress appears:

(47)   Affects of trisyllabic stress window

konzumꞌatorite	ALIGN RIGHT	DEP-STRESS	STRESS-FAITH	FB	NOINTERVENE-LEFT
kon.zu(mꞌa.to)(rꞌi.te)		*!			**, ****
+kon.zu.ma(tꞌo.ri)<te>			*		***
kon.zu(mꞌa.to)ri.te	*!				**

Satisfaction of STRESS-FAITH could only be achieved through the violation of the higher-ranking constraints ALIGN RIGHT (*konzumꞌatorite) or DEP-STRESS (*konzumꞌatorꞌite).

   Once again one can see a parallel between this system and Modern Greek. Lexical stress in Greek seems to be governed by the same constraints as in Standard Macedonian, with stress held to a three syllable window at the end of the LexWd. At the PrWd (MetWd?) level, on the other hand, prespecified pre-antepenultimate stress induces secondary stress, following the same pattern as in Macedonian dialects with DA. The evidence that Greek provides of the coexistence of these two constraint hierarchies within a single system lends some support to the idea being advanced here, namely that the prosodic constraints seen in Type 1 dialects with DA are the same as those found in Type 4 dialects with antepenultimate stress.

2.7 Conditions on the loss of final stress
The development that seems to have heralded all subsequent changes was the retraction of final stress—here attributed to the demotion of STRESS-FAITH below FB. Although portrayed above as the result of a wholesale ban against final stress, there is evidence that additional conditions apply, namely: (i) final stress is lost more readily from open syllables than from closed syllables; (ii) final stress is lost in disyllabic forms more readily than in polysyllabic forms.

2.7.1 Open versus closed syllables
As will be seen in the subsequent sections on morphology, within any given morphological category closed final syllables tend to resist stress retraction. A similar phenomenon has been documented for Serbo-Croatian (Ivić 1958: 105), where long open syllables likewise resist retraction. Although distinct vowel length is not found in Maccedonian, there are a number of contexts, most strongly represented in the N Macedonian dialects of Kumanovo and Kratovo, where final stress is retained on open syllables that were *originally* long, judging by the corresponding forms in neighboring Serbo-Croatian dialects, e.g. the Macedonian forms *čij'a* 'whose' FEM SG, *et'e* 'there!' from Kumanovo like the Serbo-Croatian forms *čij'a:*, *et'e:* from Kosovo-Metohija (Ivić (1968-69): 479; cf. also Section 5.6), but lost if the vowel was originally short. This suggests that similar prosodic processes were originally involved. This distribution of loss vs. retention of final stress amounts to the exclusion of stress from final segments, provided that long vowels are construed as bisegmental (examples *rib'ar* 'fisherman', *et'e* 'there!', *žen'a* 'woman'):

(48) rib'a\<r\> →   rib'ar   *final closed syllable*
      et'e\<e\> →   et'ee   *final long open syllable*
      žen\<'a\> →   ž'ena   *final short open syllable*

It would appear that there are two domains in operation here, one which contains the entire word and one which excludes the final segment. Stress must fall within this latter domain.

   It is not clear whether these domains should be equated with the PrWd vs. MetWd; the retatationship with respect to extrametricality is the same, except that here segments and not syllables are assessed. However, if the MetWd is construed in terms of segments and not syllables, the alignment constraints become unworkable. This becomes apparent when one looks at the similar effect seen with DA in Razlog (see Section 1.2), where secondary stress falls on final closed syllables but not on final open syllables, e.g. *z'inuv'am* 1SG vs. *z'inuva* 3SG 'yawn'. Apparently only final open syllables are extrametrical; otherwise, an ill-formed monosyllabic foot is required to satisfy ALIGNRIGHT (MetWd - Foot). If the alignment constraint is so powerful, then the form *z'inuva* must also satisfy it. However, if it is only final *segments* that are extrametrical, the footing would be *(z'i.nu.v)a*, which crosses syllable

boundaries. Instead, it seems preferable to construe the domain in which final segments are deleted (call it "Domain X") as the source for MetWd syllabification:

(49) *Final closed syllable*   *Final open syllable*
      [z i n u v a] m   [z i n u v] a   *"Domain X"*
       | | | | |
       σ   σ   σ   σ   σ   *MetWd*

On such an interpretation, final syllable extrametricality is in fact not permitted in Razlog, so that *all* MetWd-final syllables must be parsed into feet.

2.7.2 Disyllabic versus polysyllabic forms

The susceptibility of final stress to retraction in disyllabic forms is chiefly displayed by nouns and adjectives; data supporting this assertion are adduced in Sections 3.2.3.3.1, 4.3.2, 4.5.1.1 and 5.3. The same tendency has been noted in some Serbo-Croatian dialects and in medieval Central Bulgarian texts (Dybo et al. 1993: 30). If this truly represents a phonological condition on the loss of final stress, what sort of constraints could be in effect? Two features stand out: (i) if final stress retracts in a disyllabic form, it is both initial *and* directly adjacent to the original place of stress; (ii) if final stress retracts in a polysyllabic form, it can be initial, or it can be directly adjacent to the original place of stress, but not both simultaneously. This suggests that the combination of adjacency to the original place of stress and initial position are the deciding factors.

  Relative adjacency must be expressed in terms of a gradient constraint, as e.g. NOINTERVENE-LEFT. In the analysis above STRESS-FAITH was assumed to be a categorical constraint, which can be taken as the null hypothesis. However, we might also suppose that STRESS-FAITH be construed as a gradient constraint, whereby violations of it are less severe the closer surface stress is to the "correct" syllable. On that assumption, the loss of final stress will ideally be realized as retraction onto the preceding syllable:

(50) Retraction of stress by one syllable

σσ'σ	FB	STRESS-FAITH (gradient)
σσ('σ)	*!	
('σσ)σ		**!
+ σ('σσ)		*

Under these conditions some constraint must now additionally favor initial stress. This might suggest the workings of NOINTERVENE-LEFT. However, this constraint, in as much as it does not require initial stress, but only fails to penalize it, could only account for initial stress in the complete absence of other constraints. Instead, a constraint which actually *requires* initial stress must be responsible, for which we can invoke the mirror image of ALIGN RIGHT, namely ALIGN LEFT:

(51) ALIGN LEFT (MetWd - Foot):
      The lefthand edge of every MetWd is aligned with the lefthand edge of some foot.

If it is assumed that ALIGN LEFT lies between STRESS-FAITH and FB, then retraction of final stress from only in disyllabic forms will result if STRESS-FAITH is first demoted to the same level as ALIGN LEFT:

(52) Retraction onto initial syllable

σˈσ	STRESS-FAITH (gradient)	ALIGN LEFT	FB
σ(ˈσ)		*	*!
+ (ˈσσ)	*		

(53) No retraction onto internal syllable

σσˈσ	STRESS-FAITH (gradient)	ALIGN LEFT	FB
+ σσ(ˈσ)		*	*
(ˈσσ)σ	**!		
σ(ˈσσ)	*	*!	

At this stage initial stress is just as important as the realization of underlying stress; all else being equal, initial stress will be chosen. It should however be noted that although it is necessary here to assume that STRESS-FAITH is a gradient constraint, in most cases this quality, if present, is obscured by other factors, both morphological and grammatical; indeed, for Standard Macedonian it is necessary to assume categorical STRESS-FAITH (see following section). Therefore, unless otherwise indicated, STRESS-FAITH will be treated as a categorical constraint in the subsequent discussion.

2.7.2.1 Other effects of ALIGN LEFT
ALIGN LEFT appears to play a role in Standard Macedonian as well. Korubin (1969) notes that lexically marked stress is often replaced by default antepenultimate stress in forms of three or fewer syllables:

(54)   oficˈer   *or*   ˈoficer   'officer'
        banˈalen   *or*   bˈanalen   'banal'
        salˈon   *or*   sˈalon   'salon'
        negatˈiv   *or*   nˈegativ   'negative'

In longer forms, however, lexically marked stress stays put. This is especially apparent in sets of derivationally related words:

(55)   formˈira   *or*   f ˈormira   'forms' 3SG   *vs.*   deformˈira   'deforms'
        normˈalen *or*   nˈormalen   'normal'   *vs.*   abnormˈalen 'abnormal'

Cf. also the trisyllabic *gˈenitiv* 'genitive' and *vˈokativ* 'vocative', with initial stress, vs. the quadrisyllabic *akuzatˈiv,* 'accusative' with final stress. This suggests that here too STRESS-FAITH is in competition with ALIGN LEFT. However, there does not appear to be any adjacency requirement; stress does not retract by one syllable, it jumps to the initial syllable, skipping the medial one, e.g. *negatˈiv > nˈegativ*. In Standard Macedonian it would appear

then that STRESS-FAITH is *not* a gradient constraint. With that in mind, the loss of prespecified stress in trisyllabic or smaller forms can be attributed to the direct competition of STRESS-FAITH and ALIGN LEFT, just as in (52), in this case within the context of the constraint hierarchy responsible for the final trisyllabic stress window of Standard Macedonian ((44) above). Only in these shorter forms can initial stress satisfy the other constraints as well:

(56)   Retraction onto initial syllable

ban'alen	ALIGN RIGHT	DEP-STRESS	ALIGN LEFT	STRESS-FAITH	FB	NOINTERVENE-LEFT
+ (b'a.na)<len>				*		
ba(n'a.len)			*			*!

In longer forms initial stress is excluded by the higher-ranking constraints, so STRESS-FAITH does not have to compete with it:

(57)   No retraction onto internal syllable

deform'ira	ALIGN RIGHT	DEP-STRESS	ALIGN LEFT	STRESS-FAITH	FB	NOINTERVENE-LEFT
de(f 'or.mi)<ra>			*	*!		*
(d'e.for)(m'i.ra)		*!				**
(d'e.for)mi.ra	*!					
+ de.for(m'i.ra)			*			**

Since this phenomenon is subject to variation, it would seem that the ranking of ALIGN LEFT fluctuates between being ranked alongside STRESS-FAITH and being ranked below it.

    In general, the role of ALIGN LEFT is difficult to assess. Clearly, in the context of the constraint hierarchies discussed so far, STRESS-FAITH is not demoted below it; otherwise, we should expect the mirror image of DA, with obligatory secondary stress on initial syllables, and perhaps fixed initial stress. Both of these do in fact occur in a limited area in the SW, and will be discussed below. However, outside of this area the sporadic appearance of what is best explained as secondary stress on the initial syllable in Type 1-3 dialects suggests the effects of ALIGN LEFT, e.g. *b'ažan'akot* 'the brother-in-law'[16], *pr'onikn'ata* 'penetrated'[17] (Koneska 1951); *r'azgod'ila* 'broke off' FEM SG, *n'agod'ila* 'adjusted'[18] (Ivanov 1971); *k'ortol'isa* 'saved' 2-3 AOR alongside *kortol'isa* (Todorov 1937); *k'afin'eto* 'the cafe' alongside *kafin'e* 'cafe' (Małecki 1934-36); *sl'ivarn'ici* 'plum orchards', *p'oznan'ici* 'acquaintances', *p'odvir'oci* [19] (Konopište; MDA). Sporadic secondary stress on the initial syllable has also been noted in Modern Greek (Joseph and Philippaki-Warburton 1987: 243). That ALIGN LEFT should play a role in stress assignment is perhaps a reflection of the

---

[16] From Turkish *bacan'ak,* with final stress.

[17] The n/t-participle has penultimate stress in this dialect (Mariovo), thus *pronikn'ata* would be expected.

[18] The l-participle has penultimate stress in this dialect (Mariovo), thus *razgod'ila, nagod'ila* would be expected.

[19] Plural masculines otherwise have penultimate stress in this dialect, thus *slivarn'ici, poznan'ici, podvir'oci* would be expected.

tendency—claimed by Nikolaeva (1996) — for Balkan languages to make *all* initial syllables, whether stressed or not, a locus for high intensity. It may be that this intensity is at times be interpreted as stress.

2.8 Other accentual systems

Where stress is assigned through the mediation of trochaic feet, initial stress and penultimate stress are mirror images of each other: the former entails a foot at the beginning of the word, the latter a foot a the end.   In fact, the two types of accentuation appear to be related in Macedonian, in as much as they occur near each other, and may occur together in mixed systems where primary stress on the one syllable and secondary stress on the other.   Both systems share two complementary features that distinguish them from antepenultimate stress: (i) the absence of final syllable extrametricality; (ii) the dominant role of categorical ALIGN LEFT.

2.8.1 Fixed penultimate stress

It can be imagined that a system of fixed penultimate stress had the same direct progenitor as that proposed above for antepenultimate stress, namely a system with a disyllabic antepenultimate-penultimate stress window, such as characterizes the Type 3 dialects. This supposition finds some support in the fact that there are dialects, e.g. that of Armensko (Mazon 1923), where a Type 3 system shows a decided preference for penultimate stress. Although this cannot be directly connected with the dialects that have penultimate stress (the latter being cut off from other Macedonian dialects by an area of Albanian speech), a comparable situation is found in Serbo-Croatian dialects that lie between Prizren, whose dialect follows essentially the Macedonian Type 3 pattern, and the village of Dvorane, where fixed penultimate stress is found (Remetić 1996: 353;   Alexander 1975: 51-52);   the intermediate dialects are typologically similar to that of Armensko, namely Type 3 with a tendency to favor penultimate stress (see Section 6.2).

The development of penultimate stress out of a disyllabic stress window can be portrayed as the result of a ban against final syllable extrametricality. Recall that it has been assumed that a ban against initial syllable extrametricality already obtains, effected by the constraint ALIGN LEFT (MetWd - PrWd), which demands perfect alignment between the lefthand edges of the MetWd and the PrWd. Its mirror-image will then do the same for the righthand edges:

(58) ALIGN RIGHT (MetWd - PrWd):
       The righthand edge of every MetWd is aligned with the righthand edge of some PrWd.

I assume that this constraint, whose effects have not been visible in the systems examined up to this point, nevertheless operates as a default: all else being equal, the edges of the MetWd coincide with those of the PrWd. In order for fixed antepenultimate stress to emerge from a system with a disyllabic stress window, both NOINTERVENE-LEFT and STRESS-FAITH must be demoted below ALIGN RIGHT (MetWd - PrWd):

(59) a.   STRESS-FAITH » NOINTERVENE-LEFT » **ALIGN RIGHT** (MetWd - PrWd)
       b.   STRESS-FAITH » **ALIGN RIGHT** (MetWd - PrWd) » NOINTERVENE-LEFT
       c.   **ALIGN RIGHT** (MetWd - PrWd) » STRESS-FAITH » NOINTERVENE-LEFT

There is in fact some reason to think the change would proceed precisely in this order (namely, demotion first of NOINTERVENE-LEFT then STRESS-FAITH) because in the Type 3 dialects of Lerin, when secondary stress occurs it falls on the penultimate syllable, e.g.

ˈistrkalˈaj=go   'roll it out!' (Ristujčin 1994),[20] and is not aligned towards the left, as is secondary stress in the Type 1 dialects with DA. The constraint hierarchy in (59b) allows extrametricality in the case of prespecified stress, but not in the case of secondary stress.

2.8.2 Fixed initial stress
Fixed initial stress clearly results from the leftward alignment of feet. Recall though that there are two constraints which produce leftward alignment, NOINTERVENE-LEFT and ALIGN LEFT. In principle either constraint could bring about initial stress. However, the fact that some dialects with initial stress have optional secondary stress on the penultimate syllable (e.g. Želevo; cf. Vidoeski 1983: 37) suggests that ALIGN LEFT is responsible. NOINTERVENE-LEFT is able to assign initial stress only if other constraints are somehow rendered inactive, because it does not *require* stress on the initial syllable, it merely fails to penalize initial stress. In such cases stress would in fact be assigned by Lex=PrWd to the least offensive syllable, namely initial. If e.g. ALIGN RIGHT were active, it would obviate the need for Lex=PrWd to assign stress, and initial stress could only appear as secondary stress. The existence of systems with obligatory initial stress and optional penultimate stress suggests the operation of two *categorical* alignment constraints, namely, ALIGN LEFT and ALIGN RIGHT. ALIGN LEFT is undominated, producing obligatory initial stress, while ALIGN RIGHT and DEP-STRESS are lower ranked:

(60)   TROCHEE, FB, ALIGN LEFT » ALIGN RIGHT, DEP-STRESS

They compete with each other, making penultimate stress optional: the presence of secondary stress produces a DEP-STRESS violation, its absence produces an ALIGN RIGHT violation:

(61) Fixed initial stress with optional secondary penultimate stress

σσσσ	ALIGN LEFT	ALIGN RIGHT	DEP-STRESS
+ (ˈσσ)σσ		*	
+ (ˈσσ)(ˈσσ)			*

Initial stress without secondary stress will of course result from the ranking DEP-STRESS » ALIGN RIGHT.

2.8.3 Disyllabic stress window with initial/penultimate stress.
In the dialects of Opcirina (Vidoeski 1983) and Buf (MDA) prespecified stress is held within an antepenultimate-penultimate stress window, while at the same time secondary stress both on initial and on the penultimate syllables may appear. In Opcirina, according to Vidoeski (1983: 37), prespecification of stress within the disyllabic stress window is possible in trisyllabic forms, e.g. mˈaščea 'mother-in-law', pˈadina 'hollow area' vs. svekˈrva 'daughter-in-law', godˈina 'year'. Longer forms, however, are characterized by initial *and* penultimate stress, e.g. vˈodenˈica 'mill'.[21]   This can be accounted for by the following constraint hierarchy:

---

[20] Imperative stress is typically initial in this dialect, even if that be a pre-antepenultimate syllable.

[21] In the material for Buf from the MDA words of four or more syllables have initial stress, penultimate stress, or both. It would be possible to take this at face value, using the same constraint hierarchy shown in (63) for Buf but with Dep-Stress ranked alongside the alignment constraints; thus

(62)   TROCHEE, FB » ALIGN LEFT, ALIGN RIGHT » DEP-STRESS » STRESS-FAITH

Both alignment constraints are in direct competition, and dominate DEP-STRESS. This means that both constraints will, if possible, be satisfied, resulting in both initial and penultimate stress. However, FB dominates the alignment constraints, with the result that in trisyllabic forms only one foot is possible. Assuming that extrametricality does not apply in these dialects (after the fashion of those with penultimate stress), only one of the two alignment constraints can be satisfied. It is then up to STRESS-FAITH to break up the tie: hence, prespecification in trisyllabic forms alone:

(63)   Prespecification of initial/antepenultimate stress in Buf/Opcirina

p'adina	ALIGN LEFT	ALIGN RIGHT	DEP-STRESS	STRESS-FAITH
+ (p'a.di)na		*		
pa(d'i.na)	*			*!

(64)   Prespecification of penultimate stress in Buf/Opcirina

god'ina	ALIGN LEFT	ALIGN RIGHT	DEP-STRESS	STRESS-FAITH
(g'o.di)na		*		*!
+ go(d'i.na)	*			

In longer forms, prespecification of stress is essentially irrelevant. Prespecified initial stress would be accompanied by secondary penultimate stress, and vice versa. Prespecified stress on some other syllable would be superseded by the prosodic constraints; e.g. even an input form */vod'enica /would yield v'oden'ica as output:

(65)   Prespecification of stress impossible in words of 4+ syllables

vod'enica	ALIGN LEFT	ALIGN RIGHT	DEP-STRESS	STRESS-FAITH
vo(d'e.ni)ca	*!	*		
(v'o.de)ni.ca		*!		*
vo.de(n'i.ca)	*!			*
+ (v'o.de)(n'i.ca)			*	*

TROCHEE, FB » ALIGN LEFT, ALIGN RIGHT, DEP-STRESS » STRESS-FAITH. This would make either secondary initial *or* penultimate stress optional. However, there is evidence (cf. 4.5.3) for the additional participation of a NOINTERVENING constraint, which would render this analysis unworkable. Instead, I take the data from the MDA as representing the same system as described in Vidoeski (1983) for Opcirina, attributing their inconsistency to the difficulty of consistently perceiving both stresses in every word.

Section 3: Verbs

3.1 Stem classes and inflectional morphology
This section will focus on the forms of the present, imperfect, aorist and the imperative; the remaining verb forms, namely participles and the gerund, are either accentually derived from one of the above forms or are too poorly documented to contribute substantially to the discussion. Since both stems and affixes may have their own accentual properties, a fairly close look at their morphology is warranted.

3.1.1 Inflectional affixes

3.1.1.1 Present
The present tense is divided into three conjugations. The I conjugation and the II conjugation are identical except for the first vowel of the non 1SG endings, which is *-e-* in the I conjugation and *-i-* in the second:

(66) *I conjugation*   *II conjugation*

SG	PL	SG	PL	
-a(m)	-em(e)	-a(m)	-im(e)	*1ˢᵗ person*
-eš	-ete	-iš	-ite	*2ⁿᵈ person*
-e	-at	-i	-at	*3ʳᵈ person*

The 1SG ending in Common Slavic was *-ǫ, whose reflex in Macedonian dialects is typically *-a*, *-u* or *-ə*. In many dialects, among them the standard language, the ending *-a* has an added *-m*, borrowed from the aj-stem verbs.[22] Where this occurs, the 1PL is typically extended with a final *-e*, likewise borrowed from the aj-stems. In northern dialects, however, the 1PL is typically *-Vme* or *-Vmo*, whatever the form of the 1SG. In a large swath of the Type 2 dialects, from Kratovo in the N all the way to the southern limit of Macedonian, the I and II conjugations have fallen together. This also occurs in some Type 4 dialects, e.g. around Ohrid.

   The third conjugation pattern, namely the aj-stem conjugation, presents problems in its analysis because of the ambiguity of the relationship between stem and ending (see Section 3.1.2.3). The characteristic *-a-* of this conjugation can be treated as the final vowel of the stem or as the first vowel of the ending:

(67) *aj-stem*

SG	PL	
-(a)m	-(a)me	*1ˢᵗ person*
-(a)š	-(a)te	*2ⁿᵈ person*
-(a)	-(a)t	*3ʳᵈ person*

3.1.1.2 Imperfect
In the imperfect the I and II conjugation share the same set of endings, with *-e-* as the first vowel. The aj-stems have instead *-a-*, which is of ambiguous status, as in the case of the present. The 1SG and all plural forms are characterized by the tense marker *-x-* , which is still

[22] The wholesale adoption of the aj-stem pattern, with the 1SG characterized by the same vowel as found in the other present tense endings, is treated separately below at the end of Section 3.1.1.1.

found in some eastern dialects ((68); from Popova 1974). However, this consonant shows considerable variation in Macedonian dialects, and may be realized also as *h*, *j*, *v* or zero. In Standard Macedonian (69) it is zero intervocalically and *v* elsewhere. The forms of the 2SG and 3SG are always identical.

(68) *I, II conjugation*   *aj-stems*

SG	PL	SG	PL	
-ex	-exme	-(a)x	-(a)xme	*1ˢᵗ person*
-eše	-exte	-(a)še	-(a)xte	*2ⁿᵈ person*
-eše	-exa	-(a)še	-(a)xa	*3ʳᵈ person*

(69) *I, II conjugation*   *aj-stems*

SG	PL	SG	PL	
-ev	-evme	-(a)v	-(a)vme	*1ˢᵗ person*
-eše	-evte	-(a)še	-(a)vte	*2ⁿᵈ person*
-eše	-ea	-(a)še	-(a)a	*3ʳᵈ person*

The *-e-* of the I and II conjugations is descended from Common Slavic jat', and in dialects to the E of the jat' isogloss in Bulgaria may display a distinct reflex (namely *æ* or *a* preceded by palatalization) under stress. Other variation in the shape of the imperfect endings will not be of relevance here.

3.1.1.3 Aorist

The inflectional morphology of the aorist is correlated not with the three conjugations just outlined, but rather with stem class distinctions that are typically covert in the present (see Section 3.1.2): stems which end in a vowel or *-j* take a set of endings beginning in a consonant or Ø, while stems that end in an obstruent consonant take endings that begin in a vowel. As with the imperfect, the characteristic marker of all persons beside the 2-3SG in most dialects was originally *-x-*, which shows the same variation as in the imperfect; (70a) shows an archaic eastern pattern with *-x-* (Popova 1974), (70b) the endings of Standard Macedonian. As in the imperfect, the 2SG and 3SG forms are always identical.

(70)   a.   *non obstruent stems*   *obstruent stems*

SG	PL	SG	PL	
-x	-xme	-ox	-oxme	*1ˢᵗ person*
-Ø	-xte	-e	-oxte	*2ⁿᵈ person*
-Ø	-xa	---	-oxa	*3ʳᵈ person*

    b.   *non obstruent stems*   *obstruent stems*

SG	PL	SG	PL	
-v	-vme	-ov	-ovme	*1ˢᵗ person*
-Ø	-vte	-e	-ovte	*2ⁿᵈ person*
-Ø	-a	-e	-oa	*3ʳᵈ person*

In some N dialects the endings of the plural are the same as those found in Serbo-Croatian, namely *-(o)smo*, *-(o)ste*, *-(o)še*, while in the 1SG original *-x-* has disappeared (Vidoeski 1960-61: 16).

3.1.1.4 Imperative

As with the aorist, the imperative is sensitive to stem class but not to conjugation membership. Where the stem alternant ends in -*j* (namely in Vj-stems and aj-stems) the ending is -*Ø* in the singular and -*te* in the plural. Otherwise the singular ends in -*i* and the plural in -*ete* (in Standard Macedonian), -*æte*,-*ite*, or -*ejte*.

(71)

stem in -j	other stems	
-Ø	-i	SG
-te	-ete, -æte, -ite, -ejte	PL

3.1.2 Stem Classes

Verbs are traditionally regarded as having two primary stem alternants—in traditional historical grammars the present and infinitive stems—from which all verb forms may be derived. The present, imperfect and imperative were derived from the present stem, the aorist from the infinitive stem; since Balkan Slavic languages lack the infinitive, the aorist (and participles derived from it) is the sole representative of this second stem alternant. For the present purposes it will be sufficient to distinguish four major stem class divisions, based on the shape of the stem and the relationship between the two stem alternants: (i) vocalic stems; (ii) Vj-stems; (iii) aj-stems; and (iv) obstruent stems. The 3SG present will be taken to represent the present stem, and the 2-3SG aorist will be taken to represent the aorist stem. The chief point of interest here is morphological processes that affect stem-final vowels or the total syllable count of the stem; morphophonemically conditioned alternations in stem *consonants* (e.g. palatalization) will not be discussed.

3.1.2.1 Vocalic stems

The shape of the stem alternates between the aorist and the present stem, the aorist stem ending in a vowel (originally a suffix) which is absent in present stem. This class can be further divided into four sub-classes: (i) a- stem; (ii) sonorant stem; (iii) i-stem; and (iv) jat' stem. The first two belong to the first conjugation, the second two to the second conjugation.

(i)   a-stem. The stem-final vowel is -*a*.

(72)   /kaž + e/   →   kaže   3SG PR 'say'
       /kaža + Ø/   →   kaža   2-3SG AOR

(ii) Sonorant stems. The stem-final vowel is -*a* or -*e*, preceded by a root-final sonorant (*r*, *l*, *n*).[23] In a number of verbs the root contains a fleeting vowel (original jer) which is vocalized in the present and unrealized in the aorist.

Jer Vocalization

(73)   /b<e>r + e/   →   ber + e   →   bere   3SG PR 'take'

Jer Deletion

       /b<e>ra + Ø/ →   bra   →   bra   2-3SG AOR

---

[23] Historically this class also contained verbs lacking a stem-final vowel. While this type is marginally preserved in Standard Bulgarian (*vzema* and *kəlna*), it is not found in Macedonian.

(iii) i-stem. The stem-final vowel is -i.

(74)   /nos+ i/   →   nosi   3SG PR   'carry'
        /nosi+ Ø/   →   nosi   2-3SG AOR

(iv) Jat' stem. The stem final vowel is the reflex of Common Slavic jat' (ě), which in most
     Macedonian dialects has merged with *e* in most contexts (75a). In the SE dialects that
     lie to the E of the jat' isogloss in Bulgaria the reflex of jat' is distinct from *e*, typically *a*
     or *æ* preceded by palatalization. After original palatal consonants (*č*, *ž*, *š*) the reflex of
     jat' is *a* in all dialects (75b).

(75) a.   /let+ i/   →   leti   3SG PR   'fly'
           /letě + Ø/   →   lete   2-3SG AOR

      b.   /drž+ i/   →   drži   3SG PR   'hold'
           /držě + Ø/   →   drža   2-3SG AOR

3.1.2.2 Vj-stems

The present stem ends in *-j* preceded by a vowel. It is important here to distinguish
unsuffixed from suffixed stems, as the treatement of the latter may vary among the dialects.
In unsuffixed stems (76a) the stem-final *-j* is absent in the aorist; note in addition that in
many dialects, including the standard language, a global phonological rule deletes any *j*
before a front vowel, so that it is absent in most forms based on the present stem as well. In
the case of suffixed stems two patterns are found. One is identical to that found in
monosyllabic stems (76b); this is found only in some dialects, and is absent in Standard
Macedonian. Otherwise Vj-stems follow the a-stem pattern (76c); nevertheless, the shared
effects of the stem-final *j* (e.g. in the imperative), warrant including them in the same class
for the present purposes. In many dialects, suffixed verbs can belong to this class as well
(76b). All Vj-stems belong to the I conjugation.

$$j \rightarrow Ø/\_\_V_{front}$$

(76) a.   /čuj + e/   →   čue   3SG PR   'hear'
           /čuj + at/   →   čujat   3PL PR

           /ču + Ø/   →   ču   2-3SG AOR

      b.   /živej + e/   →   živee   3SG PR   'live'
           /žive + Ø/   →   žive   2-3SG AOR
                                              (dialect of Padež/Leško; Popova 1974)

      c.   /živej + e/   →   živee   3SG PR
           /živeja + Ø/   →   živeja   2-3SG AOR
                                              (Standard Macedonian)

3.1.2.3 aj-stems

Historically the aj-stems descend from Vj-stem verbs where V=*a*. In the present and
imperfect the stem-final vowel merged with the first vowel of the ending; thus   *gledaj-e >*

gleda 'looks'.[24] In some dialects, including Standard Macedonian, the 3PL was exempt from this retraction; thus **gleda-at > gledaat*. As a result, the boundary between stem and ending is ambiguous: should *gleda* be interpreted as *gleda-Ø* or *gled-a* ? The evidence afforded by analogical processes suggests that both analyses have been employed in the history of Macedonian. On the one hand the adoption of *-m* in the 1SG present, which was characteristic of the old athematic conjugation, shows that at some point this *a* was construed as the equivalent of the stem-final vowel of athematic verbs; thus **da-š* 2SG: *da-m* 1SG 'give':: *gleda-š* : x, x = *gleda-m*. On the other hand there are some N dialects where the I and II conjugation mimic the aj-stems, in as much as the same vowel is found in all present tense forms (cf. Vidoeski 1960-61):

(77)   *I conjugation*   *II conjugation*   *aj-stem*
        'take'   'carry'   'look'

        berem   nosim   gledam   1SG
        bereš   nosiš   gledaš   2SG
        bere   nosi   gleda   3SG
        beremo   nosimo   gledame   1PL
        berete   nosite   gledate   2PL
        berev[25]   nosiv   gledav   3PL

The levelling of the original vocalic alternation between the 1SG/3PL (cf. Standard Macedonian *beram*, *nosam* 1SG, *berat*, *nosat* 3PL) and the other persons suggests that the *a* of the aj-stem was construed as part of the ending. That is, the 1SG/3PL forms in (77) were arrived at by an analogy on the order of *gled-aš* : *gled-am* :: *nos-iš* : x, x = *nos-im*.   For the present purposes it will in fact be most convenient to represent the present and imperfect endings of the aj-stems as parallel to those of the other two conjugations, with *a* equivalent to I conjugation *e* and II conjugation *i*:

(78)   /gled + a/   →   gleda   3SG PR   'look'
        /gleda + Ø/   →   gleda   2-3SG AOR

3.1.2.4 Obstruent stems.
The root ends in an obstruent consonant. The aorist takes the extended endings (see (70) above).
(78)   /nes + e/   →   nese   3SG PR   'carry'
        /nes + e/   →   nese   2-3SG AOR

---

[24] In some SE dialects not all Vj-stem verbs in *a* underwent contraction; exempt were some verbs with stem-final stress (cf. Schallert 1988: 341). This is typical of Standard Bulgarian as well, e.g. uncontracted *igrʹaja* 'I play' vs. contracted *glʹedam* 'I look'. The distinction is also apparent in the aorist in Standard Bulgarian: uncontracted stems have obligatory stem-final stress, e.g. *igrʹax*, while contracted stems have optional stem final stress: *gledʹax* or *glʹedax*.

[25] The 3PL ending here is descended from *-Vju > -Vu (> -Vv)*.

3.2 General accentual features

3.2.1 Common Slavic accentual classes
In the commonly accepted reconstruction of Common Slavic accentuation (e.g. Dybo 1981, Dybo et al., 1990, 1993, Garde 1976, Stang 1957), stems fall into three accentual classes:

(i)   Columnar accent fixed to the stem (Stang's accent paradigm "a").

(ii) Unaccented stems, in which the position of accent is unspecified (Stang's accent paradigm "c").

(iii) Post-stressing stems, which assign stress to the immediately following syllable (Stang's accent paradigm "b").

These are illustrated below in (80-82), using i-stem verbs. Although the accentual paradigms represent a reconstructed state of affairs, this is illustrated with forms representing the contemporary stage of morphological development as described above (forms adapted from Popova 1974), in order to concetrate solely on accentual features.
In the fixed-accent class stress is bound to a particular stem syllable, and is columnar throughout the paradigm:

(80) Stem-stressed verb (*stavi- 'place')

present	aorist	imperative	
stˈav-a	stˈavi-x		1SG
stˈav-iš	stˈavi	stˈav-i	2SG
stˈav-i(t)	stˈavi		3SG
stˈav-im	stˈavi-xme		1PL
stˈav-ite	stˈavi-xte	stˈav-ete	2PL
stˈav-at	stˈavi-xa		3PL

In the unaccented class, stress is assigned according to the rules of the BAP (cf. Chapter 1, Section 2.1): underlyingly accented affixes are stressed, otherwise default stress is assigned the initial syllable. Forms with default accent are shown in boldface:

(81) Unaccented verb (*lovi- 'catch')

present	aorist	imperative	
lˈov-a	lovˈi-x		1SG
lov-ˈiš	**lˈovi**	lov-ˈi	2SG
lov-ˈi(t)	**lˈovi**		3SG
lov-ˈim	lovˈi-xme		1PL
lov-itˈe	lovˈi-xte	lov-ˈete	2PL
lov-ˈat	lovˈi-xa		3PL

All endings in the present, imperfect, aorist and imperative are underlyingly accented except for those of the 1SG present and the 2-3SG aorist (recall that the latter has a zero ending in all stem classes except obstruent stems). Originally all the non-zero endings terminated in a vowel, which itself was the underlyingly accented element. However, a series of stress retractions occurred within Common Slavic that obscured the transparency of this system, at

least in the aorist. As a result, the endings of the aorist are prestressing, their inherent accent being realized on the preceding syllable.

The original characteristics of the post-stressing class are difficult to determine precisely, since these verbs do not appear to have been post-stressing in all forms; non post-stressing forms are shown in boldface:

(81) Post-stressing verb (*moli- 'pray')

present	aorist	imperative	
mol-'a	mol'i-x		1SG
m'ol-iš	mol'i	mol-'i	2SG
m'ol-i(t)	mol'i		3SG
m'ol-im	mol'i-xme		1PL
m'ol-ite	mol'i-xte	mol-'ete	2PL
m'ol-at	mol'i-xa		3PL

This class is made up of originally accented stems whose root vowel was short or had circumflex pitch. Through a development analogous to Saussure's Law (cf. Chapter 1, Section 2.1.2), stress was advanced to the following syllable, producing a class of stems which assign stress to endings. The difficulty comes in determining the conditions on this stress shift. In earlier reconstructions (Stang 1957, Dybo 1981, Dybo et al. 1990) it was assumed that stress shifted onto any following vowel, in contrast to Saussure's Law, where the shift occurred only onto vowels with acute pitch. Forms with accent on the stem would then have been the result of later retractions. More recently however Dybo et al. (1993) has suggested that these shifts were in fact conditioned by the presumed pitch (and length) of the following vowel. Further, it is claimed that the stress shift can be divided into a number of stages as a result of the incremental relaxing of the conditions on stress advancement. This process was still underway in late Common Slavic, so that different areas of Slavic represent different stages. According Dybo et al. (1993) NE Macedonian and S Serbian dialects were particularly advanced, with post-stressing accentuation manifested in the greatest range of environments.

3.2.2 Common Balkan Slavic developments

A few post-Common Slavic developments are shared by the other Balkan Slavic languages:

(i)   In aj-stem verbs with original stem-final stress, the vowel contraction characteristic of this class was accompanied by a retraction of stress to the preceding syllable; thus *pit'aeš > p'itaš 'you ask'. This is typical of all of Balkan Slavic, and similar developments are seen throughout S and W Sl (cf. Vaillant 1950: 261). While in some cases, e.g. in Serbo-Croatian, stress retracted only onto a preceding long vowel, in Balkan Slavic retraction was more general; for the present purposes it can be considered

global.[26] Apparent exceptions to this in SE Macedonian dialects probably stem from more recent contractions.[27]

(ii) In the aorist in late Common Slavic accented endings assigned stress to the syllable preceding the tense marker *-x-/-s-/-š-*. The direct reflex of this is found in Balkan Slavic in all unaccented stems of all classes except obstruent stems, where stress is shifted back a further syllable. In this feature Balkan Slavic contrasts with Serbo-Croatian, where obstruent stems behave like other stems. Compare the behavior of an unaccented vocalic stem (*gasi-* 'extinguish') and obstruent stem (*nes-* 'carry') in Bulgarian and Serbo-Croatian:[28]

(82)   Bulgarian   Serbo-Croatian

vocalic	*obstruent*	*vocalic*	*obstruent*	
gasˈix	nˈesox	gasˈih	nesˈoh	1SG
gasˈixme	nˈesoxme	gasˈismo	nesˈosmo	1PL
gasˈixte	nˈesoxte	gasˈiste	nesˈoste	2PL
gasˈixa	nˈesoxa	gasˈiše	nesˈoše	3PL

The distinct accentual behavior of obstruent stems in Bulgarian and Macedonian is presumably not to be separated from their distinct morphology. The extended aorist endings are in fact an innovation in the obstruent stems; originally they were characterized by a shorter set of endings, some syllablic and some not; cf. the sigmatic aorist forms of *nes-* in Old Church Slavic: *něsŭ* 1SG, *něsomŭ* 1PL, *něste* 2PL, *něsę* 3PL. Since the accentual properties of these earlier aorist formations are unknown, it is impossible to say how the contemporary systems developed. The end effect, though, is that the *-o-* of the obstruent stem aorist is prestressing in Balkan Slavic.

(iii) In post-stressing verbs final stress is not found in the 1SG present anywhere in Balkan Slavic; thus **molˈa* is not attested.

Incorporating the more local developments described, the expected reflexes of the three original Common Slavic accentual types in Balkan Slavic are shown below.

(i) Stem-stressed verbs have columnar stress in all forms:

---

[26] In at least one Torlak dialect adjacent to Macedonian unretracted stress is found in some stems with original short vowels, e.g. *citˈaš* 'you read' (Alexander 1975: 497), suggesting that the length of the preceding vowel was originally a factor here too. In Bulgarian this condition seems to have obtained in the n-participle, e.g. *pˈitan* 'asked' vs. *kopˈan* 'dug' -- originally **pi:tˈan* vs. *kopˈan* (Stankiewicz 1993: 177)

[27] For example, in Suxo/Visoka Vj-stems in general are subject to contraction in some forms of the present (cf. Gołąb 1960-63: 152), e.g. *blandˈæja* 1SG ~ *blandˈæš* 2SG 'err', *ˈigraja* ~ *igrˈaš* 'play' (Małecki 1934-36: 8); such contraction seems to be sporadic.

[28] Following Stankiewicz (1993) Serbo-Croatian forms will here be represented according to their underlying accentuation, not surface stress, whereby rising pitch is construed as accent on the following syllable.

(83) (a-stem *pl'aka-* 'cry'):

present	aorist	
pl'ač-a	pl'aka-x	1SG
pl'ač-eš	pl'aka	2SG
pl'ač-e	pl'aka	3SG
pl'ač-em	pl'aka-xme	1PL
pl'ač-ete	pl'aka-xte	2PL
pl'ač-at	pl'aka-xa	3PL

(ii) In unaccented stems the accented present tense endings bear stress on their final syllable, while the endings of the aorist are prestressing. Default initial stress appears in the 1SG present and in the 2-3SG aorist, which lack accented endings. Obstruent and non-obstruent aorists display superficially different behavior due to their differing morphologies.

(84)a. Non-obstruent stem (jat' stem *goræ-* 'burn)

present	aorist	
g'or-a	gor'e-x	1SG
gor-'iš	gor'e	2SG
gor-'i	gor'e	3SG
gor-'im	gor'e-xme	1PL
gor-it'e	gor'e-xte	2PL
gor-'at	gor'e-xa	3PL

b. Obstruent stem (*pek-* 'bake')

present	aorist	
p'ek-a	p'ek-ox	1SG
peč-'eš	p'eč-e	2SG
peč-'e	p'eč-e	3SG
peč-'em	p'ek-oxme	1PL
peč-et'e	p'ek-oxte	2PL
peč-'at	p'ek-oxa	3PL

It should be noted that the unaccented type only appears with verbs whose present stem is monosyllabic (not counting prefixes). This excludes all suffixed Vj-stems (and by implication the aj-stems, which historically descend from them) and vocalic stems with polysyllabic roots (e.g. the i-stems *veseli-* 'make merry', *raboti-*'work') from the unaccented class.

(iii) Post-stressing stems alternate accentually between the aorist and present stems. In the aorist the root assigns stress to the following syllable, which may be the stem-final syllable (in vocalic stems (85a)) or the ending (in obstruent stems (85b)). In the present, stress falls on the stem-final syllable outside of the 1SG.

(85)a. vocalic stem (i-stem *govorˈi- 'speak')

present	aorist	
govˈor'-a	govorˈi-x	1SG
govˈor-iš	govorˈi	2SG
govˈor-i	govorˈi	3SG
govˈorim	govorˈi-xme	1PL
govˈorite	govorˈi-xte	2PL
govˈor'-at	govorˈi-xa	3PL

b. obstruent stem (*idˈ_- 'go')

present	aorist	
ˈid-a	id-ˈox	1SG
ˈid-eš	id-ˈe	2SG
ˈid-e	id-ˈe	3SG
ˈid-em	id-ˈoxme	1PL
ˈid-ete	id-ˈoxte	2PL
ˈid-at	id-ˈoxa	3PL

3.2.3 Developments common to all Macedonian dialects

The accentual classes outlined above do not appear in a pure form in any of the Macedonian Type 1 dialects. The primary deviations are: (i) the generalization of initial stress in the 1SG present; (ii) the elimination of initial stress in the 2-3SG aorist; (iii) the grammaticalization of imperative accentuation; and (iv) the correlation of prefixation and stem stress.

3.2.3.1 1SG present

In the 1SG present, the accentuation of unprefixed verbs with monosyllabic present stems as described above is superficially identical for all accentual classes; thus stem-stressed *plˈača* like unaccented *gˈora* and post-stressing *pˈiša*. In prefixed or polysyllabic stems however one should expect at the very least a contrast between the initial stress of unaccented stems and the stem stress of stem-stressed verbs, e.g. unaccentedˈ*izgora* with default initial stress vs. **zaplˈača* with stem stress. Instead, Macedonian Type 1 dialects typically display stress on the initial syllable regardless of the accentual class, e.g. the stem-stressed *rˈazvesela se* 'cheer up' (cf. *razvesˈeli se* 3SG). This is a feature they share with adjacent portions of Torlak and most of Bulgarian outside of the Balkan and Moesian dialects (cf. Alexander 1983: 44). It seems to be correlated with aspect: derived imperfectives (invariably aj-stems) are not affected in any of the dialects. Therefore, in the most restrictive system, initial stress seems to be a marker of perfective aspect (Alexander 1983).

However, in at least one dialect initial stress has been partly extended to underived polysyllabic imperfective verbs as well: in Padež and Leško, near Blagoevgrad, suffixed Vj-stem verbs regularly have initial stress in the 1SG present, e.g. *žˈivea* 1SG ~ *živˈeeš* 2SG 'live' (Popova 1974). Other stem classes, however, are unaffected, e.g. *rabˈota*, *vesˈela*. Initial stress in a suffixed Vj-stem is also found in one example from Suxo, ˈ*igrajam* 1SG~ *igrˈaš* 2SG 'play', but is not typical, e.g. *blandˈæja* 1SG ~ *blandˈæš* 2SG 'err', *pikˈajam* 1SG ~ *pikˈaiš* 2SG 'piss' (Małecki 1934-36; see fn. 27 for a discussion of these forms). Although it seems clear that the suffix is a factor in this accentuation, the reason for the extension of initial stress to this environment alone is not obvious.[29]

---

[29] Various possibilities offer themselves, but are none too satisfying: (i) Initial stress has been extended to (non-secondary) imperfectives, but is ranked such that it overrides only accent on the

What does the extension of initial stress in the 1SG present tell us about the status of the BAP? Under the BAP initial stress represents default accentuation, found where the form is underlyingly unaccented, yet here lexically marked stress is overridden. One possible interpretation is that this represents a grammatically-induced dominance cophonology, whereby prespecified stress on the stem is deleted. Since the 1SG ending itself is unaccented, the BAP would then assign initial stress. However, there are a number of other developments, especially those that characterize the transition from Type 1 to Type 2 dialects, that suggest the BAP in verbs is only operative in the imperative; elsewhere the default position is rather the stem-final syllable. Significant in this respect are southern Type 1 dialects in which initial stress in the 1SG is only sporadically applied, namely Suxo, Savek (cf. Schallert 1988: 342; Gołąb 1960-63: 255), and, to a lesser extent, Visoka. Here, both accented and unaccented stems frequently lack initial stress in the 1SG present; e.g. unaccented *nag'otv'a* 1SG ~ *nagotv'iš* 2SG 'cook' (Visoka). The appearence of stem stress in the 1SG here is most easily explained by assuming that this is simply the default position.

3.2.3.2 2-3SG aorist

The other area where default initial stress would have been expected is the 2-3SG aorist of unaccented stems, since the ending is unaccented (be it -Ø or -*e*). In one small area of Macedonian this has received essentially the same treatment as the 1SG, present, with initial stress being found in perfective verbs (Skopska Crnogorja to Sveti Nikole, map M3). However, it has been extended to the first person singular as well, e.g. *'ozelene* 1-3SG vs. *ozelen'emo* 1PL 'plant' (Vidoeski 1954), which coincides with the phonologically regular collapse of segmental phonology of both singular forms (due to the loss of word-final -*x* in the 1SG).[30] In Type 2 dialects this accentuation is typically optional, e.g. *z'apali* or *zapal'i* 'light' 1-3SG (Vidoeski: 1962: 114); in the Type 3 dialects to the W initial stress in the aorist singular is more regular. Since this accentuation occurs only in Type 2 and Type 3 dialects, it is naturally unconnected with accentual class distinctions, which do not exist in these dialects.

Traces of what might be interpreted to have been initial stress in the singular are also found much further to the S, in the Type 3 dialects of Popəlžani, e.g. *p'ostoja* 1-3SG, *postoj'ame* 1PL, *postoj'ate* 2PL, *postoj'aa* 3PL 'stand; exist' (MDA), where only one verb shows this pattern, and Buf, where it is unclear whether such a pattern is an archaism or induced by the prosodic constraints (cf. Section 2.8.3). From the SE there are some isolated examples of retraction to the root syllable in the 2-3SG: *zabrav'ix* 1SG ~*zabr'avi* 2-3SG 'forget', *krast'ix* 1SG~*kr'asti* 2-3SG 'christen' (Negovan; MDA); *narend'ix* 1SG ~ *nar'endi* 2-3SG 'arrange' (Suxo; Małecki 1934-36).

Otherwise there are no regular examples of a contrast between the 2-3SG and the other aorist forms in unaccented stems;[31]   stress is typically columnar throughout the aorist
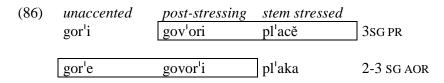
---

suffix but not accent on the root, thus *ž'iv-ej-a* but *rab'ot-a*. However, inherently accented suffixes are typically robust in Macedonian dialects; witness the behavior of accented -*ir*- in Standard Macedonian, which is responsible for the only deviations from default accentuation in the finite verb system, e.g. *telefon'iram*; (ii) There is an output-output correspondence relationship between the imperative singular and 1SG present. In Padež and Leško at least, the imperative of these forms is likewise stressed on the initial syllable, e.g. *ž'ivej* like *ž'iveja*, which follows from a ban on final stress (cf. Section 3.2.3.2.1). Why the one form should depend on the other though would be hard to explain. Unfortunately, data on such stems in dialects that otherwise have grammaticalized initial stress in the 1SG present is scanty.

[30] Such accentuation is found in the neighboring Torlak dialects, where the contrast between 1SG and 2-3SG is maintained (Alexander 1975).

[31] The alternation found in Delčevo (see fn. 38) I take to be secondary.

paradigm.   However, the interpretation of the data is problematic.   As discussed below (Section 3.3.1), accentual class distinctions in the aorist are maintained only in the extreme SE dialects.   The sources for these dialects rarely give complete verb paradigms, so unambiguous examples of unaccented verb stems (as determined by the behavior of the present) in the aorist are hard to come by.   Nevertheless, it seems probable that the normal accentual pattern for unaccented verb stems is columnar stress on the stem-final syllable.   For example, Mirčev (1936) notes that in the aorist of jat' stems, stress regularly falls on the stem-final syllable throughout the aorist;   judging by their present tense forms, this whole stem class is inherently unaccented. The simplest way to account for this pattern is to assume that stem-final position is the default;   i.e., that the BAP is not in operation.

One of the consequences of these changes in the aorist of unaccented stems—and perhaps at the same time one of the motives—is their superficial merger with the post-stressing stems in the aorist in all stem classes other than obstruent stems.   In those Type 1 dialects that preserve reflexes of the three original accentual classes, namely those of the SE, there are only two patterns found in either the present or the aorist.   The fact that three accentual classes are still distinguishable is due to the differing relationships of the present and aorist: in the present, stem-stressed and post-stressing stems are identical, while in the aorist, post-stressing and unaccented stems are identical:

(86)   *unaccented*   *post-stressing*   *stem stressed*
       gor'i   gov'ori   pl'acě   3SG PR

       gor'e   govor'i   pl'aka   2-3 SG AOR

3.2.3.3 Imperative
In Common Slavic it is presumed that the imperative endings were underlyingly accented, so that one would expect to find the ending stressed with unaccented and post-stressing verbs, while stem-stressed verbs would naturally have stem stress.   This is the state of affairs still found in, e.g. Standard Serbo-Croatian.   In Balkan Slavic,   however, accentual class distinctions are not found in the imperative, at least when formed with the vocalic endings. This construction seems to constitute a dominance cophonology, in which the stress lexically specified by the stem is superseded by the ending.   The ending may be underlyingly accented or unaccented.   Here, though, in contrast to the present and aorist, the BAP still appears to determine the default position: where the ending is unaccented, most dialects display initial stress.   In some dialects (in the N, parts of the SW and optionally around Kukuš and Dojran), stem stress appears instead (see Map M4).

3.2.3.3.1 Vocalic endings
One of the major isoglosses in Balkan Slavic is that which divides E Bulgarian, where the singular ending *-i* is underlyingly accented, from W Bulgarian, Macedonian and Torlak Serbian, where it is unaccented.   In NW Bulgarian there is a transitional zone where the ending is stressed in prefixed/polysyllabic forms only, while disyllabic forms have initial/stem stress, e.g. *naber'i* 'gather!' but *b'eri* 'take!' (cf. Dybo et al. 1993 and references therein).   This suggests that the state of affairs in E Bulgarian is original, with unaccented *-i* resulting from the retraction of final stress, originally only in disyllabic forms (see Section 2.7.2).

In the plural, there morphological variation in the endings is mirrored in the greater complexity of its accentuation (cf. map M4).

(i)   The ending *-ete* is found all through the N, as well as in the Type 3 dialects bordering on the Type 4 from Veles in the N all the way to the SW limit.

(ii)   The ending *-ite* is found in the SE and in a wide band of dialects from Kratovo in the NE all the way to the SW-most limit of the Type 3 dialects.

(iii) The endings *-ejte* and *-æte* are found in a compact area in the S. To the N the range of these endings extends roughly as far W as the border between the Type 1 and 2 dialects, to the S they extend as far as the Type 2-3 border.

(iv)   There is a small area in the SW where the imperative plural is non-vocalic (*-te*) with all stem classes. This presumably resulted from the elision of unstressed vowels.

The endings *-ejte*,*-æte* and *-ite* show consistent accentual behavior, while *-ete* is variable. The endings *-ejte* and *-æte* [32] are invariably stressed, e.g. *nesˈejte*, *nesˈæte*, while *-ite* is invariably unstressed, e.g. *nˈesite*. The ending *-ete* is stressed immediately to the N and NE of the zone where *-ejte* and *-æte* are found, e.g. *nesˈete*, while otherwise it is unstressed, e.g. *nˈesete*. Thus there is a compact area where the imperative plural ending is underlyingly accented, while elsewhere it is underlyingly accented.

   In some cases accented endings appear to be associated with an additional initial stress, such as is otherwise found only with unaccented endings. This occurs in some Type 1 dialects that allow DA, e.g. with the ending *-ajte*; *dˈonesˈʲajte* alongside *dˈonesite* (Sekavec; Vidoeski 1990), or optionally with *-ete*, e.g. *zˈa rabotˈɛte* 'work!' alongside *zarabotˈɛte*; *zˈakatarˈɛte se* 'start climbing!' alongside *zakatarˈɛte se* (Razlog; Molerov 1905). It could be that there is a low-ranked output-output constraint tying the stress of the plural to that of the singular, since in both the dialects the singular occurs with initial stress.[33]

3.2.3.3.2 Non-vocalic endings
In those stem classes that take non-vocalic endings (namely the Vj- and aj-stems), there is a split between the behavior of imperfective and perfective stems. Among imperfective stems, lexically specified stem stress is found. This may be disrupted in certain contexts:

(i)   Among the suffixed Vj-stems, which bear underlying accent on the suffix, absolute final stress may be retracted e.g. *žˈivej* IMP SG, with retracted final stress, vs. *živˈejte* IMP PL, *živˈee* 3 SG PR 'live' (Popova 1974). In other dialects though stem-final stress may remain unaffected, e.g. *bləndˈʲæj* 'err!', *igrˈaj* 'play!'[34] from Suxo/Visoka (Małecki 1934-36); *belˈej* 'become white!' from Berovo (Gabor 1979); unfortunately, the data are too scanty to say much more.

---

[32] Further to the E there are occasional isolated dialects with unstressed *-ejte* (cf. BDA III, 147, 148).

[33] The examples from Razlog, as well as from dialects further S, e.g. *zˈabeležˈʲete* 'notice!' (BDA III, 148), could otherwise be considered counterexamples to the claim that NOINTERVENE-LEFT orients secondary feet in Type 1 dialects; if these represented cases of initial stress with prosodically motivated secondary stress, then NOINTERVENE-LEFT would place the stress rather on the penultimate syllable, e.g. **zˈarabˈotɛte* rather than *zˈarabotˈɛte*. However, if stress on the ending here is not prosodically motivated, it can tell us nothing about prosodic alignment.

[34] Note that *igraj* is a Vj-stem verb in this dialect, and not an aj-stem.

(ii) The stress of the aj-stems is typically stem-penultimate, corresponding to the present, e.g. *krəšt'avajte* 'christen!' like *krəšt'avam* 1SG PR (Popova 1974).[35] However, in most of the dialects where I and II conjugation verbs have the stressed imperative plural ending -*ejte,* the aj-stems follow suit, e.g. *kup'uvaj ~ kupuv'ajte* 'buy!' like *n'osi ~ nos'ejte* (Bojkovska 1992).[36]

Perfective verbs, which are invariably prefixed among the stem classes in question, display initial or prefix stress in the singular, which overrides lexically specified stem stress. This indicates the complete grammaticalization of perfective imperative accentuation.

3.2.3.4 Correlation of prefixation and stem stress

In various parts of Macedonian speech territory the accentual behavior of monosyllabic roots is affected by prefixation (itself typically correlated with perfectivization). This is manifested in three contexts: (i) the present; (ii) the aorist; and (iii) derived verbs with the suffix -*uv-*.

In the present tense, verbs which are unaccented when unprefixed have stem stress when prefixed; e.g. *per'e* 'washes (imperfective)' but *isp'ere* (perfective) (Gabor 1979); cf. also Schallert 1988: 358; Alexander 1983: 45). This is a regular phenomenon in northern Type 1 dialects (see map M2). In at least one dialect (Kərlandovo, near Melnik), proclitics have this effect as well, e.g. *vərn'e* 'returns' but *k'e=v'ərne* 'will return', *vərz'e* 'binds' but *go=v'ərze* 'binds it' (Dybo et al. 1993: 40).

In the aorist, verbs which have post-root (=stem-final) stress when unprefixed have root (i.e. stem-penultimate) stress when prefixed. This is manifested in many imperfective (IMPFVE) ~ perfective (PFVE) pairs, e.g. *pas'ix* 'I grazed' IMPFVE vs. *pop'asix* PFVE (Małecki 1933b: 123); *kaln'ax* 'I swore' IMPFVE vs. *zak'alnax* PFVE, *mis'ix* 'I kneaded' IMPFVE vs. *razm'esix* PFVE (Negovan; MDA). This is found in the S Type 1 dialects of Sekavec and Negovan, and affects only some verbs. In Sekavec, judging from the data given by Vidoeski (1990), out of sixteen unprefixed non-obstruent stems, all have stem-final stress in the aorist, while only four out of the ten prefixed aorists do. In Negovan, where final (SG) ~ penultmate (PL) accentuation in the aorist has been extended to obstruent stems as well (see below 3.3.2.1), out of 70 verbs, only 21 have stem stress, and all are prefixed, e.g. *naj'adux* 'I ate' PFVE vs. *jad'ox* IMPFVE; these data come from Małecki (1933b), Vidoeski (1991) and the MDA. The northern dialect of Preod, whose verb system follows the Type 2 pattern, displays a phenomenon which appears to be similar. While unprefixed verbs typically have final stress in the aorist singular, prefixed verbs have penultimate stress, e.g. *jad'o* 'I ate' IMPFVE but *iz'edo* PFVE; *drž'a* 'I raised' IMPFVE but *zad'rža* PFVE; *strig'o* 'cut' IMPFVE but *ostr'igo* PFVE; *kəln'a* 'I swore' IMPFVE but *zak'əlna* PFVE (MDA). Only syllabic prefixes seem to have

---

[35] Note that the underlying stress of aj-stems not having the suffix -*uv-* should be stem-final (Section 3.1.2.3). Stem-penultimate stress in the imperative must be the result of a common Balkan Slavic morphological innovation, whereby the phonologically regular retraction of stress in the present is mirrored in the imperative (Stankiewicz 1993: 177). In some northern Type 1 dialects there is possible evidence of the retention of a lexical distinction between stem-final and stem-penultimate stress in the imperative, e.g. the plural forms *kup'uvajte* 'buy!', with stem-penultimate stress, vs. *vik'ajte* 'call!', with stem-final stress (Trabovište; MDA).

[36] Further to the N, where the I-II conjugation ending is stressed -*ete*, there are sporadic examples of stressed -'*ajte* in aj-stem verbs (Nivičino, Trabovište (MDA), Kočani (Vidoeski 1954). While this may be the result of a generalization of penultimate stress in the imperative plural, it may also be evidence of the absence of present-imperative accentual correspondence (see preceding footnote) in these dialects; i.e. this accentuation may represent the retention of archaic stem-final stress in the imperative.

this effect; e.g. *don'eso* 'I brought' but *snes'o* 'I laid (an egg)'. In the plural, though, all verbs have penultimate stress, e.g. *zadrž'amo* 'we held' PFVE like *drž'amo* IMPFVE. This is adjacent to the area where prefixed aorist forms have initial stress in the singular, so it is tempting to see a connection, though it is not clear what that might be.

In verbs formed with the derivational suffix -*uv*-, stress typically falls on the suffix when unprefixed but on the root when preceded by a syllabic prefix, e.g. *sretn'uva* 'meets', *men'uva* 'changes', *legn'uva* 'lies down', *vid'uva* 'sees', *zajd'uva* 'goes down' vs. *nar'ečuva* 'calls', *zam'rsuva* 'entangles' (Vinica; MDA); *zəm'uve* 'hibernates', *pušč'uve* 'releases', *kup'uv*e 'buys' vs. *nər'əčuve* 'calls', *sub'oruve* 'knocks down', *pərk'ažuve* 'shows' (Peev 1979). This obtains throughout the Type 1 and Type 2 dialects.

The relationship between prefixation and stress in the present tense is familiar from other Slavic languages. It is found in various forms throughout Serbo-Croatian, where typically it is correlated with the length of the root vowel: only roots with a short vowel are affected (Dybo et al. 1993: 40), and in some cases stem-class as well (Stankiewicz 1993: 139-40). Ukrainian likewise shows this contrast in some verbs (Dybo et al. 1993: 32). In the aorist, this relationship between prefixed and unprefixed form is regular in many W Bulgarian dialects, where it affects all stem classes except jat' stems (cf. Alexander 1983). Dybo et al. (1993) attributes this distribution to a late Common Slavic stress shift, part of the same development which yielded post-stressing stems. On this account, stress shifted from initial short syllables onto following short syllables, but not from internal short syllables, e.g. from an original pair **d'erži* ~ *zad'erži*, stress shifted only from initial position, thus *derž'i* ~ *zad'erži*. Thus it would have been restricted to a limited number of verbs. However, in the present it has either been eliminated or extended to all prefixed verbs, including asyllabic prefixes, e.g. *ber'e* 'takes' vs. *zb'ere* 'gathers' (Vidoeski 1954). The aorist contains only relics of such a system in a limited area.

3.3 Collapse of accentual classes within Macedonian

3.3.1 Grammaticalization of aorist accentuation within Type 1

The imposition of grammaticalized accent patterns and the realignment of default stress to the stem-final syllable, though reducing the distinct characteristics of each of the original three accentual classes, still leaves the classes as such intact. However, the original three-way distinction is characteristic of only a part of the Type 1 dialects, namely those of the SE (Goce Delčev, Drama, Suxo, Visoka; see map M3). Outside of this area the realization of accentual classes among non-obstruent stems is restricted due to the establishment of a grammaticalized accent pattern in the aorist.

In Type 1 dialects outside of the SE, stem-stressed verbs have adopted stem-final stress in the aorist. This can be seen in the contrast between the neighboring dialects of Drama, with the more archaic system, and Ser, with the innovative system:

(87)	*Drama*	*Ser*			
stem-stressed	d'ign-e	d'ign-e	3SG PR	'raise'	
	d'igna	<u>dign'a</u>	2-3SG AOR		
post-stressing	pl'at-i	pl'at-i	3SG PR	'pay'	
	plat'i	plat'i	2-3SG AOR		
unaccented	sed-'i	sed-'i	3SG PR	'sit'	
	sed'e	sed'e	2-3SG AOR	(Ivanov 1977: 137)	

With all non-obstruent stem verbs displaying stem-final stress in the aorist, only two distinct accentual classes remain, since the distinction between stem-stressed and post-stressing verbs has been effaced.

Note that though original stem-stressed verbs seem now to follow the post-stressing pattern, this innovation cannot be attributed to the generalization of the post-stressing type as such, since some of the resulting patterns are new. That is, since stem-stressed verbs can bear lexically marked stress on any stem syllable, stress may alternate between the stem-penultimate syllable in the present and stem-final syllable in the aorist, e.g. *dov'eruv-a* 3SG PR ~ *doveruv'a* 2-3SG AOR 'trust' (Popova 1974). Such a pattern is not found in the original post-stressing stems, which are invariably stressed on the stem-final syllable. Instead, it would appear that aorist accentuation has been grammaticalized, whereby the tense itself assigns stem-final stress. It may be that the model for that was a reinterpretation of the original post-stressing alternation as the result not of a retraction of stress in the present, but rather of an advancement in the aorist.

Obstruent stems remain unaffected by these developments. Given their particular morphology, the generalization of stem-final stress in the aorist should in fact leave most obstruent stems unaffected. The vast majority are unaccented, and have stem-final stress in any case, e.g. *ved-'e* 3SG PR ~ *v'ed-e* 2-3SG AOR 'lead', as do stem-stressed verbs, e.g. *fl'ez-e* 3SG PR ~ *fl'ez-e* 2-3SG AOR 'enter'. Only the post-stressing stems diverge, e.g. *'i-de* 3SG PR ~ *id-'e* 2-3SG AOR 'go' (Popova 1974: 69); since however post-stressing accentuation seems to be limited to two stems (*id-* and *vid-* 'see'), the assertion that aorists are stressed on the stem-final syllable in Type 1 dialects outside of the SE is nearly without exception.

3.3.2 From Type 1 to Type 2
The Type 2 dialects are distinguished from the Type 1 dialects by two chief features: (i) in the aorist, a single accent pattern obtains for all stem classes. (ii) in the present, all verbs have columnar stem stress.

3.3.2.1 Generalization of aorist accentuation
At the W periphery of the Type 1 dialects, obstruent stems tend to display stress on the aorist endings, e.g. the stem-final stress characteristic of stem-stressed and unaccented verbs is replaced by stress on the ending, e.g. *rek'ox* 1SG, *reč'e* 2-3SG 'said' in place of *r'ekox*, *r'eče*; see map M3. This suggests that the morphological distinction between obstruent and non-obstruent stems has ceased to be relevant. That is, aorist accentuation no longer targets the stem-final syllable, but is instead simply positionally determined, targeting the final syllable in the singular and the penultimate syllable in the plural.

Nevertheless, there are vestigial traces within the Type 2 and even Type 3 dialects of a distinction between obstruent stems and others; e.g. in Kulakia, a Type 2 dialect, columnar stem-final stress is found in the aorists of *rek-* 'say', *otid-* 'go' (Vaillant and Mazon 1938). In the Type 3 dialect of Neolani, columnar stem stress occurs in *ized-* 'eat up', *rek-* 'say', *vid-* 'see', *dones-* 'bring', *izleg-* , *zleg-* 'lie down', *zanes-* 'carry away' (Mazon 1923); note also that in Neolani, the root *-id-/-jd-*, 'go' which is typically post-stressing in the Type 1 dialects (cf. Gabor 1979: 208), invariably shows stress on the ending.[37]

---

[37] Note that stress never falls on final syllables in the aorist in this dialect, so that the equivalent of stress on the ending is fixed penultimate stress. A few non-obstruent aorists pattern with the obstruents, displaying columnar stem-penultimate stress throughout, e.g. *napr'avi* 2-3SG ~ *napr'avia* 3PL 'made'; likewise *vrna* 'return', *pobegna-*'run', *sobra-*'gather' and *tepa-* 'kill'. In Preod *vrna-*is the only non-obstruent unprefixed aorist to display fixed penultimate stress. Note that two of the non-obstruent examples contain the *-na-* suffix. In Type 1 with lexical stress in the aorist (e.g. Goce

The isogloss for the generalization of final ~ penultimate stress in the aorist of obstruent stems corresponds closely to that which marks the elimination of stress on the ending in the present (see below; also map M2), and it has been suggested that this development in the present was the motivation for the refashioning of aorist accentuation (cf. Vidoeski 1954: 12-13). That is, with stem stress established in the present, the accentuation of the aorist was universally opposed to it. This could be construed as the extension of tendencies found in the Type 1 dialects outside the SE; although the accentual oppositon of present and aorist was not universal, it characterized all accentual classes except unaccented non-obstruent stems and stem-stressed obstruent stems.

However, the data are somewhat contradictory. Positive evidence for this interpretation comes from the root *pas-* in Gratče. This is an unaccented root, but in this dialect prefixed verbs are always stem stressed (cf. 3.2.3.3). In the aorist the prefixed form has the innovative accentual pattern and the unprefixed form the older pattern:

(88)   *unprefixed*   *prefixed*
        pas'e   nap'ase   3SG PR   'graze'
        p'asox   napas'ox   1SG AOR   (Gratče; MDA)

That is, the innovative pattern has been extended first where it will produce a present ~ aorist opposition. But some verbs in this same dialect have extended the innovative final (SG) ~ penultimate (PL) pattern, even while retaining stress on the ending in the present, e.g. *reč'e* 3SG PR ~ *reč'e* AOR. Similarly in Delčevo (Kuševski 1958) final (SG) ~ penultimate (PL) has been extended to obstruent aorists, even though they typically retain stress on the ending in the present, e.g. *peč'e* 3SG PR, *pek'ox* 1SG AOR 'bake'. However, final stress has *not* been extended to the 2-3SG aorist, e.g. *p'eče*. That is, final (SG) ~ penultimate (PL) stress has been generalized throughout the aorist in all forms *except* for the one which is formally identical to one of the present tense forms.[38] Although the opposition of present to aorist plays a role in the resistance of the 2-3 to the accentual innovation, the innovation itself is independent of the accentuation of the present. Likewise, Ivanov (1977: 137) reports that final (SG) ~ penultimate (PL) stress predominates among obstruent stems in Ser, but that stress on the ending is still typical of the present (p. 171). These facts suggest that although a present ~ aorist opposition resulted from the generalization of final (SG) ~ penultimate (PL) stress, it was not the primary motivation, since the innovations in the aorist as often as not precede those of the present.

Delčev) this suffix seems to be associated with stem stress, which suggests this behavior in Neolani is an archaism.

[38] Note that this alternation looks like the one produced by initial/prefix stress in the 2-3SG, and it might be argued that e.g. *rek'ox ~ r'eče* in Delčevo has the same source as *rek'oh ~ r'eče* in Serbo-Croatian, i.e. it is a reflex of the alternation originally characteristic of unaccented stems. Two facts argue against this interpretation:
(1) Where this alternation does occur in obstruent stems in neighboring dialects, i.e. Torlak and Bulgarian, it invariably entails prefix stress in the 2-3SG vs. stem final stress elsewhere. Unprefixed stems invariably have columnar stress.
(2) Nowhere else is this alternation limited to obstruent stems.
Under the present account the reason for the limitation of this alternation to obstruent stems is clear. Less clear is the fact that this alternation may characterize prefixed verbs as well; in this dialect prefixed stems invariably have stem stress in the present (cf. Section 3.2.3.3); thus *dot'eče* PR vs. *dotek'ox* 1SG AOR, *dot'eče* 2-3SG AOR 'flow to'. In this case the alternation creates rather than eliminates ambiguity.

3.3.2.2 Generalization of stem stress in the present

Unaccented stems retain their distinct behavior in the present and imperfect throughout the Type 1 dialects. They are best represented in the SE dialects (e.g. Suxo, Visoka, Plevna, Gorno Brodi, Drama, Goce Delčev), where this class is found not only among obstruent stems and jat stems, but also a small number of a-stems, i-stems and unsuffixed Vj-stems. Outside of this area the remaining Macedonian dialects lack unaccented i-stems completely (cf. Alexander 1983, Schallert 1988).

At the Type 1-Type 2 border however the unaccented stems adopt stem stress, thus merging with the other accentual class (see map M2). This is reflected not only in the present but in the imperfect. Although accent classes are absent in the Type 2 dialects, lexical specification of stress is still possible, in as much as which stem syllable stress will fall on may be specified. The fact is though that most verbs have stem-final stress, the only notable exception being aj-stem verbs with the suffix *-uv-*, which typically have stem-penultimate stress in the present when prefixed (cf. Section 3.2.3.3).

As with the elimination of distinct accentual classes within other tense-mood categories (aorist, imperative), the generalization of stem stress in the present entails a morphological change. However, as with the imperative singular, the prosodic dimension should not be overlooked: the elimination of stress on endings implies the elimination of final stress. Nevertheless, unlike the loss of final stress in the imperative, this cannot be attributed entirely to a ban on final stress, since stressed endings do not necessarily entail final stress per se. The effects of a ban on final stress are seen in most Type 1 dialects outside of the extreme N in conjunction with disyllabic endings; in these cases, though, the ending remains inherently accented, with stress realized instead on the first syllable. Thus most Type 1 dialects have *ber'eme* 1PL, *ber'ete* 2PL; only in NE Kriva Palanka do we find forms such as *berem'e, beret'e* (Vidoeski 1954).

However, this retraction of stress by one syllable in disyllabic endings occurs only in the context of Type 1 dialects, where final stress is otherwise allowed. The global application of a ban on final stress would yield a mixed paradigm in the present and imperfect, with stress on the disyllabic endings, i.e. in the present tense *ber-'ete* 2PL (also possibly *ber'eme* 1PL), and in the imperfect *ber-'eše* 2-3SG, *ber-'exme* 1PL, *ber-'exte* 2PL, *ber-'exa* 3PL, while the remaining forms with monosyllabic endings would have stress on the stem. Such a paradigm is not attested. In the case of the present it seems fairly obvious that, if prosodic constraints are responsible for the retraction of stress from the monosyllabic endings, some kind of paradigmatic constraint causes the 2PL to follow suit. If this is true, then it can no longer be the case that accent assignment in these forms is effected through the evaluation of the underlying accentual properties of the component morphemes. Rather, it is the accentual paradigm, i.e the set of accentual specifications per se as distinct from inflectional morphology, which has assumed the burden of stress assignment. This is the concept of stress assignment advanced by Brown et al. (1996), discussed in Chapter 1, Section 2.2, whereby accentual specification resides in an accentual template. On this approach there are two paradigms, defined in terms of the behavior of the non-1SG present and imperfect forms (recall that stress in all the other forms is assigned by grammatical constraints): (i) stress on the ending; and (ii) stress on the stem. Following Stankiewicz (1968) these can be labeled, respectively, β and α; the latter in turn could be subdivided into different classes based on which stem syllable is meant: stem-final (α_1), stem-penultimate (α_2) etc. According to the proposal outlined above (Sections 3.2.3.1, 3.2.3.2), stem-final stress (α_1) is the default position; therefore, individual stems are only defined in as much as they deviate from that. Thus all verbs in principle have α_1 as an option, but they may further specify β or α_2 as the preferred options.

On this interpretation the constraint STRESS-FAITH is inadequate, since it assesses stress marked on particular syllables in individual lexical items, and not whole paradigmatic patterns.   I propose instead a variation, PARADIGM-FAITHFULNESS (PAR-FAITH), which assesses faithfulness to the lexically specified accentual paradigm.   Loss of stress on the ending can thus be portrayed as the demotion of this faithfulness constraint below TROCHEE, i.e. that constraint which disfavors final stress. Because some members of the paradigm violate this constraint, the whole paradigm is rejected and default stem-final stress, expressed as a low-ranking constraint, is selected instead.   The hypothetical pattern decribed above, with stress on the ending only in the 2PL, is not possible because it is not one of the paradigmatic options: it is neither lexically encoded, nor is it the default paradigm. In (89), the paradigm designation for each pattern is shown in parentheses:

(89) Stem-final stress selected over stress on the endings

ber- (β)	TROCHEE	PAR-FAITH	Paradigm = α_1
ber-'eš ber-'e ber-'em ber-'ete ber-'at (β)	*!**		*
b'er-eš b'er-e b'er-em ber-'ete b'er-at		*	*!

+ b'er-eš
  b'er-e
   b'er-em
   b'er-ete
   b'er-at   (α_1)
		*	

The retention of final stress in these dialects in other contexts can be attributed to the constraint ranking STRESS-FAITH » TROCHEE » PAR-FAITH; i.e. final stress is lost where it is assigned as part of a lexically-encoded inflectional paradigm, but not where the place of stress per se is lexically specified.

The imperfect could also be handled by the same approach, though when seen informally it seems less satisfying, in as much as only one of the endings is effected by the ban on final stress, while the other four are dragged along by the paradigm. Alternatively (or in addition) it could be claimed that a output-output correspondence constraint obtains between the present and imperfect, whereby the accentuation of the imperfect depends on that of the present (cf. Alexander 1975). Problematic for this approach is the existence of dialects in the N where stress on the ending is still found in the present, but only stem stress is found in the imperfect, e.g. *jad'e* 3SG PR 'eat' but *j'adeše* 2-3SG IMPF (Gratče; MDA); the reverse situation does not occur. This suggests that developments in the imperfect are not necessarily dependent on what happens in the present. Why the imperfect should be more subject to accentual leveling is not clear, though the lesser frequency or salience of the imperfect may play a role.

It seems paradoxical that the loss of stress on endings in the present and imperfect, which has been attributed to the effects of a ban on final stress, should coincide so closely with the generalization of final stress in the aorist. Yet it should be borne in mind that the way accent

is assigned in the two sets of forms is different: in the present and imperfect stress is lexically marked and realized through faithfulness constraints, while aorist accentuation is assigned from the outside. That aorist accentuation dominates faithfulness constraints is clear in those Type 1 dialects where lexical distinctions are erased in the aorist but retained in the present. Thus it should be no great surprise that lexical faithfulness constraints should succumb to prosodic constraints before grammatical constraints, because the former are by definition lower-ranked. Stress-assigning constraints which are ranked below lexical faithfulness constraints serve rather the role of default constraints.

3.3.2.3 Elimination of the 1SG accentual alternation

The generalization of stem stress in the present should not, in principle, have affected grammaticalized initial stress in the 1SG present. There is indeed an area in within the Type 2 dialects in the N where this alternation persists (see map M2). Conversely, in the S, initial stress is sporadic in the westernmost dialects, so that ending stress in the present may be found alongside the absence of initial stress in the 1SG, e.g. *nagᶦotʃ'a* 1SG ~ *nagutʃ ᶦiš* 2SG 'cook' (Małecki 1934-36). The interpretation of the absence of initial stress in the 1SG present, which characterizes most Type 2 dialects, depends on what the original state of affairs was. If initial stress in the 1SG present was grammaticalized throughout Macedonian, then this isogloss represents its loss. On the other hand it may be that this isogloss represents the western limit of grammaticalization in the first place. Given the lack of any evidence for its grammaticalization W of this isogloss the latter proposal is perhaps preferable. On this interpretation the failure of grammaticalization to take hold in the more westerly dialects may have been due to the early loss of the unaccented class of verbs, since initial stress in the 1SG was originally characteristic solely of unaccented verbs. Such a proposal must remain speculative, however, as it depends upon a particular interpretation of relative chronology for which there is no independent confirmation.

3.3.3 Type 2 to Type 3

The Type 3 dialects are distinguished from the Type 2 dialects primarily by (i) the complete absence of lexically specified stress in verbs; (ii) the imposition of the prosodic constraints (specifically, the ban on final stress) on aorist accentuation; and (iii) modifications in the accentuation of the imperfect.

3.3.3.1 Elimination of lexical stress.

In the Type 2 dialects, lexical specification of stress is possible in the present and imperfect, in as much as stress can fall on the stem-final or on the stem-penultimate syllable. In practice stem-penultimate stress seems to be limited to aj-stem verbs with the suffix *-uv-*, which may be stressed on the suffix or on the preceding root. This state of affairs persists up to the border with the Type 3 dialects, where the suffix is stressed in all verbs. As a consequence all verbs have stem-final stress in the present and imperfect. Since the default position of stress has been assumed to be the stem-final syllable, this entails the adoption of default accentuation by all verbs.

As with the elimination of stress on endings, the elimination of lexical stress on stems can be attributed to the effects of the demotion of the paradigmatic faithfulness constraint PAR-FAITH below prosodic constraints. In this case stem-penultimate stress entails pre-antepenultimate stress in some or all of the forms of the plural, e.g. *donᶦesuvame* 1PL, *donᶦesuvate* 2PL and in dialects where the 3PL is uncontracted, *donᶦesuvaat* 'bring'. Recall that pre-antepenultimate stress in the Type 3 dialects is banned by the combined effects of

DEP-STRESS and ALIGN RIGHT. If these two constraints dominate PAR-FAITH, default stem-final stress results; in the tableau the effects of DEP-STRESS are assumed:

(90) Stem-final stress selected over stem-penultimate

donesuva- (α_2)	ALIGN RIGHT	PAR-FAITH	Paradigm = α_1

+ done(s'u.vam)
   done(s'u.vaš)
   done(s'u.va)
   done(s'u.va)\<me>
   done(s'u.va)\<te> (α_1)
		*	

do(n'e.su)\<vam> do(n'e.su)\<vaš> do(n'e.su)\<va> do(ne.s'u)va\<me> do(ne.s'u)va\<te>		*	*!
do(n'e.su)\<vam> do(n'e.su)\<vaš> do(n'e.su)\<va> do(n'e.su)va\<me> do(n'e.su)va\<te > (α_2)	*!*		*

In the case of the uncontracted 3PL endings, how stem-final stress is realized varies within the Type 3 dialects. In most dialects stress is columnar throughout the entire paradigm, thus *dones'uvaat*. It may be that in such systems the stem is construed as *donesuv-* and the ending as *-aat*. However, in the area between Veles and Mariovo (see map M2) stress falls on the penultimate syllable, e.g. *gled'aat* 'they look' (Negotino; Filiposki 1952). It seems here that the first *-a-* is construed as the stem-final syllable, thus *gleda-at*, which corresponds to the historically original state of affairs. Since this stem-final syllable appears only in the 3PL, consistent stem-final stress in the present naturally results in an accentual alternation, e.g. *gl'ed-am ~ gled'a-at*. Such an alternation is found as well in Serbo-Croatian, e.g. *p'i:ta:m* 1SG ~ *pi:t'aju* 3PL 'ask'. However, this is also an area in which penultimate stress as such has been extended to a number of morphological categories (aorist and imperfect, as well as in the nominal system), so whether this represents an archaism or an innovation is unclear.

    The dominance of stem-final stress in the present and imperfect of verbs with the *-uv-* suffix (modulo the 3PL) is nearly universal in the type 3 dialects W of the isogloss in map M2. However, in a few points, near the border with the type 4 dialects, some vacillation is seen (Divle, Trojaci, Neolani). In Neolani, Mazon (1923) notes that stem-penultimate stress (e.g. *s'opnua* 'trips') is characteristic of the older generation, with stem-final stress prevailing among the younger generation, suggesting a change still in progress.

3.3.3.2 Retraction of final stress in the aorist
Slightly to the W of the isogloss of the generalization of stem-final stress in the present, stress is retracted from the final syllable in the aorist (i.e. all singular forms), so that the aorist has fixed penultimate stress throughout; see map M3. As with the loss of stress on the ending in the present and imperfect, the motivation seems to have come from the prosodic constraints, in this case the demotion of grammaticalized aorist accentuation below TROCHEE. The prosodic nature of this development is indicated by the fact that, in the XVI century glossary from Kostur, final stress is still found when the verb form is followed by an enclitic, e.g.

rasip'a se 'fell apart' 1-3 SG, but is otherwise retracted, e.g. *prom'enix* 'I changed' (Ničev 1987).

In contrast to the developments in the present and imperfect, in which a variety of lexically marked accentual types were eliminated in favor of a single, default paradigm, these developments in the Type 3 dialects operate on a monolithic accentual paradigm. Any changes in this paradigm necessarily result in a new paradigm. The question then arises: why did fixed penultimate stress result? In the previously outlined developments the interference of the prosodic constraints motivated the selection of another one of the pre-existing accentual paradigms. In this case the reason that the new paradigm assumed the shape it did must be accounted for. This, however, must remain fairly speculative. It might have been that prosodic constraints favored retraction of stress by one syllable. It may also be that the penultimate stress of the plural provided a model for the developments in the singular.

In certain northern dialects the interaction of grammaticalized initial/prefix stress (cf. Section 3.2.3.2) and the retraction of final stress combine to produce an initial SG ~ penultimate PL alternation in the aorist:

(91) *prefixed/perfective*   *unprefixed/imperfective*
      r'azmesi   m'esi   1-3SG   'kneaded'
      razmes'imo   mes'imo   1PL   (Creševo; MDA)

Unfortunately, there are no examples of polysyllabic imperfective aorists in the material, so it is impossible to determine whether the imperfective forms are characterized by initial stress as such, and not simply penultimate stress.

3.3.3.3 Developments within the imperfect

In most of the Type 3 dialects the imperfect, rather than having stem-final stress like the present, has penultimate stress in all forms. The isogloss is closer to the Type 4 dialects than that of penultimate stress in the aorist, so that the N and S fringes of the Type 3 zone retain imperfects with stem-final stress. This development cannot readily be attributed to the influence of any of the prosodic constraints that seem to have played a role so far. The replacement of stem-final stress with penultimate stress necessarily entails the loss of antepenultimate stress, which is not otherwise disfavored in these dialects. Rather, it appears that the imperfect borrowed its accentuation from the aorist, thus conforming to an accentual opposition of present vs. past. That the aorist served as the direct model for this change is suggested by the presence of a transitional pattern in a few of the Type 3 dialects, near the border with Type 4 (Trojaci, various points in Lerin, Popəlžani). Though the bulk of verbs in these dialects have penultimate stress, in a number of them the 2-3SG form has stem-final (i.e. antepenultimate) stress instead:

(92) tov'arav   'loaded'   k'osev   1SG   'mowed'
      tov'araše   k'oseše   2-3SG
      tovar'ame   kos'eme   1PL
      tovar'ate   kos'ete   2PL
      tovar'aja   kos'eja   3PL   (Trojaci; MDA)

Note that penultimate stress has been adopted in those forms whose inflectional morphology most resembles that of the aorist, i.e. *-me* 1PL, *-te* 2PL, *-(j)a* 3PL; cf. the plural aorist forms *vikn'ame* 1PL, *vikn'ate* 2PL, *vikn'aja* 3PL 'we called' (the stress of the 1SG is identical in both

in any case). The 2-3SG, with its radically different shape, seems at times to have remained resistant to leveling with the aorist.[39]

The morphological rather than phonological nature of these developments is strikingly represented by the extension of columnar stress in the new imperfect accentual type. This is found regularly in Kajlar (Drvošanov 1993) and sporadically in Negotino (Filiposki 1952); it is likewise regular in the Serbian Torlak dialect of Prizren, whose accentual system corresponds to the Type 3 dialects of Skopska Crnogorja (Remetić 1996).[40] Here stress falls on the first syllable of the ending in every form; consequently, on the final syllable in the 1SG:

(93)   mislʹe   1SG   'thought'
        mislʹeše   2-3SG
        mislʹeme   1PL
        mislʹete   2PL
        mislʹea 3PL   (Filiposki 1952)

This is in direct violation of TROCHEE and unparalleled anywhere else in the Type 3 dialects. Presumably columnar stress, in the form of an output-output correspondence constraint among all the forms of the imperfect, is responsible. Note that columnar stress was vacuously satisfied in the Type 1 and 2 dialects, so this may have been a constraint which was latent, only asserting its influence when in conflict with the prosodic constraints.

Section 4: Nouns

4.1 Inflectional morphology
Nominal morphology in Balkan Slavic is characterized by the reduction or elimination of oblique case forms on the one hand and by the development of an enclitic definite article on the other. As a result the declensional paradigm consists of: (i) indefinite singular; (ii) definite singular; (iii) indefinite plural; and (iv) definite plural.[41] On the basis of these forms nouns can be divided into four major inflectional classes. These will be referred to for the sake of convenience as discrete "declensions", though some of them contain a number of inflectional sub-classes. Unless otherwise noted, the forms in the following discussion are taken from Standard Macedonian.

[39] According to Vidoeski 1985-86, the generalization of penultimate stress was later in aj-stem verbs than in the I-II conjugations, in an effort to avoid homophony with the aorist (e.g. aj-stem *vʹikame* 1PL IMPF vs. *vikʹame* 1PL AOR 'called', as opposed to I conjugation *miʹeme* 1PL IMPF vs. *mʹijme* 1PL AOR 'washed'). It is not clear where the evidence for this assertion comes from. Though aj-stem verbs may retain stem-final stress in some forms of the imperfect, it does not seem to be a matter of the avoidance of homophony; e.g. in Lerin, according to Mazon (1923), aj-stem verbs differ from I-II conjugation verbs in the 2-3SG only, thus *f ʹatvaše* 'grabbed' vs. *gredʹeše* 'stepped'; that is, precisely in that form where confusion with the aorist would *not* occur. The same relationship is also found in Trojaci: *vʹikaf, vʹikaše, vikʹame, vikʹate vikʹaja* vs. *nʹosef, nosʹeše, nosʹeme, nosʹete, nosʹeja* 'carried' (MDA).

[40] Koneska likewise reports that in Mariovo both the imperfect *and* the aorist have final stress in the 1SG (1951: 22). However, this is contradicted by assertions elsewhere in the text (as well as the data from the MDA); it seems that what is really meant is compensatory lengthening due to the loss of final *-x*.

[41] Other forms (e.g. marginally found oblique case forms) will be alluded to later as needed.

4.1.1 The declensional patterns
The four declensions, with respect to their endings, are:

(i)   a-stem: these are typically feminine, though animate masculines may belong to this class as well. The singular ends in -*a*, the plural in -*i*; e.g. *žena* ~ *ženi* 'woman/women'. A few nouns take -*e* in the plural instead, e.g. *raka* ~ *race* 'hand/-s'. In a part of the N dialect group, as well as in the extreme SW, -*e* is the sole plural ending for a-stems, e.g. *žene* (Šklifov 1973: 60).

    In some SE dialects (e.g. Ser, Drama) the singular ending is the reflex of the old accusative -*ǫ* rather than the nominative -*a*. However, the reflexes of -*ǫ* and -*a* are distinct only under stress (-*ə* vs. -*a*); unstressed, both fall together as –*a*.

(ii) i-stem: these are all feminine. The singular ends in a consonant, the plural in -*i*, e.g. *sol* ~ *soli* 'salt/-s'.

(iii) masculine: the singular ends in a consonant, while in the plural a number of different endings occur. Nearly all monosyllabic stems take the disyllabic ending -*ovi*, or its variant -*evi*, e.g. *dvor* 'court', *nož* 'knife' ~ *dvorovi*, *noževi* PL. Polysyllabic stems and a small number of monosyllabic stems have the ending -*i*, e.g. *kovač* 'smith', *maž* 'man' ~ *kovači*, *maži* PL. A small number of nouns, both mono- and polysyllabic stems, take the plural ending -*(j)e*, e.g. *trn* ~ *trnje* 'thorn/-s', *kosten* ~ *kostenje* PL 'chestnut/-s'. A collective plural -*išta* is occasionally found with monosyllabic stems, e.g. *pat* ~ *patišta* PL 'way/-s'.

    In the E dialects the endings -*ove* is found in place of -*ovi,* e.g. *dvorove* (Blagoevgrad; Stoilov 1905), and the ending -*e* is more widespread in both mono- and polysyllables than it is to the W, e.g. *maže*, *kovače*.

    In addition to the normal plural endings, following numerals the so-called counted plural (-*a*) may be found, e.g. *dvorovi* PL but *5 dvora*.

(iv) neuter: the singular ends in -*o* or -*e*. Nouns whose singular ends in -*o* take the plural ending-*a*, e.g. *selo* ~ *sela* 'village/-s'. Nouns with singular in -*e* typically take -*inja*, e.g. *more* ~ *morinja* 'sea/-s', though -*a* as well is found under certain conditions, as when the stem-final consonant is -*c*, e.g. *srce* ~ *srca* 'heart/-s', or with certain derivational suffixes, e.g. *boište* (*boj* 'battle' + *ište*) ~ *boišta* 'battlefield/-s'. In some of the E dialects singulars in -*e* are associated with other plural endings, either instead of or in addition to -*inja*, e.g. -*eta* (*more* ~ *moreta*), -*ena* (*ime* ~ *imena* 'name/-s') or -*ina* (*imina*).

4.1.2 The article
The form of the article is determined as follows:

(i)   The form of the article is *ta* if (i) the noun is feminine and singular, or (ii) the noun form ends in -*a*. Thus -*ta* is found with all singular a-stem and i-stem nouns, and all neuter plurals.

(ii) The form of the article is *to* for all neuter singulars, and for all masculine and neuter plurals that end in -*e*.

(iii) The exclusively plural form *te* is occurs with all plural forms not covered by (i) and (ii), namely all a-stem and i-stem plurals, and masculine plurals that end in *-i*. In many E dialects, though *-to* does not occur as a plural article, with only *-te* being found.

(iv) The form of the article is *ot* for all masculine singulars. In many dialects the final *-t* is lacking; in addition, the vowel itself may vary (e.g. *-o*, *-ə*, *-e*, *-ɔ*).

4.2 Common Slavic accentual patterns in Balkan Slavic

As with verbs, for Common Slavic three accentual classes are reconstructed: (i) columnar stress fixed to the stem (Stang's accent paradigm "a"); (ii) unaccented stems, in which the position of stress is unspecified (Stang's accent paradigm "c"); and (iii) post-accenting stems, which assign stress to the following syllable (Stang's accent paradigm "b"). The expected reflexes are outlined in this section; the forms are based on those found in E Macedonian dialects (such as in Gabor 1979).

4.2.1 Stem-stressed nouns

In stem-stressed nouns stress falls on the same stem syllable throughout the paradigm:

(94) Stem-stressed nouns

a-stem ('old woman')	*i-stem* ('age')	*masculine* ('grave')	*neuter* ('plough')	
bˈaba	stˈarost	grˈob	rˈalo	INDEF SG
bˈabata	stˈarostta	grˈobo(t)	rˈaloto	DEF SG
bˈabi	stˈarosti	grˈobove	rˈala	INDEF PL
bˈabite	stˈarostite	grˈobovete	rˈalata	DEF PL

4.2.2 Unaccented nouns

In unaccented stems, accentuation follows the BAP, with stress falling on the leftmost inherently accented affix, else the initial syllable. The underlyingly accented affixes are: (i) all forms of the article; (ii) the ending *-a* of the a-stem singular; and (ii) the ending *-a* of the neuter plural. In (95) the forms with default initial stress are shown in boldface.

(95) Unaccented nouns

a-stem ('goat')	*i-stem* ('salt')	*masculine* ('city')	*neuter* ('meat')	
kozˈa	**sˈol**	**grˈad**	**mˈeso**	INDEF SG
kozˈata	soltˈa	gradˈo(t)	mesˈoto	DEF SG
kˈozi	**sˈoli**	**grˈadove**	mesˈa	INDEF PL
kozˈite	solitˈe	gradovˈete	mesˈata	DEF PL

Two points require clarification: (i) the place of stress in the definite forms; and (ii) variation in the treatment of the a-stem singular ending.

    To explain the behavior of definite forms a look back at an earlier stage is required. Originally stress fell on the article itself, but was retracted to the preceding vowel except in cases where said vowel was a weak jer, which was unable to bear stress:

(96)   *before retraction*   *after retraction*
      kozi-tʹě   →   kozʹi-tě
      solĭ -tʹa   →   solĭ-tʹa
      gradŭ-tʹŭ   →   gradʹu-tŭ
      męso-tʹo   →   męsʹo-to

A clear phonological motivation for this retraction can only be found for the masculine singular, where the vowel of the article itself was a weak jer. It has been supposed (Stankiewicz 1986: 342) that retraction in the other forms followed by analogy. Note that in the masculine singular, the loss of the weak jer led to the reinterpretation of the preceding vowel as part of the article itself:

(97)   *loss of weak jer*   *reanalysis*
    grobŭ + tŭ   →   grobŭ + t   →   grob + ŭt
    NOUN ART   NOUN ART   NOUN ART

As a result of these retractions, the accentuation of unaccented stems with the article can be portrayed simply as follows: when the article is added to a form ending in a vowel, stress falls on the preceding syllable; otherwise, stress falls on the article itself. Exceptions to this in Balkan Slavic are rare, e.g. in the Bulgarian dialect of Banat the article itself is stressed in the neuter singular and feminine plural (cf. Stojkov 1967), while in Standard Bulgarian the plural article is stressed with the numerals *čʹetiri* '4' and *stʹo* '100', thus *četiritʹe, stotʹe*. In some W Bulgarian and E Macedonian dialects the same thing occurs with '2' and '3', thus *dve-tʹe*, *tri-tʹe* (Stankiewicz 1993: 169, Peev 1987: 142); this is presumably on analogy with the remaining numerals, which end in consonants and thus are not subject to retraction, e.g. Standard Bulgarian *pet-tʹe* 'the 5', *šest-tʹe* 'the 6', *sedem-tʹe* 'the 7'.

4.2.3 Post-stressing nouns

The original characteristics of the post-accenting class are difficult to determine, a situation probably not helped by the probability that Macedonian speech territory lies at the crossroads of a number of old Common Slavic isoglosses relating to the original advancement of stress that characterizes this accentual class (Dybo et al. 1993: 123-134). The maximal system that could be expected, with stress advanced off of the stem onto the following syllable in the most number of positions, is shown below:

(98)   Post-stressing nouns

a-stem ('needle')	*i-stem* ('ox')	*masculine* ('kettle')	*neuter* ('wine')	
iglʹa	vʹol	kotʹel	vinʹo	INDEF SG
iglʹata	vʹolo(t)	kotʹelo(t)	vinʹoto	DEF SG
iglʹi	volʹove	kotlʹi	vinʹa	INDEF PL
iglʹite	volʹovete	kotlʹite	vinʹata	DEF PL

In the a-stems and neuters stress on the ending is found in all forms. Overt post-accenting behavior in masculines is found in the plural only; the singular has stem (-final) stress. Among i-stem nouns there is no evidence of a post-stressing type.

    The columnar stress on the ending found in the a-stems and neuters is expected only where the root vowel was originally long, as in the a-stem and neuter examples in (98). Nouns with

short root vowel would have evinced post-accenting behavior in the singular only (Dybo et al. 1993: 19-20, 25):

(99) Post-stressing nouns with short root vowel

a-stem	*neuter*	
žen'a	sel'o	INDEF SG
žen'ata	sel'oto	DEF SG
ž'eni	s'ela	INDEF PL
ž'enite	s'elata	DEF PL

4.3 Developments within the Type 1 dialects.

4.3.1 Loss of inherent accent on endings

The a-stem singular ending *-a* and the neuter plural ending *-a*, although originally inherently accented, behave as if unaccented in many Type 1 dialects.

4.3.1.1 a-stem singular

In most Macedonian Type 1 dialects the a-stem singular *-a* is treated as unaccented, so that the indefinite form displays default initial stress, e.g. *v'oda ~ vod'ata* 'water', *n'oga ~ nog'ata* 'leg', *r'aka ~ rak'ata* 'hand', *pl'anina ~ planin'ata* 'mountain' (Gabor 1974: 121). This presumably resulted from the extension of the behavior of the accusative, whose ending was unaccented, to that of the nominative. This assumption is supported by the fact that in some dialects the form accusative form itself has replaced that of the nominative (cf. Section 4.1). The original relationship of accent and case is still found in some neighboring Bulgarian dialects which preserve a distinct a-stem accusative, e.g. in Caribrod:

(100) NOM SG   ACC SG
       vod'a   v'odu   INDEF
       vod'ata   vod'utu   DEF   (Božkov 1984)

The one major exception in Macedonian is the dialect of NE Kriva Palanka, where *-a* still bears stress in unaccented stems, e.g. *vod'a*, *nog'a*, *ruk'a* (Vidoeski 1954: 9).

4.3.1.2 Neuter plural

The *-a* of the neuter plural appears to be treated as inherently accented only in the southern- and easternmost dialects. However in most of these dialects *-a* is stressed regardless of the accentual properties of the stem it is attached to:

(101)

	singular	*stressed -a in plural*	
a. *stem-stressed*	ž'el'azu	žil'az'a	'iron/-s'
	kur'itu	kurit'a	'trough/-s'
b. *post-stressing*	gumn'o	gumn'a	'threshing floor/-s'
c. *unaccented*	kr'ilu ~ kril'oto	kril'a	'wing/-s'

(Suxo/Visoka; Małecki 1934-36,
 Gołąb 1960-63)

Adjacent to this zone, in Elešnica to the N and Sekavec to the W—that is, in dialects where stressed *-a* was not generalized—there is sporadic evidence of underlying accent on *-a* being

retained with unaccented nouns-*a*, e.g. *d'rvo ~ drv'oto* 'tree' vs. *drv'a ~ drv'ata* PL (Vidoeski 1987, 1990). Otherwise in these dialects the ending -*a* behaves as if inherently unaccented, displaying (default) initial stress in the indefinite form, e.g. *br'ašna ~ brašn'ata* 'flours' (Sekavec; Vidoeski 1990).

4.3.2 Fate of post-stressing accentuation with monosyllabic stems

The "expected" reflexes of post-stressing stems (see (98) and (99)) with monosyllabic stems are rather the exception than the rule in the Type 1 dialects. Recall that in a-stem and neuter nouns two patterns are expected, depending on the original length of the root vowel: stress on the ending in the singular, and either stress on the ending (in the case of long-vowel roots) or stress on the stem (in the case of short-vowel roots). However, evidence for two separate accent patterns in the plural is limited largely to neuters, and only in some dialects at that.

4.3.2.1 Plural

4.3.2.1.1 Neuter

With respect to their treatment of the plural of post-stressing neuters, Type 1 dialects can be divided into three zones (see map M5):

Zone 1:
In the SE, the plural ending -*a* is always stressed, regardless of accentual class; see above (101).

Zone 2:
To the NE, neuters which are post-stressing in the singular display alternating stress in the plural, like unaccented stems; recall that in this zone, plural -*a* is treated as inherently unaccented (cf. Section 4.3.1):

		SG	PL		
(102)	*a. post-stressing*	vlakn'o	vl'akna	INDEF	'fiber/-s'
		vlakn'oto	vlakn'ata	DEF	
	b. unaccented	br'ašno	br'ašna	INDEF	'flour/-s'
		brašn'oto	brašn'ata	DEF	(Vidoeski 1989a: 20)

In Elešnica, stress on the ending is displayed marginally in the plural as well, e.g. *run'o* 'fleece'~*run'a* PL (Vidoeski 1987). This happens in a few *historically* post-stressing neuters in Sekavec, e.g. *lakn'a* 'fibers', *per'a* 'feathers' (Vidoeski 1990: 57); note that in the singular these nouns have alternating stress, due to retraction off of final -*o* (cf. Section 4.3.2.2.1). In both these dialects however there are also examples of historically unaccented nouns in which stress falls on -*a* in the plural (cf. Section 4.3.1).

Zone 3:
Further to the NW, neuters which are post-stressing in the singular typically display fixed stem stress in the plural (103a). Some examples of alternating stress in the plural are found too (103b):

(103)

	SG	PL		
a. stem stressed	rebrˈo	rˈebra	INDEF	'rib/-s'
plural	rebrˈoto	rˈebrata	DEF	
b. alternating	testˈo	tˈesta	INDEF	'dough/-s'
plural	testˈoto	testˈata	DEF	(Mačovo, MDA)

In these dialects there are also a number of examples of neuters with alternating stress in the singular and fixed stem stress in the plural, e.g. *krˈosno ~ krosnˈoto* SG, *krˈosna ~ krˈosnata* PL 'warp-beam/-s' (Dvorište; MDA). Judging from this example and the forms cited by Gabor (1979) from Berovo which exhibit the same behavior (*čˈelo* 'forehead', *mlˈeko* 'milk', *pˈero* 'feather', *pˈismo* 'letter', *sˈelo* 'village', *zˈrnce* 'kernel'), these all appear to be original post-stressing stems in which final stress has retracted in the singular (cf. Serbo-Croatian *čelˈo*, *mle:kˈo*, *perˈo*, *pi:smˈo*, *selˈo*; Bulgarian *krosnˈo*, *zrncˈe*). That is, these forms would originally have followed the pattern of (103a).

These formation of these three zones can be attributed on the one hand to the generalization of one or the other of the original patterns of plural accentuation in post-stressing stems, and on the other hand to retraction of final stress. I reconstruct the stages as follows:

Stage a:
Post-stressing nouns were affected by the generalization of one or the other of the two original plural stress patterns. In zones 1 and 2, stress on the ending was generalized; e.g. *vˈedra ~ vˈedrata > vedrˈa ~ vedrˈata*. In zone 3 on the other hand stress on the stem was generalized, e.g. *runˈa ~ runˈata > rˈuna ~ rˈunata*. The unaccented stems were affected by the loss of inherent accent on the *-a* of the plural in zones 2 and 3, so that alternating stress is found in both singular and plural; e.g. *drvˈa ~ drvˈata > dˈrva ~ drvˈata*.

Stage b:
In zone 1, where stress on the ending *-a* was characteristic of two of the three accent classes, it was extended to the remaining accent class as well, e.g. *mˈasla ~ mˈaslata > maslˈa ~ maslˈata*. In zone 2 (and 3?[42]), stress was retracted off of *-a* in final position in disyllabic forms. Such a development may have received analogical support from retraction of final stress among unaccented stems, which resulted from the reanalysis of *-a* as underlyingly unaccented. Thus alternating stress is the historical reflex of stress on the ending.

The effects of these developments are represented graphically below:

---

[42] The few examples from zone 3 that show stress on the ending in the singular and alternating stress in the plural could be taken as evidence that stem stress in the plural was not fully generalized for all post-stressing neuters. Unfortunately, the data are too scant to judge whether or not the lexical distribution of these forms matches the historical expectations.

(104) The three neuter plural accentual zones

Zone 1	*original pattern*	*stage a*	*stage b*
stem-stressed	mˈasla mˈaslata	no change	maslˈa maslˈata
post-stressing (short root)	vˈedra vˈedrata	vedrˈa vedrˈata	no change
post-stressing (long root)	runˈa runˈata	no change	no change
unaccented	drvˈa drvˈata	no change	no change

Zone 2	*original pattern*	*stage a*	*stage b*
stem-stressed	mˈasla mˈaslata	no change	no change
post-stressing (short root)	vˈedra vˈedrata	vedrˈa vedrˈata	vˈedra vedrˈata
post-stressing (long root)	runˈa runˈata	no change	rˈuna runˈata
unaccented	drvˈa drvˈata	dˈrva drvˈata	no change

Zone 3	*original pattern*	*stage a*	*stage b*
stem-stressed	mˈasla mˈaslata	no change	no change
post-stressing (short root)	vˈedra vˈedrata	no change	no change
post-stressing (long root)	runˈa runˈata	rˈuna rˈunata	no change
unaccented	drvˈa drvˈata	dˈrva drvˈata	no change

4.3.2.1.2 a-stem

Whereas in the case of neuters there is some evidence of of two accentual patterns in the plural of post-stressing nouns, among feminines only isolated traces of either of these patterns are found in dialects at the fringes:

(i) Stress on the ending: *branˈa ~ branˈi* 'dam/-s' (Elešnica; Vidoeski 1987), *leskˈa ~ leskˈi* 'hazel tree/-s', *tləkˈa ~ tləkˈi* 'volunteer/-s' (Razlog; Molerov 1905), *ženˈa ~ ženˈi* 'woman/women' (Plevna/Gorno Brodi; Vidoeski 1991), *kərmˈa ~ kərmˈi* 'feed' (Suxo/Visoka; Małecki 1934-36); see map M6.

(ii) Stress on the stem: In some SE dialects the words *žena* 'woman'and *moma* 'girl' (Suxo, Visoka (Małecki 1934-36), Goce Delčev (Mirčev 1936)) have fixed stem stress in

the plural: e.g. *m'omi ~ m'omite*. Note that in these dialects final stress is retracted in monosyllabic stem a-stem singulars (cf. Section 4.3.2.2.2), so that the pattern in the singular is *m'oma ~ mom'ata*.

Both types are found next to each other in NE Kriva Palanka, e.g. *koz'a ~ koz'i* 'goat/-s', *ovc'a ~ ovc'i* 'sheep' in one group of villages alongside *koz'a* SG ~ *k'ozi* ~ *k'ozite* and *svinj'a ~ sv'inje ~ sv'injete* 'pig/-s' in adjacent villages (Vidoeski 1954: 9). Since in at least one case (*koz'a*) the same word displays both patterns, it seems unlikely that this represents the original distribution of accentual types. The dialects with columnar stress on the ending are otherwise accentually more archaic, while the the dialects with stem-stress in the plural are adjacent to the innovative Type 2 dialects, which have columnar stress on the stem.

Beyond these exceptional cases, in most Type 1 dialects the plural forms of post-accenting a-stems display alternating stress; i.e., they are indistinguishable from the unaccented class:

(105)	*unaccented stem* ('water')	*post-stressing stem* ('boundary')		
	v'oda	mežd'a	SG INDEF	
	vod'ata	mežd'ata	SG DEF	
	v'odi	m'eždi	PL INDEF	
	vod'ite	mežd'ite	PL DEF	(Gabor 1974)

This pattern has parallels in E Slavic and Serbo-Croatian in the form of a-stem nouns which appear to be post-stressing in the singular and unaccented in the plural. One interpretation offered for this class in Serbo-Croatian is that it originally represented a class of *animate* unaccented nouns, which are affected by a global constraint against accentual alternations in the singular (Stankiewicz 1986: 200). Compare the paradigms in Serbo-Croatian for the animate *koza* 'goat' and inanimate *voda* 'water':

(106)	*animate*	*inanimate*	
	koz'a	vod'a	NOM SG
	koz'u	v'odu	ACC SG
	koz'i	v'odi	DAT SG
	k'oze	v'ode	NOM-ACC PL
	koz'ama	vod'ama	LOC-DAT-INSTR PL

If this type existed in Macedonian as well, then we must consider the possibility that, at one point in history, a-stems which were post-stressing in the singular could potentially have displayed any one of the three accentual patterns in the plural (stem-stressed, stress on the ending, alternating stress). The reason for the generalization of the alternating pattern remains however obscure.

4.3.2.1.3 Masculine

Post-stressing accentuation in nouns which take the ending *-ove* in the plural is limited to a handful of words, typically *vol* 'ox', *pop* 'priest' and *rog* 'horn'. In the extreme SE (Suxo, Visoka, Goce Delčev, Drama) this accentuation does not occur at all; cf. BDA III, map 134. Dybo et al. (1993) attributes this to the failure of stress to advance off the root syllable in this context; thus on this interpretation this class of nouns never was post stressing the SE dialects. In the other dialects, aside from the nouns cited above, old post-stressing stems have

been largely been absorbed by the stem-stressed class, which can probably be traced to the fact that they display identical behavior in the singular. The few remaining stems however retain their accentuation tenaciously, and such forms as *pop'ove* and *vol'ove* are found throughout the Type 2 dialects, all the way up to Type 3.

The plural ending *-i* is rare with monosyllabic stems. The only real examples come from nouns where only the plural stem is monosyllabic, i.e. those with a fleeting vowel of the type *kozel ~ kozli* 'he-goat/-s'. Even among such nouns post-stressing accentuation is limited, the only examples coming from the extreme SE (see map M6); e.g. *ur'el ~ url'i* 'eagle/-s', *koz'el ~ kozl'i*, *ov'en ~ ovn'i* 'ram/-s', *sok'ol ~ sokl'i* 'falcon/-s', which occur alongside forms such as *dov'ec ~ d'ofci* 'widower/-s', *pet'el ~ p'etli* 'rooster/-s' (Plevna/Gorno Brodi; Vidoeski 1991). From Suxo comes the single example *kun'ec ~ kunc''æ* 'thread/-s' (Małecki: 1934-36) with the plural ending *-æ*. Typically, though, such nouns behave the same way as monosyllabic stem post-stressing a-stems, displaying alternating stress in the plural, e.g. *p'etli ~ petl'ite*.

Scattered examples of post-stressing accentuation with the ending *-e* come from Blagoevgrad, namely *car''e* 'emperors', *kral''e* 'kings'(Stoilov 1904), and from Plevna/Gorno Brodi, namely *maž'e* 'men', *car'e* (Vidoeski 1991). Otherwise, alternating stress is found, e.g. *k'on'e ~ kon''eto* 'horses'(Gabor 1979). The picture is confused by the multiple origins of the ending *-e*, which reflects both the old palatal stem accusative plural *-ę* and the collective formant *-je* (originally neuter singular). The (originally) collective ending appears to be pre-stressing in the N and stressed in the S; compare *d'ab'e ~ d'ab'eto* 'oaks' from the N (Blagoevgrad; Stoilov 1905) with *dab'e* from the S (Ser/Drama; Ivanov 1977). Note that stress on *-e* in the S occurs in the same area where stress on the neuter plural ending *-a* has been extended to all accent classes.

4.3.2.2 Singular
Post-stressing accentuation in the singular should only be expected in neuters and a-stems. As in the plural, disyllabic forms here show restrictions on final stress, though not as extreme.

4.3.2.2.1 Neuter
Outside of the area around Razlog, where post-stressing accentuation is unrestricted (cf. BDA III, maps 127, 130, 131, 132, 133), neuters in *-o* display limitations on post-stressing accentuation. Their behavior in the N differs sharply from that in the S (see map M7). In the N post-stressing accentuation is still widely attested, but absolute final stress has been retracted in a number of words, yielding an alternating pattern matching that of unaccented stems, e.g. *sel'o ~ sel'oto > s'elo ~ sel'oto* 'village'. Typically this occurs in stems that end in a single consonant, but not in stems that end in a consonant cluster; thus from Berovo *cr'evo* 'intestine', *č'elo* 'forehead', *p'ero* 'feather', *v'ino* 'wine' (however final stress is retained in *glet'o* 'chisel', *kol'o* 'circle') vs. *cresl'o* 'plough blade', *krosn'o* 'warp-beam', *pasm'o* 'skein', *platn'o* 'cloth', *rebr'o* 'rib', *sedl'o* 'saddle', *stebl'o* 'trunk', *vlakn'o* 'fiber'(however final stress is retracted in *p'ismo* 'letter', *z'rnce* 'kernel'; Gabor 1979). This effect was observed in Bulgarian dialects by Kortlandt (1983: 93), with the suggestion that stress retraction occurred only onto open syllables. This requires a syllabification other than what is typically assumed in Slavic (thus *kros.no* rather than *kro.sno*); nevertheless, the correlation between stem shape and retention of final stress is here strong enough that it cannot be ignored (note that the same effect is seen in adverbs in Kashubian; see Chapter III, Section 2.1.3). In addition to these cases of retraction from absolute final syllable, there are also a number of cases of historically post-stressing stems appearing with fixed stem stress, e.g. from Blagoevgrad *g'uvno* 'threshing floor', *zr'əno* 'grain', *r'uno* 'fleece' (Stoilov 1905: 193).

In the S, as well as along the border between the Type 1 and Type 2 dialects, post-stressing accentuation is limited to isolated examples, e.g. from Suxo/Visoka *červ'o* 'intestine', *gumn'o* 'threshing floor', *lajn'o* 'dung', *pism'o* 'letter', *ribr'o* 'rib', *sidl'o* 'saddle' (Małecki 1934-36; the last two in Suxo only); from Plevna/Gorno Brodi *cikl'o* 'beet', *pism'o* (Vidoeski 1991); from Goce Delčev *pekl'o* 'Hell' (Mirčev 1936); note that the stem ends in a consonant cluster in all these cases. Otherwise either alternating stress or fixed stem stress is found in the singular; thus in Plevna/Gorno Brodi the words *r'ebro ~ rebr'oto* 'rib', *kr'ilo* 'wing', *cer'evo* 'intestine', *gn''azdo* 'nest' have alternating stress, while *v'ino* 'wine', *p'asmo* 'skein', *pl'atno* 'cloth', *r'uno* 'fleece', *s'elo* 'village', *sr'ebro* 'silver', *č'elo* 'forehead' have fixed stem stress (Vidoeski: 1991); in Suxo/Visoka alternating stress is found with *kr'ilu* (~ *kril'otu*) 'wing', *kr'osnu* 'warp-beam', *p'eru* 'feather', *pr'osu* 'millet' vs. stem stress in *p'asmu* 'skein', *pl'atnu* 'cloth', *v'edru* 'bucket', *c''astu* 'dough' (Małecki 1934-36); in Ser/Drama alternating stress is found in *p'ero* 'feather', *r'ebro* 'rib', *gn''azdo* 'nest' vs. stem stress in *v'ino* 'wine', *č'elo* 'forehead', *sr'ebro* 'silver', *pl'atno* 'cloth', *s'elo* 'village' (Ivanov 1977); in Gabrovo alternating stress is found in *t'esto* 'dough', *kr'osno* 'warp-beam', *č'elo* 'forehead', *s'elo* 'village' vs. stem stress in *cr'evo* 'intestine', *r'ebro* 'rib', *s'edlo* 'saddle', *v'edro* 'bucket', *vl'akno* 'fiber' (MDA); in Nivičino alternating stress is found in *č'elo* 'forehead', *vl'akno* 'fiber', *cr'evo* 'intestine', *t'esto* 'dough', *s'eno* 'hay', *kr'osno* 'warp-beam', *v'edro* 'bucket', *pr'oso* 'millet', *s'edlo* 'saddle', *s'elo* 'saddle' vs. stem stress in *gl'eto* 'chisel', *sr'ebro* 'silver', *sv'eklo* 'beet', *r'ebro* 'rib' (MDA). In Sekavec Vidoeski (1990) *only* cites examples with alternating stress: *r'ebro* 'rib', *kr'ilo* 'wing', *kr'osno* 'warp-beam', *r'uno* 'fleece', *l'akno* 'fiber', *s'elo* 'village', *t''asto* 'dough', *č'elo* 'forehead', *č'arvo* 'intestine', *p'ero* 'feather', *pr'oso* 'millet'. It is not clear what the conditions were which dictated the two different reflexes, since there is little consistency among the dialects as to which words suffered which fate. It may be that in some cases relative chronology may have played a role, with fixed stem stress characterizing an earlier, fully morphologized wave of retractions, and alternating stress characterizing a later, quasi-phonological retraction off of absolute final syllables. Some evidence for this relative chronology come from the behavior of historically post-stressing neuters in *-e*. These maintain post-stressing accentuation all the way up to the type 2 dialect border (cf. BDA III, maps 125, 126, 128). In Gabrovo, at the Type 1-Type 2 border, such nouns invariably have alternating stress, e.g. *d'ete ~ det'eto* 'child', *m'omče* 'boy', *t'ele* 'calf', *j'ajce* 'egg' and the Turkish borrowing *g''ubre* 'trash', while neuters in *-o* show fixed stem stress in half the cases (MDA). Thus it is quite probable that here the alternating pattern represents a more recent retraction, fixed stem stress an older one.

4.3.2.2.2 a-stem
Post-stressing accentuation is well maintained in the Type 1 dialects to the N, while in the S, in the same dialects which have banned post-stressing accentuation in neuters in *-o*, alternating stress is found instead; see map M7. In other words, among monosyllabic stems there has been a complete merger of the original post-stressing class and unaccented class:

(107)	*originally post-stressing* ('woman')	*originally unaccented* ('head')	
	ž'ena	gl'ava	INDEF SG
	žen'ata	glav'ata	DEF SG
	ž'eni	gl'avi	INDEF PL
	žen'ite	glav'ite	DEF PL (Ivanov 1977)

Exceptions to this are rare. Unretracted stress is found in *žen'a* in Plevna/Gorno Brodi (Vidoeski 1991) and in *kərm'a* 'feed' from Suxo/Visoka (Małecki 1934-36); note both these words maintain stress on the ending in the plural as well.

4.3.3 Polysyllabic post-stressing stems

4.3.3.1 a-stem

In the singular, polysyllabic post-stressing a-stems (typically with the suffixes *-in-* and *-ot*), retain stress on the ending throughout the Type 1 dialects, even in those southern dialects where post-stressing accentuation is not found with monosyllabic stems, e.g. *xubavin'a* 'beauty', *sramot'a* 'shame', *dobrin'a* 'goodness'(Plevna/Gorno Brodi; Vidoeski 1991); *xubavin'a* (Suxo; Małecki 1934-36); *golin'a* 'barren ground' (Petrič; Vidoeski 1989a); *greot'a* 'sin', *dubočin'a* 'depth' (Nivičino; MDA). Post-stressing accentuation is also retained in the easternmost Type 2 dialects, e.g. in Radoviš *dlabočin'a* 'depth', *visočin'a* 'height, hill' (Ivić 1981). There are even examples from considerably further W, in the Type 3 dialect of Čerešnica, namely *gulimin'a* 'size', *dubrin'a* (Šklifov 1995); see map M7. Where post-stressing accentuation is not found, stem-final stress typically occurs, e.g. *dlabočin'a* alongside *dlaboč'ina* (Kosturino; MDA).

Stress on the ending is also typically found in the plural, even in dialects where it is invariably retracted in the plural of disyllabic forms, e.g. *greot'a* ~ *greot'i* 'sin/-s' alongside *metl'a* ~ *m'etli* 'broom/-s' (Gabor 1979). However, the two other accentual patterns may occur in the plural as well, though, judging from the data from Berovo (Gabor 1979), these represent only a small number of cases: (i) stem-final stress, e.g. *slobod'a* ~ *slob'odi* 'freedom/-s' (alongside *slobod'i*); and (ii) alternating stress, e.g. *veselb'a* ~ *v'eselbi* INDEF PL ~ *veselb'ite* DEF PL 'wedding/-s'. Stem-final stress corresponds to the stem stressed plurals *ž'eni* and *m'omi* from Suxo/Visoka and Goce Delčev (see Section 4.3.2.1.2), and is found elsewhere in Slavic, e.g. Russian *krasot'a* NOM SG ~ *kras'oty* NOM-ACC PL 'beauty'. The second type parallels the behavior found in monosyllabic-stem nouns, and may have been formed on analogy with it. This pattern is likewise familiar from elsewhere in Slavic, e.g. Russian *slobod'a* NOM SG ~ *sl'obody* NOM-ACC PL ~ *slobod'am* DAT PL 'freedom'.

4.3.3.2 Masculine

In polysyllabic stems post-stressing accentuation with the plural ending *-i* is limited to nouns whose stem-final syllable contains a fleeting vowel. The data are scanty, but stress on the plural ending does not seem to be subject to the same limitations as with nouns whose plural stem allomorph is monosyllabic; thus *mrtov'ec* 'corpse', *gulem'ec* 'big person' ~ *mrtovc'i*, *gulemc'i* PL from Delčevo, a dialect where post-stressing accentuation does not occur with shorter stems of this morphological class (Kuševski 1958; cf. also Gabor 1979: 132); see map M6. The role of syllable count in the maintenance of post-stressing accentuation is especially striking when deletion of the fleeting vowel is blocked by phonotactic constraints, as in the case of *madreci* 'wise men'. The expected vowel deletion in the plural would yield *drc-* as the syllable onset (*ma.drci*), which is unacceptable. Instead the vowel is retained in the plural, yielding a trisyllabic form, which retains stress on the ending:

(108)	*disyllabic plural* ('sparrow')	*trisyllabic plural* ('wise man')		
	vrab'ec	madr'ec	SG	
	vr'apci	madrec'i	PL	(Elešnica; Vidoeski 1987)

There is however at least one example of a polysyllabic stem adopting an unaccented plural (as with *veselb'a* above): *m'rtovci ~ mrtovc'ite*. As was supposed in the case of a-stems, such accentuation may have been borrowed from the shorter stems of the type *pe'tli ~ petli'te*, which behave as unaccented in the plural.

Stress on the plural ending *-e* is quite regular in northern Type 1 dialects (see map M6; also BDA III, map 137), most frequently in conjunction with the agentive suffixes *-ač* and *-ar*, e.g. *kovač'e* 'smiths', *ribar'e* 'fishermen' (Stoilov 1905). However this accentuation, whatever its origins, is not post-stressing in the strict sense (i.e. assigned by the stem alone), since it is dependent partly on the ending. These nouns may also be found with the ending *-i*, which does not receive stress, e.g. *por'oi* alongside *poro'e* 'flood' (Gabor 1974). This occurs even in dialects where *-i* can otherwise serve as a host for post-stressing accentuation (e.g. Berovo).[43]

4.3.3.3 Neuter

Post-stressing accentuation among polysyllabic neuter nouns is infrequent, though there is no particular reason to think this is the result of an active constraint against it. As with a-stem nouns, it appears that post-stressing accentuation is possible with polysyllabic stems even in dialects where stress does not typically fall on *-o* in disyllabic forms, e.g. *kulil'o* 'wheel'from Plevna/Gorno Brodi (Vidoeski 1991). Likewise, post-stressing accentuation may be retained in the plural, even in dialects where it is retracted in disyllabic forms, e.g. *oblekl'o ~ oblekl'a* 'garment/-s' alongside *vlakn'o ~ vl'akna* 'fiber/-s' (Gabor 1979).

4.3.4 Unaccentedness and stem size

Throughout Balkan Slavic there is a tendency to restrict the unaccented accentual class to monosyllabic stems, though nowhere does it amount to an absolute ban. The occurrence of polysyllabic unaccented stems in the Macedonian dialects varies depending on the declension. Among the neuters, no examples are found. Among the a-stems, the only regularly found example is *planina* 'mountain' in Berovo (Gabor 1979), Elešnica (Vidoeski 1987), Plevna/Gorno Brodi (Vidoeski 1991), Gratče, Nivičino and Stinek (MDA). Recall also that there are a few polysyllabic nouns which are post-stressing in the singular and unaccented in the plural (cf. Section 4.3.3.1). The sorts of polysyllabic a-stems we might expect, on the basis of Serbo-Croatian, to be unaccented, namely derivatives in *-ot-* and *-in-* (Stankiewicz 1993: 116), are typically post-stressing in these dialects.

Only among the masculines and i-stems are unaccented polysyllabic stems well-attested, though these are also subject to limitations correlated both with stem size and number; for that reason the singular and plural are most conveniently looked at separately.

4.3.4.1 Singular

All monosyllabic i-stems, in contrast to the other declensions, belong to a single accentual class in the Type 1 dialects; namely, they are unaccented. The treatment of polysyllabic stems, however, varies. Southern dialects are distinct from northern ones: in the S they are all unaccented, like the monosyllabic stems, while in the N lexical specification of accent class seems to be possible; typically derivatives in *-os(t)* and *-es(t)* are stem-stressed, e.g. *b'oles ~ b'olesta* 'disease' vs. *p'epel ~ pepelt'a* 'ash' (Nivičino; MDA; cf. also Gabor 1979:

---

[43] Note that in the S the reverse situation is found: final stress on *-e* is found with monosyllabic stems (*dab'e*) but not with polysyllabic ones (*rib'are*). However, if the formation of collectives is seen as governed by a special accentual rule (see Section 4.3.2.1.3), then forms like *dab'e* and *rib'are* do not really represent parallel forms.

122). At the western end of Type 1 the isogloss between the N and S systems seems to run between Nivičino and Smolare;   it is not clear where the isogloss is in the E.

Among masculines, unaccented polysyllabic stems are found only in extreme eastern and southern dialects; e.g. *sv'ekor ~ svekor'o* 'son-in-law', (Bansko; Molerovi 1954), *m'ozuk ~ muzuk'o* 'brain' (Suxo/Visoka; Małecki 1934-36), *v'etar ~ vetar'ə* 'wind' (Plevna/Gorno Brodi; Vidoeski 1991), *p"asak ~ p'asak'ə* 'sand' (Goce Delčev; Mirčev 1936). Most examples involve stems which were monosyllabic in Common Slavic (**svekr-*, **mozg-*, **větr*), or if disyllabic, the nucleus of the second syllable was a jer which alternated between being strong and weak (e.g. *pěsŭk-*, where *ŭ* is strong in some forms and weak in others;   cf. *p"asak* SG ~ *p"ask-ove* PL). Such stems might be considered crypto-monosyllables, in as much as they regularly evince a monosyllabic alternant. Only in Suxo/Visoka, Ser and Drama do we find bona fide unaccented disyllabic stems, e.g. *pl'amin ~ plamin"o* 'flame', *d"ever' ~ divir"o* 'brother-in-law', *xl'oput' ~ xloput"o* 'bother, to-do' (Małecki 1936). Nearly all these examples involve stems ending in a palatalized consonant, suggesting a partial accentual merger with the feminine i-stems, which likewise end or at one time ended in palatalized consonants in these dialects.[44]

4.3.4.2 Plural

The tendency to limit unaccentedness to monosyllabic stems is even more apparent in the plural (cf. Vasiliev 1969: 324). Throughout the Type 1 dialects polysyllabic i-stems have stem-stressed plurals even if the singular is unaccented, e.g. *b'olest ~ bolest'a* SG vs. *b'olesti ~ b'olest'ite* PL 'disease' (Vidoeski 1990; the second stress is due to DA). Such examples are in fact rare, since polysyllabic i-stems are overwhelmingly abstract nouns not used in the plural. Among masculines the evidence is more copious; here as well polysyllabic stems all have stem stress in the plural, whether or not the singular is unaccented, e.g. *p'oluk ~ pulug'o* SG vs. *p'oluci ~ p'oluc'etu* PL 'nest' (Suxo/Visoka; Małecki 1934-36).   In the case of monosyllabic stem masculines which take the disyllabic plural ending *-ove* the situation is varied.   In some dialects (Blagoevgrad (Stoilov 1905), Elešnica (Vidoeski 1987), Suxo/Visoka (Małecki 1934-36), Ser, Drama (Ivanov 1977), Sekavec, Plevna/Gorno Brodi (Vidoeski 1990, 1991)) the longer ending implies stem-stress (109a), producing minimal pairs with those nouns which optionally take the monosyllabic plural ending *-i*, e.g. *v'əlkove ~ v'əlkov'eto*[45] vs. *v'əlci ~vəlc'ite* 'wolves' (Ivanov 1977).   In some other dialects the longer ending does not necessarily affect accentual behavior (109b).

---

[44] Ivanov (1977) reports that stress on the article is productive - though optional - in old en-stems, which typically end in a palatalized *n'*, e.g. *k'amen' ~ kamen'e* 'stone', likewise *r"emen'* 'strap', *pl'amen'* 'flame'. He suggests that the motivation is the disambiguation of the definite singular from the plural, since segmentally both forms are identical, e.g. *kamen'e* DEF SG vs. *k'amene* INDEF PL. However, most of these examples have parallels in Suxo/Visoka, where the two forms are segmentally distinct, and so the accentual alternation serves no disambiguating function; e.g. *k'amin'u* DEF SG, *k'amin'a* INDEF PL with fixed stem stress and *plamin"o* DEF SG vs. *pl'amin'a* INDEF PL with alternating stress.

[45] The second stress here is due to DA.

(109)   SG   PL
        a.   gl'as   gl'asove   INDEF   'voice'
             glas'o   gl'asoveto   DEF   (Stoilov 1905)

        b.   gl'as   gl'asove   INDEF
             glas'o   glasov'eto   DEF   (Kuševski 1958)

However, dialects in which the pattern of (109b) is an option also contain examples like (109a). This variation may be due to the ambiguous nature of the element *-ov-*; though it is being analyzed here as an ending, it is possible that it functions as a stem extension (which, historically, it is), yielding a polysyllabic stem in the plural, which would then be subject to the tendency to ban unaccentedness from polysyllabic stems.

4.3.5 Polysyllabic neuter plural endings
The polysyllabic plural endings found with neuter nouns whose singular ends in *-e* have their own peculiar accentual characteristics, which may supersede lexically specified accentual classes. The use and productivity of these endings varies considerably among the dialects.

(i)   *-eta*. This ending typically behaves as though underlyingly accented on the first syllable, and follows the expected pattern for stress assignment: with stem-stressed nouns it is unaccented, while with post-stressing and unaccented nouns it is stressed on the first syllable:[46]

(110)   SG   PL
        a. stem-stressed   'ime   'imeta   INDEF   'name'
                            'imeto   'imetata   DEF

        b. post-stressing der'e[47]   der'eta   INDEF   'river'
                            der'eto   der'etata   INDEF

        c. unaccented   m'ore   mor'eta   INDEF   'sea'
                            mor'eto   mor'etata   DEF   (Sekavec; Vidoeski
                                                                   1990)

   Note that this accentuation occurs even where stress on the neuter plural ending *-a* has been generalized to all accentual classes (e.g. Suxo, Visoka, Goce Delčev).

(ii) *-ena*. This ending is always stressed on its final syllable, even with stem-stressed nouns; this is especially striking where it occurs alongside *-eta*, e.g. 'imeta vs. imen'a (Goce

---

[46] In Suxo and Visoka the element that corresponds to *-eta* in other dialects has the shape *-enta/-ænta* (with the reflex of the old nasal vowel). In Suxo the first vowel of the ending was apparently equated with the ending of the singular. This is evident through the extension of this ending according to the pattern [singular] + [*nta*], e.g. *pism'o ~ pism'onta* 'letter/-s'. However, the resulting accentual patterns are the same as in (110): stem-stressed *im''a ~ 'im'ænta* 'name/-s', post-stressing *nib'e ~ nib''ænta* 'sky/skies'and unaccented *m'ori ~ mur''ænta* 'sea/-s'.

[47] A borrowing from Turkish; the native Slavic lexicon lacks post-stressing monosyllabic stem neuters in this dialect.

Delčev; Mirčev 1936). The marginally attested, archaic *-esa* behaves the same way, e.g. *nebes'a.*

(iii) *-inja* (*-ijna*, *-ina*). This ending is invariably stressed on the first syllable in the Type 1 dialects, regardless of the accentual characteristics or size of the stem, e.g. '*imeta* alongside *im'ina* (Vidoeski 1990). However, in northern Type 2 dialects (e.g. Kumanovo and environs), it appears to be the noun stem rather which assigns stress to the ending, in as much as there is lexical variation, e.g. *momč'inja* vs. *br'atčinja* (Vidoeski 1962). In these dialects this ending must have functioned in the same way as *-eta*, whereby stress fell on it only in conjunction with post-stressing or unaccented stems, e.g. **momč'e ~ momč'inja* 'boy/-s'. Thus variation in the accentuation of the ending *-inja* in this dialect represents the reflex of old accent class distinctions. Outside of the Type 1 dialects, *-inja* or its variants is the dominant plural ending for neuters in *-e*.

4.4 From Type 1 to Type 2

The various restrictions and mergers affecting post-stressing and unaccented stems that can be seen in the Type 1 dialects lead towards a system in which these two accent classes are in complementary distribution with respect to stem size: monosyllabic stems are unaccented and polysyllabic stems are post-stressing. Such a distribution is almost fully realized in the dialect of Nivičino(MDA), at the Type 1-Type 2 border. The only major deviation from this complementarity is the fact that some polysyllabic i-stems are unaccented.[48] If this represents an intermediate stage between Type 1 and Type 2, then the formation of the Type 2 system can be attributed to two developments: (i) the elimination of the unaccented class in monosyllabic stems; and (ii) the elimination of the post-stressing class in polysyllabic stems. The isogloss for the second is considerably further W than the first, suggesting it was a later development.

4.4.1 Elimination of the unaccented class

The elimination of the unaccented class seems to have proceeded in three stages, affecting first masculine nouns, then a-stem and neuter nouns, and finally i-stems. The evidence for the early elimination of unaccented masculine stems comes from Gabrovo (MDA). In the dialect of Smolare, immediately to the E there are 8 attestations of unaccented masculine nouns: *nož* 'knife', *maž* 'man', *dzid* 'wall', *dib* 'bottom', *list* 'leaf', *praz* 'leek', *led* 'ice', *zab* 'tooth' (MDA); all but one of these (*zab*) are stem-stressed in Gabrovo.   Otherwise the accentual system of this dialect is the same as that of Nivičino, with the unaccented type well represented among nouns of the other declensions. Also as in Nivičino, disyllabic masculines with a fleeting vowel maintain alternating stress in the plural (*k'otli ~ kotl'ite* 'kettles', likewise *p'etli* 'roosters', *m'amci* 'lures'). In accounting for the loss of the unaccented class among monosyllabic stem masculines, two factors seem to be important:

(i)   What has been eliminated in Gabrovo is not the unaccented class per se, but rather final stress on the article. Where the manifestation of unaccentedness does not involve final stress, as in the a-stems or neuters, it is retained. However, final stress on the article is also retained in monosyllabic i-stems, e.g. *sol't'a* 'the salt', *bolest'a* 'the sickness'. This is likely due to the lack of paradigmatic options available to i-stems.   Whereas

---

[48] There are no examples of polysyllabic post-stressing neuters in *-o* among the MDA material; recall, however, that this is a poorly represented class everywhere. On the basis of neighboring Type 2 dialects it is likely that disyllabic stems with a fleeting vowel can also follow the unaccented pattern in the plural, e.g. *pet'el ~ p'etli ~ petl'ite* 'rooster' (Radoviš; Bojkovksa 1992).

masculine nouns, under pressure from the prosodic constraints, could switch to an equally admissible accentual class (i.e. stem-stressed), i-stem nouns had only one paradigmatic option available, namely to belong to the unaccented class. The switch from unaccented to accented among the i-stems would have entailed the creation of a new accentual type within this declension, which may account for its relative resistance.

(ii)   The one exception, *zab*, is also the one example where the plural is formed with the monosyllabic ending *-i*. The plural is unaccented: *z'abi ~ zab'ite* 'teeth'. All the other monosyllabic stem masculines take the plural ending *-ove*. It is possible that *-ove* assigns stem stress in this area (cf. Section 4.3.4.2); if so, paradigmatic levelling between the singular and plural could have encouraged the retraction of stress onto the stem in the singular. Unfortunately, the data from Gabrovo and Smolare are insufficient to determine the accentual properties of *-ove*.

The evidence that unaccentedness was retained longer in i-stems than in a-stems and neuters comes from the fact that throughout the Type 2 dialects there are isolated examples of i-stem nouns with stress on the article, e.g. *vičirt'a* 'the evening', *rədust'a* 'the joy', *starust'a* 'the age', *nuk't'a* 'the night' from Kukuš (Peev 1988). Such examples, typically in the form of adverbialized time expressions, are found even in Type 3 dialects, e.g. *večert'a* 'in the evening' from Neolani (Mazon 1923: 64).[49] Otherwise, i-stem nouns in the Type 2 dialects have generalized the initial stress of the indefinite form.

While the loss of the unaccented class in masculine and i-stem nouns is mostly concomitant with the loss of final stress, this is not the case for the a-stems and neuters, since the alternating pattern characteristic of the unaccented type in the Type 1 dialects does not involve absolute final stress at any point. The disappearance of the unaccented type in this class of nouns thus cannot be attributed directly to any prosodic constraints. It has instead been suggested that nouns in the Type 2 dialects are constrained by the requirement that stress be columnar (e.g. in Vidoeski 1970, 1985-86). Seen in terms of the noun paradigm as a whole this is not true, since there are dialects where the unaccented type has been completely eliminated, but where accentual alternations between the singular and plural are still possible, e.g. in Kumanovo *kot'əl ~ k'otli* 'kettle/-s' (Vidoeski 1962: 98); recall that this same dialect likewise allows lexical specification of stress on the neuter plural ending *-inja* (see Section 4.3.5). This suggests the operation of an output-output constraint tying together the accentuation of the indefinite and definite forms; such a constraint will be seen to play a major role in the development of the Type 3 system. However, the question of its origin is a matter of pure speculation. It may be that indefinite-definite correspondence was a default constraint, redundantly satisfied by stem stress, whose promotion in the hierarchy was encouraged by the prosodically motivated loss of the unaccented—and hence non-alternating—type in the other declensions.

4.4.2 Loss of the post-stressing class
Since the post-stressing class is so rare among polysyllabic stem masculines and neuters, the only reliable evidence comes from a-stems. As pointed out above (Section 4.3.3), these are maintained in eastern Type 2 dialects, and may even crop up in Type 3 dialects; see map M7. Ultimately this type gives way to stem-final stress.

---

49 Likewise, the stress of *v'ečer ~ več'erta* 'evening' from the Type 3 dialect of Slimnica (MDA) appears to result from a more recent retraction from stressed *-ta* in this form, though elsewhere in this dialect the stress of the definite is the same as the indefinite (e.g. *'esenta* 'the autumn').

4.5 From Type 2 to Type 3

Although noun stress in Type 2 dialects is bound to the stem, lexical specification of stress within that limitation is still possible. In the Type 3 dialects—at least in the most fully developed ones—lexical specification has been eliminated. All nouns follow the same pattern: stress falls on the penultimate syllable of the LexWd, i.e. the noun form not counting the article. Since the article is always monosyllabic, nominal accentuation is held within a two-syllable stress window, indicating the complete domination of two prosodic constraints, TROCHEE and ALIGN RIGHT, over STRESS-FAITH, banning both final and pre-antepenultimate stress. The Type 3 dialects are thus characterized both by stress retraction and stress advancement. As suggested by the constraint hierarchies outlined in Section 2, retraction should precede the advancement.

4.5.1 Retraction of final stress

The ban on final stress in the Type 1 and 2 dialects is highly morphologized. The exact nature of this ban is in fact hard to characterize, since only endings are affected. Is it phonological, targeting only open syllables? Is it morphological, affecting affixes but not stems? Both interpretations seem equally plausible. In the Type 3 dialects however it is clear that a ban on final stress as such is in effect, though it may be subject to morphological conditioning. In addition, syllable count may play a role.

The retraction of final stress is a process that necessarily affects only the masculine singular, since final stress in the Type 2 dialects is absent from other noun forms. The first clear signs of retraction are found in former post-stressing nouns with a fleeting vowel of the type *petˈel* ~ *pˈetli* 'rooster/-s'. Throughout the Type 2 dialects these show a tendency to retract stress from the final syllable in the singular, e.g. *ˈorel* 'eagle' alongside *petˈel* in Radoviš (Bojkovska 1992) and Kukuš (Peev 1988). Here the loss of final stress was likely encouraged by the prior retraction in the plural (cf. Vidoeski 1970); it is apparently a change in progress in Kratovo (Vidoeski 1952).

Further W the retraction of final stress is more widespread. In the Type 3 dialects neighboring Type 2 retraction is regular except where certain productive derivational suffixes are involved, typically *-ar*, *-ač*. These are invariably stressed in the Type 1 and 2 dialects as well (cf. Vasiliev 1969: 324). Thus there is a band of dialects where final stress in nouns is regularly found only in conjunction with these suffixes; in more central Type 3 dialects, though, these too lack final stress (see map M8). Compounds are especially resistant to retraction, examples with final stress being found all the way up to the Type 4 border, e.g. *listopˈat* 'October', *vodopˈat* 'waterfall' (Popəlžani; MDA), *pesnopˈoj* 'singer' (Vambel (Ivić 1981)).

4.5.1.1 Disyllabic versus polysyllabic forms

As with the elimination of post-stressing accentuation in the Type 1 dialects, the retraction of final stress in masculines affected disyllabic forms before polysyllabic ones. The evidence for this comes mostly from nouns with the *-ar* and *-ač* suffixes, the reason being that these provide the only reliable examples of a contrast between disyllabic and polysyllabic forms. Examples of such a contrast from within one dialect include: *ˈovčar* 'shepherd', *rˈibar* 'fisherman', *mlˈekar* 'milker', *kˈonjar* 'groom', *vˈodar* 'water carrier', *dzˈidar* 'mason' vs. *govedˈar* 'cattleherd', *volovˈar* 'oxherd' (Knežje; MDA); *kˈojnar*, *ˈovčar*, *mlˈekar* 'milkman' vs. *lakomˈar* 'greedy person', *govedˈar*, *volovˈar* (Patele; MDA); *rˈibar* vs. *levačˈar* 'left-handed person', *volovˈar*, *govedˈar* (Markoveni; MDA);   *rˈibar* vs. *guvedˈar* (Čegan; Vidoeski 1978). The existence of final stress solely in non-compound words of three or more syllables is also reported for Gratče, Tiolišta, Ezerec, Nestram (Vidoeski 1977, 1979, 1984a,

1989b), and suggested by the MDA data for Slimnica and Rupišta. However, the evidence from Rupišta suggests that syllable count may not always be responsible for this effect. This is strikingly illustrated in derivates from place-names denoting "dweller of..."; the disyllabic words in (111a) and trisyllabic words in (111b) contrast as in the above examples, while (111c) is trisyllabic yet still lacks final stress:

(111)   *Place name*   *"dweller of"*
        a   Grˈatče   grˈatčar
             Čˈuka   čˈukar
             Stˈemno   stˈemnar

        b   Nˈestram   nestramˈar
             Slˈimnica   slimnicˈar
             Rˈupnišča   rupnišcˈar

        c   Dranˈičevo   dranˈičar   (Rupišta; MDA)

In these examples the accentual contrast seems to stem from the derivational process itself. The accentuation of forms with -*ar* appears to depend on three conditions: (i) the suffix is underlyingly accented; when added to the stem, *both* are underlyingly accented. (ii) in cases of stress clash, the stress marking on the suffix is deleted. (iii) only the rightmost of the underlying stresses surfaces. This is illustrated below:

(112)   *eliminate stress clash*   *rightmost*
        a   nˈe.stra.mˈar →   n.a.   →   nestramˈar

        b   čˈu.kˈar →   čˈu.kar   →   čˈu.kar

In other words, these derivatives strive to retain, at least underlyingly, an accentual structure which reflects their compound nature, with both the original stem and the suffix accented. Only where retention of this underlying structure would cause a stress clash is it dispensed with, in favor of stress which corresponds to that found in the original place-name. The behavior of *dranˈičar* is thus due to the fact that the suffix -*ev*- is omitted in the derivational process, bringing about the same potential stress clash, (dra.nˈi.čˈar) found in (111b). Note that outside of this particular derivational environment, the suffix -*ar* is usually stressed in this dialect regardless of stem size, e.g. *konjˈar*, *biškˈar* 'swineherd', *mlekˈar* (but also *bˈiškˈar*, and *ˈofčar*).

    However, the notion that there is also an prosodic motivation for the retraction of stress solely from disyllabic forms should not be dispensed with. This is especially clear when one looks at Turkish borrowings, which will originally have had final stress. These frequently show the same contrast of disyllabic vs. longer forms, e.g. *gˈerdan* 'necklace', *tˈemel* 'foundation', *jˈorgan* 'blanket', *bˈajrak* 'banner', *dˈukˈan* 'shop', *pˈazar* 'market' vs. *bakrdˈan* 'polenta', *kačamˈak* 'polenta', *badžanˈak* 'son-in-law' (Bogoslovec; MDA). Nor does this only affect masculine nouns; Drvošanov (1993) gives a number of similar examples from Kajlar involving a-stem nouns. Since these are borrowed words, the effect cannot be traced back to any derivational process. In addition, the behavior of adjectives with respect to stress retraction also seems due solely to the size of the form itself (cf. Section 5.3).

4.5.1.2 Indefinite-definite correspondence
A prosodically motivated retraction of final stress should be expected to affect only the indefinite form. Nevertheless, the definite form typically follows suit, e.g. *rib'ar ~ rib'arot > r'ibar ~ r'ibarot*. This suggests that the direct source of the surface stress of the definite form is in fact the indefinite. That is, there is an output-output constraint linking the two forms, such as was proposed above to account for the loss of the unaccented type among a-stem and neuter nouns (Section 4.4.1). This is illustrated in (113), where input-output STRESS-FAITH (i.e. faithfulness to the underlying representation as it has been construed up to this point in the text) is identified as "I-O", and output-output STRESS-FAITH is identified as "O-O (output 1, ouput 2)", where output 2 is assessed in terms of output 1.

(113)   Retraction affects both definite and indefinite forms

rib'arot (def. = r'ibar)	TROCHEE	O-O STRESS-FAITH (indef, def)	I-O STRESS-FAITH
+ (r'i.ba)rot			**
ri(ba.rot)		*!	*
ri(ba.rot)	*!		

The output-output constraint is evidently ranked above the input-output constraint; thus it forces stress retraction in the definite form, e.g. *rib'arot > r'ibarot*, even though *rib'arot* itself does not violate the prosodic constraints.

    Violations of indefinite-definite correspondence correlated with the retraction of final stress are rare; the only reasonably certain examples I have are from Divle: *r'ukav ~ ruk'avat* 'glove', *p'ojas ~ poj'asat* 'belt', *kr'evet ~ krev'etat* 'bed' (MDA).   From the area around Lerin and Bitola, where Type 3 dialects border on Type 4, come a number of apparent examples, e.g. *'ofčar ~ ofč'aro* 'shepherd', alongside examples of stress *advancement* in the definite form of nouns which did not originally have final stress, e.g. *p'rsten ~ prst'eno* 'ring' (Mazon 1923). These are discussed below in Section 4.5.3.

4.5.2 Stress advancement
Stress advancement off of pre-antepenultimate syllables seems to have embraced first masculine plural forms, then plurals of other declensions, and finally singular forms.

4.5.2.1 Masculine plural
The retraction of final stress in masculine nouns will naturally affect singular forms but not plurals, since stem-final stress is not in absolute position there, e.g. *čov'ek > č'ovek* SG but *čov'eci* PL. As a result, the original distinction between lexically marked stem-final and stem-penultimate stress will be maintained only in the plural:

(114)	a. retracted final stress ('person')	b. original stem-penult stress ('Friday')		
	č'ovek	p'etok	SG	
	čov'eci	p'etoci	PL	(Bogoslovec; MDA)

This in effect introduces a new accentual type, one with a singular-plural alternation (cf. Vidoeski 1985-86). The two patterns, i.e. alternating stress and columnar stress, are found alongside each other in some dialects at the Type 2-Type 3 border: around Sveti Nikole

(from Bogoslovec to Divle), in Voden and in Meglen. There is a tendency however for nouns to migrate from one type to another, originally end-stressed nouns being found with columnar stem-penultimate stress, e.g. *k'ovač ~ k'ovači* 'smith/-s' (Knežje, Preod, Divle; MDA), and nouns which originally had stem-penultimate stress being found with alternating stress, e.g. *p'ajak ~ paj'aci* 'spider/-s' (Preod; MDA). The former tendency predominates in Divle and Knežje; cf. the Turkish borrowings *'adet ~ 'adeti* 'custom/-s', *č'emberi* 'hoops', *d'uduci* 'flutes', *n'išani* 'targets', *v'ildžani* 'cups' (Divle); *p'azari* 'markets' (Knežje), which originally had stem-final stress. Elsewhere, however, the alternating type has been expanded at the expense of columnar stress; cf. *m'ozok ~ moz'oci* 'brain/-s', *p'ajak ~ paj'aci*, *pr'aznik ~ prazn'ici* 'holiday/-s' (Preod), words which originally had fixed stem-penultimate stress.

   In its most restricted form the alternation appears to have been construed as the generalization of stem-final stress in the plural. That is, the alternation *č'ovek ~ čov'eci*, originally the result of a restriction on the realization of underlying stress in final position, was reinterpreted as the imposition of stem-final stress in the plural of a subset of nouns. It seems probable that disyllabic nouns, the first to be affected by the retraction of final stress, were also the first to be embraced by the generalization of stem-final stress in the plural. For example, in Gorno Požarsko it is reported that stem-final stress has been generalized in the plural of *all* disyllabic-stem masculine nouns, while only some longer stems have been affected (Bojkovska 1981: 64). Likewise i-stem nouns, though formally identical to masculine nouns in their indefinite forms, appear to have been affected later. For example, in Voden it is reported that while stem-final stress in the plural is the norm among masculines, it is absent among i-stems, e.g. *uč'itel ~ učit'eli* 'teacher/-s' but *m'ilust ~m'ilusti* 'favor/-s'(Dumev 1943: 75). The absence of this pattern in i-stems can be attributed to the fact that they never had stem-final stress in the first place, so that this class lacked the analogical model found in masculines.

   Stem-final stress as such seems to be limited to plurals in *-i*; thus, in the dialects around Sveti Nikole the (originally) collective plurals in *-ja* remain exempt from this rule, as do counted plurals in *-a* (Vidoeski 1962: 118). However, elsewhere within the Type 3 dialects the alternation is extended to forms with these endings as well. Ultimately, words with disyllabic endings *-ovi* and *-išta* are embraced by the alternation. Compare the forms from Gorno Požarsko, where nouns in *-ovi* are not included in the alternating pattern (115a), with those from the neighboring villages of Volkojanovo, Nisija and Lukovec, where they are (115b):

		a.	*b.*		
(115)					
	-i plural	m'ozuk	m'ozuk	SG	'brain'
		muz'oci	muz'oci	PL	
	-ovi plural	gr'op	gr'op	SG	'grave'
		gr'obuvi	grub'ovi	PL	(Bojkovska 1981)

The inclusion of these endings in the alternating pattern lends itself to two interpretations: (i) in these dialects *-ov-* and *-išt-* are construed as part of the stem, rather than part of the ending, and so fall under the rubric of this alternation; or (ii) the target for plural accentuation has been broadened from the stem-final syllable to simply the LexWd penultimate syllable; that is, it is no longer sensitive to the internal morphological composition of the word. Since the prosodic development from the Type 1 to the Type 4 dialects to a large measure entails a decrease in the morphological sensitivity of stress-assigning principles, the latter interpretation is to be preferred.

4.5.2.2 Other declensions

In other Type 3 dialects the generalization of LexWd penultimate stress in the plural has been extended to the remaining declensions: a-stem, i-stem and neuter. Note that the sort of alternation that results in a-stem and neuter nouns is fundamentally different from that found among masculine and i-stem nouns. There the shift of stress in the plural is associated with the addition of an ending, and hence of extra syllables, so that the shift of stress is concomitant with the maintenance of penultimate stress, e.g. *vode*(*n'i.čar*) ~ *vodeni*(*č'a.ri*). The a-stems and neuters have a monosyllabic ending in both singular and plural, so that the relationship of stem syllables to the end of the word does not change between the two forms.[50]   Thus where stress is on the penultimate syllable in the singular no change is observable. However, where stress is *not* on the penultimate syllable in the singular, the application of penultimate stress in the plural will produce an alternation, e.g. *k'oliba* ~ *kol'ibi* 'cottage/-s', *p'astrmka* ~ *past'rmki* 'trout/-s', *'ostrovo* ~ *ostr'ovi* 'island/-s' (Trojaci; MDA); *j'agula* ~ *jag'uli* 'eel/-s', *g'odina* ~ *god'ini/god'inje* 'year/-s', *pij'avica* ~ *pijav'ici* 'leech/-es' (Dunje; MDA); *j'abəko* ~ *jab'əki* 'apple/-s' (Lugunci; MDA); *s'abota* ~ *sab'oti* 'Saturday/-s' (Neret; Ristujčin 1994); *g'odina* ~ *god'ini* (Podles; MDA); *M'arkova* (a surname, FEM) ~ *Mark'ovi* PL (Nikodin; MDA). Such a system allows lexically marked stress in the singular only. Ultimately, LexWd penultimate is extended to the singular as well in most Type 3 dialects; thus singular *god'ina* like plural *god'ini*, though a handful of exceptions often remains.

4.5.2.3 Prosodic and morphological motivation for stress advancement

The extension of LexWd penultimate stress throughout the noun system can be seen as the result of pressure from ALIGN RIGHT; i.e. it results in the elimination of pre-antepenultimate stress. This of course makes no sense if seen only in terms of the indefinite form, since it entails not only the advancement of pre-antepenultimate stress, e.g. *v'erverica > verver'ica*, but also of antepenultimate stress, e.g. *g'odina > god'ina*.   The motivation for the advancement only becomes clear when the definite forms are considered, i.e. *g'odinata > god'inata*. The definite form apparently influences the indefinite form, in much the same way as the indefinite form was seen to influence the definite form in the retraction of stress in masculines. However, whereas the transference of accent from the indefinite to the definite appears quite suddenly and practically without exception, the reverse is not the case. It is not unusual to find examples where stress shifts in the definite form only, leading to a violation of indefinite-definite correspondence, e.g. from Gorno Kalenik *č'etiri* ~ *čet'irite* 'four', *s'abota* ~ *sab'otata* 'Saturday', *č'etvərtok* ~ *četv'ərtoko* 'Thursday' (Hill 1990); from Trojaci *sl'oboda* ~ *slob'odata* 'freedom', *p'adina* ~ *pad'inata* 'slope' (MDA); from Divle *s'udija* ~ *sud'ijata* 'judge', likewise *k'ošul'a* 'shirt', *j'agula* 'eel', *j'agutka* 'berry', *sl'oboda*, *pl'anina* 'mountain', *p'eštera* 'cave', *r'amnica* 'plain', *'osnova* 'warp', *'olovo* 'lead', *'orak'an* 'plough ox' (MDA);   from Negotino *s'abota* ~ *sab'otta* (< *sab'otata*), likewise *r'abota* 'work', *pl'adnina* 'noon', *n'edela* 'week' (Filiposki 1952). Such an alternation is found, marginally, as far E as the Type 2 dialect of Kulakia, e.g. *p'ətički* ~ *pət'ičkite* 'paths' (Vaillant and Mazon 1938).   In some cases the stress shift in the definite form is optional, thus *j'atrva* ~ *jat'rvata/j'atrvata* 'sister-in-law' (Creševo; MDA);   *'olovo* ~ *ol'ovoto/'olovoto* (Gradsko; MDA).

Nevertheless the general tendency in the Type 3 dialects is to maintain columnar stress between the indefinite and definite. Yet it is still clear that the transference of accentual features from the definite to the indefinite proceeds at a slower rate than transference in the

---

[50] Of course the neuter ending *-inja* is disyllabic, but its stress is exceptional in any case, ultimately coinciding with LexWd penultimate stress.

other direction. The difference in behavior can be accounted for by assuming that indefinite-definite correspondence is higher ranked for definite forms than for indefinite forms. That is, for definite forms the relevant constraint ranking is O-O STRESS FAITH (indef, def) » I-O STRESS-FAITH, with output-output correspondence dominating faithfulness to underlying stress, while for indefinite forms it is the reverse, I-O STRESS-FAITH » O-O STRESS FAITH (def, indef), with faithfulness to underlying stress dominating output-output correspondence. Thus any demotion of STRESS-FAITH that leads to a change in the indefinite form will automatically lead to a change in the definite form. However, for indefinite forms the reverse is not necessarily true. For example, the demotion of STRESS-FAITH below ALIGN RIGHT[51] itself does not imply any change in the indefinite form:

(116)

g'odina cf. *god'inata*	ALIGN RIGHT	I-O STRESS-FAITH	O-O STRESS-FAITH (def, indef)
+ g'odina			*
god'ina		*!	

The transference of accentual features from the definite to the indefinite can only follow from the demotion of I-O STRESS-FAITH below indefinite-definite correspondence. At their most innovative the Type 3 dialects evince a constraint ranking O-O STRESS-FAITH » I-O STRESS-FAITH that applies to all nouns, which implies the complete loss of lexically marked stress. Instead, noun stress is governed simply by two requirements: (i) stress must fall within an antepenultimate-penultimate stress window; and (ii) the stress of the indefinite and definite forms must match.

4.5.3 Violations of indefinite-definite correspondence

Some of the Type 3 dialects around Lerin and Bitola, though presumably having undergone the generalization of LexWd penultimate stress described above, show evidence of a secondary violation of indefinite-definite correspondence, observable in masculine plurals in *-ovi*. Throughout this area, as a result of regular phonological processes, this is reduced to *-oj*, whereby the stress which was formerly on the penultimate syllable in the indefinite finds itself on the final syllable, e.g. *rog'ovi > rog'oj* 'horns'. While this is tolerated in some dialects, in others stress is retracted in the indefinite form, i.e. from absolute final position; thus *r'ogoj ~ rog'ojte* (Popəlžani; MDA); this is sporadic in Popəlžani and Živojna (MDA), while Mazon (1923: 36) reports it to be regular in the environs of Lerin and Neolani.

However, this area displays some more extreme examples of non-correspondence. Throughout the area around Lerin there are examples of a shift of stress forward between the indefinite and definite forms, e.g. from Neolani *p'rsten ~ prst'eno* 'ring', *k'amen ~ kam'eno* 'stone'; from Armensko *g'ostin ~ gost'ino* 'guest', *'izba ~ izb'ata* 'shack', *sv'adba ~ svadb'ata* 'wedding', *nev'esta ~ nevest'ata* 'bride' (all examples from Mazon 1923); note that all these examples were historically stem-stressed, so they cannot be taken as representing the effects of a retraction of final stress in the indefinite. Likewise, from further S, the XVI century lexicon from Kostur includes examples such as *dux'ovnik ~ duxovn'iko* 'priest',

---

[51] Recall that the ban against pre-antepenultimate stress is brought about by the combined effects of ALIGN RIGHT and DEP-STRESS (cf. 2.3). Since it is ALIGN RIGHT that dictates the primary conditions, it is used as representative of the effects of both; DEP-STRESS merely governs *how* ALIGN RIGHT will be satisfied.

j¹organ ~ jorg¹ano 'blanket', *post¹ela ~ postel¹ata* 'bed' (Ničev 1987: 38). These seem to represent the extension of the target of penultimate stress from the LexWd to the MetWd, and as such a precursor to penultimate stress, such as is found in nearby Korçë.

A possible intermediate stage is found in the dialects of Buf and Opcirina. Recall that in these dialects lexical specification of stress is only possible in trisyllabic forms: in longer forms the prosodic constraints assign penultimate stress and/or initial stress, while disyllabic forms are invariably trochaic (cf. Section 2.8.3). However, though it seems that the place of stress may be specified in trisyllabic indefinite nouns, e.g. *k¹okoška* 'chicken', *vr¹eteno* 'spindle' vs. *mag¹arka* 'she-ass', *venč¹ilo* 'marriage', definite nouns nearly always have penultimate stress, e.g. *mor¹eto* 'the sea', *sob¹ata* 'the room', *več¹erta* 'the evening'(MDA). What is significant here is that these particular definite forms are based on disyllabic indefinite forms (*m¹ore*, *s¹oba*, *v¹ečer*); i.e. forms which cannot have lexically specified stress. Thus, while the place of stress in trisyllabic indefinite forms is lexically specified, the place of stress in trisyllabic definite forms is not. This suggests that what we are seeing here is the default position of stress, namely the penultimate syllable of the MetWd. Its emergence here as a regular feature (and in the other dialects as a sporadic feature), indicates the demotion of indefinite-definite correspondence to a position where it is without effect. Such a demotion will have characterized the rise of antepenultimate stress as well, provided the constraints proposed for the Type 2 and 3 dialects really did play a role in its development.

Section 5: Adjectives

The behavior of adjectives resembles that of nouns, but is sufficiently different to warrant being looked at separately. Pronominal and demonstrative adjectives in turn show enough deviations that they will be treated separately at the end of this section.

5.1 Morphology

Adjectives distinguish masculine, feminine and neuter forms in the singular and display a single plural form, except in the northern dialects. The endings of the feminine and neuter singular are the same as those found among a-stem and neuter nouns, namely *-a* and *-o*, while the plural in *-i* matches that typically found in non-neuter nouns; in the northern dialects, where the a-stem plural is *-e*, the feminine plural adjective ending is likewise *-e* (Vidoeski 1960-61: 16). The only morphological difference between nouns and adjectives which is of import to accent is found in singular masculine forms. In the indefinite form, some adjectives behave like nouns and take no ending, while others take the ending *-i*. This ending is found in conjunction with suffixes that end in a consonant cluster, such as *-sk-* (e.g. *makedonski*), as well as with denominal adjectives formed with the suffix *-j-*, such as *kozji* 'goat- (adj.)' < *koza*. However, in the definite form, the *-i* ending is obligatory for *all* masculine adjectives. Thus a typical adjective paradigm looks as follows in Standard Macedonian:

(117)   Adjectival declension

indefinite	definite		
golem	golemiot[52]	MASC	'big'
golema	golemata	FEM	
golemo	golemoto	NEUT	
golemi	golemite	PL	

---

[52] As with nouns, the form of the masculine singular article in many dialects lacks the final *-t*.

The presence of the *-i* ending in the definite form and its absence in most indefinite forms reflects the original Common Slavic distinction between forms with and without the enclitic pronominal element *jĭ;* which denoted definiteness e.g. **golěmŭ -jĭ > golemi* vs. **golěmŭ > golem*. The definite article was appended only to this definite form; hence the obligatory *-i-* of the contemporary definite adjective forms. The origin of the other definite forms is ambiguous; on the basis of what is found in Serbo-Croatian it is probable that the adjectival ending and enclitic pronoun merged, yielding a single long vowel, e.g. **mladaja > mlada:* 'young'. With the shortening of long vowels in Balkan Slavic the indefinite and definite forms would have become identical.

5.2 Accentual features of Type 1 dialects

The range of accentual classes found in adjectives is limited. Of the original three Common Slavic accentual classes, post-stressing accentuation is only marginally attested in isolated forms, e.g. *dob'ar ~ dobr'a* 'good' from Elešnica (Vidoeski 1987), *dobr'o* from Kulakia (Vaillant and Mazon 1938); forms such as *sfet'i, sfet'a* 'holy' (Plevna/Gorno Brodi; Vidoeski 1991), *bož'a* 'divine' (Stinek; MDA), which are more frequently encountered, are probably Church Slavicisms. A number of Type 1 dialects maintain a class of adjectives which appear to be unaccented, with initial stress in the indefinite form and pre-article stress in the definite form:

(118)	*indefinite*	*definite*		
	ml'ad	mlad'ie	MASC	'young'
	ml'ada	mlad'ata	FEM	
	ml'ado	mlad'oto	NEUT	
	ml'adi	mlad'ite	PL	(Pexčevo; MDA)

This type is attested from Pexčevo, Mačovo, Berovo, Trabovište, Star Istevik, Sasa and Kostin Dol in the N (MDA), and in Plevna/Gorno Brodi in the S. Elsewhere all adjectives have stem stress. Outside of Macedonian this alternation is found in some adjacent W Bulgarian dialects (cf. Alexander 1975), and is marginally found in Standard Bulgarian, e.g. *g'orək ~ gork'ijat* 'bitter' (Stankiewicz 1993).

When compared to the situation in nouns the near complete dominance of stem stress in adjectives is striking. The elimination of the post-stressing type can probably be traced to the influence of the definite forms. In late Common Slavic, post-stressing accentuation as such was realized only in the indefinite form; the definite form rather had a neoacute accent on the stem-final syllable. Given the formal collapse of most definite and indefinite adjectival forms their accentual collapse is perhaps not surprising. In the indefinite forms of unaccented stems, stress on the ending should be expected in the feminine singular alone; recall however that *-a* appears to have lost its inherent accentuation even among nouns (cf. Section 4.3.1). The rarity of the expected stress on the endings in the definite forms has no obvious explanation; at best one can cite the general tendency exhibited in Slavic to reduce the number of accentual classes in adjectives with respect to those found in nouns (cf. Stankiewicz 1993).

5.3 Accentual features of Type 2 and 3 dialects

The columnar stem stress found in most Type 1 dialects is continued in the Type 2 dialects. The issues facing adjectives in the Type 3 dialects are essentially the same as those facing nouns, namely the generalization of LexWd penultimate stress in conjunction with the prosodic constraints. As in nouns, the loss of final stress is conditioned by the nature of the

final syllable, with certain productive derivational suffixes (e.g. *-vit, -liv*) retaining final stress longer. Likewise, disyllabic forms are more readily affected; cf. the contrast within one dialect of *pr'enkliv* 'pocked', *g'orčliv* 'bitter' vs. *milosl'iv* 'merciful', *rabotl'iv* 'hard-working', *kamenl'iv* 'stony' (Slimnica; MDA); *zb'orlif* 'talkative' vs. *bolezl'if* 'sickly' (Popəlžani).[53] All told, final stress is somewhat more tenacious in adjectives than in nouns. Thus we find dialects where final stress has been eliminated in nouns except in association with productive derivational suffixes, but is still freely found in adjectives, even those lacking productive suffixes, e.g. from Kajlar *vis'ok* 'high', *dəlb'ok* 'deep', *šir'ok* 'wide', *zil'en* 'green', *cərv'en* 'red', *ša r'en* 'motley', *gul'em* 'big', *dib'el* 'fat', *bug'at* 'rich' (Drvošanov 1993), from Ezerec *vis'ok, dib'el, bog'at, eft'in* 'cheap', *gor'ešč* 'hot' (Vidoeski 1984a); from Rupišta *gol'em, vis'ok, deb'el, bog'at, zel'en* (MDA); from Knežje *crv'en, šir'ok, zel'en, gol'em, vis'ok, deb'el* (MDA). It may be that the differing structure of the adjective paradigm is responsible for the greater robustness of final stress. In adjectives, though a masculine singular form may have the disfavored final stress, it occurs alongside three other indefinite forms which do not, e.g. *vis'ok, vis'oka, vis'oko, vis'oki*. Perhaps there is an output-output correspondence constraint obtaining between these forms which is not found in nouns.

The retraction of stress from final syllables produces a stress alternation between the the stem-penultimate syllable in indefinite masculine and the stem-final in the other forms in adjectives which originally had lexically marked stem-final stress. Since most adjectives originally had either stem-final or stem-penultimate stress, the result is a lexical distinction between alternating and non-alternating stress, such as is seen in dialect of Preod[54]:

(119)	*retracted final stress* ('big')	*original stem-penult stress* ('greedy')	
	g'olem	l'akom	MASC SG
	gol'ema	l'akoma	FEM SG
	gol'emo	l'akomo	NEUT SG (Preod; MDA)

Ultimately, though, the alternating pattern is extended to all adjectives in most Type 3 dialects, so that adjectives display LexWd penultimate stress, regardless of their original accentuation. There are, however, two sets of forms that constitute exceptions: (i) possessive adjectives in all type 3 dialects; (ii) the definite masculine in some type 3 dialects.

5.3.1 Possessive adjective suffixes

The suffixes *-ov-* (masculine and neuter) and *-in-* (feminine), used to derive possessive adjectives from nouns, are prestressing in most of the Type 3 dialects. How this came about is not entirely clear. In the Type 1 and 2 dialects *-in-* seems to be inherently unaccented, while *-ov-* shows traces of having once been inherently accented, whereby it presumably received stress when appended to unaccented and post-stressing stems. However, in the contemporary dialects there is no regular correspondence between accentual class (either current or historical) and the accentual behavior of *-ov-*. In many dialects it seems to follow

---

[53] Note that retraction only occurs in the disyllabic masculine forms; thus *g'orčliv* but *gorčl'iva* 'bitter' (Slimnica; MDA). This demonstrates that retraction cannot be equated with the derivational process described in Section 4.5.1.1 above; were that the case, we would expect to find pre-suffix stress in all forms of *gorčliv* and similar adjectives.

[54] The other dialects where the comparable contrast is found in nouns do not undergo retraction of final stress in adjectives.

semantic lines, with stressed *-ov-* characterizing certain semantic fields, such as plant names (cf. Vidoeski 1962: 111; Peev 1988: 152; Peev 1979: 58) or bird names, e.g. the neuter forms *kokošk^ıovo* 'chicken's', *gusk^ıovo* 'goose's', *orl^ıovo* 'eagle's', *čapl^ıovo* 'heron's' (Nivičino; MDA). Note from the preceding examples that *-ov-* may sometimes be expanded at the expense of *-in-* to derivatives from feminine nouns, e.g. *kokošk^ıovo < kok^ıoška*; cf. *kok^ıoškino* in Kratovo (Vidoeski 1952).

The suffixes *-in-* and *-ov-* are prestressing in the Type 3 dialects S of Veles.[55] This accentual property blocks the generalization of LexWd penultimate stress in such forms; instead, possessive adjectives display columnar pre-suffix stress:

(120)	*possessive adjective* ('poplar's')	*ordinary adjective* ('big')	
	top^ıolov	g^ıolem	MASC SG
	top^ıolova	gol^ıema	FEM SG
	top^ıolovo	gol^ıemo	NEUT SG
	top^ıolovi	gol^ıemi	PL

In the definite forms this accentual scheme yields pre-antepenultimate stress, and hence a violation of ALIGN RIGHT. This is nevertheless tolerated throughout the Type 3 dialects, e.g. *d^ıabovoto* 'the oak's' (Trojaci; MDA), though it may be resolved by DA, e.g. *d^ıabov^ıoto* (Dunje; MDA).

5.3.2 Indefinite-definite correspondence

In definite masculine forms there is a conflict between the application of LexWd penultimate stress on the one hand and indefinite-definite correspondence on the other. In nouns this conflict does not arise, but in adjectives, where the definite form is two syllables longer, the two demands cannot be satisfied simultaneously in polysyllabic adjectives whose indefinite masculine takes the zero ending. Thus given the indefinite form *g^ıolem*, the stress of the definite form *gol^ıemiot* fails to correspond to the indefinite, while the stress of the form *g^ıolemiot* does not have LexWd penultimate stress. Most Type 3 dialects favor the first approach. However, around Bitola and Lerin, adjacent to the Type 4 dialects with initial stress, correspondence with the indefinite form is favored, e.g. *z^ıelenio* 'the green' (Tiolišta; Vidoeski 1979); *k^ıadravio* 'the curly' (Skočivir; MDA); *nem^ıožlivio* 'the impossible', *g^ıolemio* 'the big' (Živojna; MDA); *v^ıisokjo* 'the high' (Popəlžani; MDA); scattered examples in fact occur throughout the Type 3 dialects. Paradoxically, the last two villages admit the violation of indefinite-definite correspondence among nouns where it would result in final stress, e.g. *r^ıogoj ~ rog^ıojte* PL (cf. Section 4.5.3). That is, on the one hand in nouns a prosodic constraint (the avoidance of final stress) leads to a violation of indefinite-definite correspondence, while on the other hand in adjectives the demands of indefinite-definite correspondence leads to a violation of a prosodic constraint (the ban against pre-antepenultimate stress). It is probably not insignificant that this occurs in the area near where initial stress has been generalized, which indicates that the ban on pre-antepenultimate stress may no longer be operative in this area.

---

[55] That this accentuation is associated specifically with the suffixes, and is not a consequence of the derivational process itself, is indicated by the behavior of non-possessive adjectives whose stem coincidentally ends in the sequence *-ov*. In some dialects the prestressing qualities of the possessive suffix are transferred to such adjectives, e.g. *g^ıotoo* /*gotovo*/ 'ready' (Hill 1990), *j^ıaluva* 'barren' (Drvošanov 1993).

5.4 Comparative and superlative forms

Throughout Balkan Slavic the comparative and superlative forms of the adjective are formed with the prefixed elements *po-* and *naj-*. In Macedonian Type 1 dialects these carry their own separate stress, e.g. *p'og'olem* 'bigger', *n'ajg'olem* 'biggest', while in the Type 4 dialects they form part of a single PrWd with the adjective itself, receiving one stress; thus Standard Macedonian *p'ogolem*, *pog'olema*, *pogol'emiot* etc. The transformation of *p'o-* and *n'aj-* from independently stressed elements[56] to undifferentiated components of a single PrWd is a matter of no small interest. However, it is difficult to speak in precise terms about this transition, as the data are often contradictory. Separate stress on *po-/naj-*, as in the Type 1 dialects, seems to be an eastern and southern feature, being reported for the dialects of Kratovo (Vidoeski 1952), Radoviš (Bojkovska 1992), Dojran (Peev 1979), Kukuš (Peev 1988), Enidže Vardar (Karanfilovski 1992), Meglen (Bojkovska 1981), Voden (Dumev 1943), Kajlar (Drvošanov 1993) and Kostur (Šklifov 1973). In the northern Type 2 dialect of Kumanovo, according to the data from Vidoeski (1962), it seems there is a tendency to avoid stress clash: where stress clash would occur only the prefixed element is stressed, e.g. *p'ostar* (i.e. /p'ost'ar/) 'older', *n'ajstrašnji* (i.e. /n'ajstr'ašnji/ 'most frightening', *p'oarnoga* (i.e. /p'o'arnoga/) 'better (oblique animate masculine)' vs. *p'ogol'em*, *p'onapr'ednji* 'more advanced', *p'omirišlj'iv* 'more fragrant'. This system seems to obtain in eastern Skopska Crnogorja dialects as well, e.g. *p'ostarata* vs. *p'oslob'odan* 'more free', *p'ozel'eno* 'greener' (Vidoeski 1954). However, there are also examples from this area of stress solely on the prefixed element even where stress clash would not occur, thus *p'ogolemi*.   Stress on the prefixed element alone in all contexts is reported for Negotino, e.g. *n'ajubavjot* 'the most beautiful' alongside the unprefixed *ub'avjot* (Filiposki 1952), as well as for Gorno Kalenik (Hill 1990); the material from the MDA suggest that such accentuation is typical for the dialects N of Lerin. Likewise around Tetovo, where fixed antepenultimate stress normally prevails, stress on the prefixed element is nevertheless typical, even if pre-antepenultimate, e.g. *p'omilosni* 'more merciful', *p'ostariot* (Seliščev 1929);   *n'ajmladiot* 'the youngest', *p'ogolemi* (Stamatoski 1956). For Mariovo the situation is unclear; in Koneska (1951) the examples from the grammatical description suggest that only the adjective itself is stressed (*post'ariot*), while examples from the appended texts suggest only the prefixed element is stressed (*p'ostar'io*), the second stress being due to DA); the material from the MDA for the same area shows evidence of all the accentual types outlined above. It seems not unlikely that throughout the Type 3 dialects both the prefixed element and the adjective bear underlying stress, with the surface realization being dependent on other factors, such as phrase-level prosody.

5.5 Demonstrative/pronominal adjectives

The demonstrative and pronominal adjectives *takov* 'such', *kakov* 'what kind of?', *koj* 'which', *čij* 'whose?', *moj* 'my', *tvoj* 'your', *svoj* 'own (reflexive)' and *kutri* 'which', and the numeral *eden* 'one' are noteworthy for displaying post-stressing accentuation—absent from ordinary adjectives—in many Macedonian dialects. The dialects can be roughly divided into three groups based on the degree to which post-stressing accentuation is maintained:

(i)   The possessives *moj*, *tvoj* and *svoj* are post-stressing only in a few northern Type 1 dialects, e.g. *mo'e*, *moj'a*, *mo'i*, *tvo'e*, *tvoj'a*, *tvo'i*, *svo'e*, *svoj'a*, *svo'i* in Blagoevgrad (Stoilov 1905) and Delčevo (Kuševski 1958); *moj'a* in Laki (MDA). The post-stressing

---

[56] In some western Bulgarian dialects they are even independent words, e.g. *p'o ot st'aro vr'eme* 'from an older time' (Mladenov 1966), *p'o li e sl'atko?* 'is it sweeter?' (Bojadžiev 1972).

relative/interrogative pronoun *kutr'i* is found in place of (or alongside) *koj* only in the extreme SE (Suxo, Plevna/Gorno Brodi); e.g. *kutr'i, kutr'a, kutr'o, kutr'e* (Małecki 1936, Vidoeski 1991).

(ii)   The interrogatives *koj* and *čij* are post-stressing throughout much of the Type 1 and the northern Type 2 territory. The range of post-stressing *koj* is broader, being found throughout the Type 1 dialects, e.g. in Elešnica, Petrič, Sekavec and Plevna/Gorno Brodi, (Vidoeski 1990, 1991, 1987, 1989a) as well as the northern Type 2 dialects of Kratovo and Kumanovo (Vidoeski 1952, 1962). *čij* however is stem-stressed in the southernmost of these dialects, thus *č'ija, č'ie* vs. *koj'a, ko'e* in Sekavec and Plevna/GB (Vidoeski 1990, 1991);   *čij* is also stem stressed in Suxo/Visoka, which lacks *koj* (Małecki 1934-36).

(iii) The adjectives *takov* and *kakov* and the numeral *eden* are post-stressing throughout the Type 1 dialects and in most Type 2 dialects, including some which are transitional to Type 3. Post-stressing *takov* is found as far W as Preod and Knežje in the N, e.g. *tak'əv ~ takv'a* (MDA) and Kajlar and Patele in the S, e.g. *tak'of ~ takf 'a* (Drvošanov 1993, MDA). The range of post-stressing *kakov* seems slightly more limited; e.g. in Kajlar it is stem-stressed (Drvošanov 1993). Post-stressing *ed'en* is also found in Kajlar, and marginally even as far W as Rupišta, where it is preserved only under enclisis of the definite article; thus *'edin, 'ena, 'eno, 'eni, 'edniot* vs. *en'ata, en'oto, en'ite* (MDA). In the N it is post-stressing only as far W as Kumanovo; in Preod and Knežje it is stem-stressed.

The maintenance of post-stressing accentuation in these forms, alongside its complete loss in ordinary adjectives, is probably due to the original lack of a separate set of definite forms. Recall that the loss of post-stressing accentuation in ordinary adjectives was attributed to the influence of the stem stressed definite forms. The adjectival forms and numerals just examined originally lacked definite forms; the fact that some of these now display distinct definite forms is secondary.[57] Therefore, the pressure that ordinary adjectives were under to resolve the conflict between two sets of forms with distinct accentuation did not apply to these forms.

   Besides being anomalous with respect to other adjectives, these forms are also phonologically anomalous, in as much as they retain stress on final open syllables even in type 2 dialects, where such stress is typically limited to past tense verb forms. Ivić (1968-9: 479) attributes this to the original length of these vowels, citing Serbo-Croatian dialect forms from Kosovo, e.g. *koj'e:, čij'a:, takv'a:, jedn'a:*. While this may be part of the explanation, it does not account for the fact that post-stressing accentuation is much more persistent in *takov*, *kakov* and *eden* than in the other forms. A likely cause for this is the shape of the forms themselves; because of the morphophonemic deletion of the stem-final vowel in the non-masculine forms, post-stressing accentuation is columnar on the post-root syllable, which is not the case with *koj* and *čij* :

---

[57] Note e.g. the absence of definite forms for *takav, kakav* and *jedan* in Serbo-Croatian.

(121)

columnar	alternating	
tak'ov	k'oj	MASC SG
takv'a	koj'a	FEM SG
takv'o	ko'e	NEUT SG
takv'i	ko'i	PL

The (automatic) stem-stress of the masculine seems to have contributed to the earlier lost of post-stressing accentuation in *koj* and *čij*.

Section 6: The transition to fixed stress

Seen in terms of dialect geography, the transition from the Type 1 to the Type 3 dialects is a relatively smooth continuum: within individual word classes the role of prosodic constraints is gradually increased and the role of prespecified stress is gradually decreased. However, the final stage, namely the transition from the limited free stress of Type 3 to the fixed stress of Type 4, is quite sudden. Dialects in which stress prespecification plays a role—however limited—in all word classes lie directly next to dialects in which stress prespecification plays no role whatsoever. This is of course a crucial stage in the evolution of fixed stress, and the contemporary dialects unfortunately tell us very little about how this might have happened.

Nevertheless, evidence of transitional phenomena is not completely lacking, but it is typically limited to features displayed in single villages, for the most part poorly documented, so the picture that emerges is tentative at best. Given the importance of this transition to the evolution of fixed stress, it is worth examing the evidence these dialects have to offer. Since there are three major fixed stress types, the following will be divided into three sections, exploring antepenultimate, penultimate and initial stress.

6.1 Antepenultimate stress

Assuming that the prosodic model presented at the beginning of this chapter is correct (see Section 2.5), namely that antepenultimate stress arose first through the restriction of stress to an antepenultimate-penultimate stress window such as is found in the Type 3 dialects, the question still remains: is it necessary to assume that all of the specifically *morphological* innovations of the Type 3 dialects played a role in the establishment of fixed stress? On the one hand these innovations can be seen as a logical intermediary stage in the rise of fixed stress, in as much as individual lexical marking of stress is replaced by a system where stress is predictable on the basis of higher-level, non-lexical information such as word class, tense etc. On the other hand, the assumption that a fully-fledged Type 3 morphological system formed the historical basis for fixed antepenultimate stress would imply that in many cases stress was shifted off of an antepenultimate syllable onto a penultimate syllable and then back again. Take for example the verb *donesuva* 'brings', which has lexically specified pre-suffix stress in the Type 1 and 2 dialects, stem-final stress in the Type 3 dialects, as characterizes all present tense verb forms, and prosodically-determined antepenultimate stress in Type 4:

(122) *Type 1, 2*   *Type 3*   *Type 4*
       don'esuva   dones'uva   don'esuva

Positive evidence for this scenario is minimal. Most striking is the very shape of the isoglosses, which suggests that the Type 3 dialects preceded Type 4 in much of their range (see map M1). The Type 3 dialects surround the Type 4 dialects in such a way as to suggest they both radiated from a common center, with the Type 4 system spreading over areas that

had been previously touched by Type 3 innovations. However, there are no clear examples of dialects where one can demonstrate that the full range of Type 3 morphological innovations has been carried out, only later to yield to antepenultimate stress. Vidoeski (1982) reports that the dialect of Drenovo (on the SE shore of Lake Prespa), displays features both of antepenultimate stress and of Kostur-Lerin (i.e. Type 3) accentuation; unfortunately, beyond this assertion, there is no further information.

   Otherwise, there is evidence that *some* system of prespecified stress lies at the root of dialects with antepenultimate stress:

(i)   Certain pronominal adjectives with the suffix *-av-* have prespecified stress on this suffix in many dialects with antepenultimate stress (the extreme NW excepted), a feature that has even been (optionally) incorporated into the standard language, e.g. *tolk$^|$av* 'so big', *kolk$^|$av* 'how big?'. This is reminiscent of the exceptional stress displayed by the words *takov* and *kakov* in Type 2 and 3 dialects (see Section 5.6), though it should be noted that both these words exist in Type 4 dialects, and do not have exceptional stress.

(ii) Oblak (1896) reports that, in the late 19th century, aorists in the dialect of Klenje (corresponding to MDA point 74) had penultimate stress, though otherwise stress in this dialect is strictly antepenultimate, e.g. *izl$^|$egof* 1SG vs. *izl$^|$egofme*, *izl$^|$egofte*, *izl$^|$egoa* 1-3PL 'lay down'; *rab$^|$otaf* 1SG vs. *rab$^|$otae* 3PL 'work'.[58] Possibly this represents prespecified stem-final stress, which is found sporadically in the aorist in the Type 3 dialect of Lerin (see Section 3.3.2.1).

(iii) The accentuation of the dialect of Crkvino (MDA) appears to be primarily antepenultimate, but imperatives have initial stress, as in the neighboring Type 3 dialects.

There are also phenomena which argue against the supposition that a fully developed Type 3 system was the precursor to antepenultimate stress. These entail examples that appear to show antepenultimate stress arising directly out of a more archaic system:

(i)   Nouns in the dialect of Divle (MDA) display the effects of the antepenultimate-penultimate stress window typical of the Type 3 dialects, but lack the generalization of stem-final stress. Instead, the lexical distribution of stress resembles that of the adjacent Type 2 dialects, with stem-final stress, e.g. *vil$^|$ica* 'fork', stem-penultimate stress, e.g. *kokoš$^|$arnik* 'chicken coop', and stem-antepenultimate stress, e.g. *$^|$orak'an* 'plough ox'. The effects of the stress window are seen in the retraction of stem-final stress when in absolute final position, e.g. definite *poj$^|$asat* vs. indefinite *p$^|$ojas* 'belt',[59] or plural *badžan$^|$aci* vs. singular *badž$^|$anak* 'son-in-law'. Stem-penultimate and stem-antepenultimate stress are in turn advanced from pre-antepenultimate position, e.g. indefinite *j$^|$agutka* 'berry', *$^|$orak'an* vs. definite *jag$^|$utkata*, *or$^|$ak'anot*.[60] This shows that

---

58 The contemporary dialect does not seem to have this accentuation; I thank Vladimir Zhobov of the University of St. Kliment Oxridski in Sofia for access to material from their fieldwork.

59 Output-output correspondence between indefinite and definite operates only partially in this dialect; see Section 4.5.1.2.

60 Whether the stress window is maintained in the masculine definite plural is unclear; thus the indefinite plural of *kokoš$^|$arnik* is *kokoš$^|$arnici*, but is the definite form *kokošarn$^|$icite* or *kokoš$^|$arnicite*? Unfortunately the materials contain only one example, *k$^|$əlkovite* 'hips'; this violates the stress window, but it may be that the plural suffix *-ov-* induces atypical behavior.

the complete implementation of the prosodic constraints is possible without any of the Type 3 morphological innovations. However, the position of this dialect, at a point where the Type 2 dialects are almost directly adjacent to dialects with antepenultimate stress, make this an exceptional rather than representative case.

(ii) In the Type 3 dialects of Trojaci (MDA) and Dunje (MDA), which lie directly next to the antepenultimate stress zone, noun stress is frequently on the antepenultimate syllable in indefinite forms, particularly in the singular (see Section 4.5.2.1); e.g. *p'adina ~ pad'inata* 'slope' (Trojaci). Frequently doublet forms exist, e.g. *j'aziče/jaz'iče ~ jaz'ičeto* 'tongue (dim.)', *ogl'edalo/ogled'alo ~ ogled'aloto* 'mirror'. In other Type 3 dialects non stem-final stress is an archaic feature (see Section 4.5.2.3). If this is also the case in Trojaci and Dunje, that would suggest that the influence of the adjacent antepenultimate stress system has advanced faster than the generalization of stem-final stress. This notion is supported by the fact that among verbs, stem-final stress has not been generalized in prefixed verbs with the suffix -*uv*-, e.g. *se razd'enuva* 'dawns', *se os'amnuva* 'ibid.' (Trojaci); recall that this is an archaic feature typical of Type 1 and 2 dialects (see Section 3.3.3.1). On the other hand it is clear that non stem-final stress is secondary in at least some cases; e.g. *jab'andžija* < Turkish *yabanc'ı* 'foreigner' (Trojaci).

(iii) The dialect of the N Polog region (Seliščev 1929: 384) has antepenultimate stress, except that in the plural forms of present tense verbs penultimate stress is possible. What is especially noteworthy is that, on the basis of Seliščev's examples, this seems to occur precisely in those verbs which would have had stress on the ending in Type 1 dialects. Thus penultimate stress is found in *ber'emo* 'we take', *pred'emo* 'we spin', *plet'emo* 'we weave', which are unaccented in Type 1 dialects and hence have stressed endings, while the verbs *m'esimo* 'we knead', *v'arimo* 'we boil', *v'ikaat* 'they call', with antepenultimate stress, all have stem stress in Type 1 dialects.[61] It could then be that these dialects preserve traces of the original Type 1 accentual classes in the present, tempered by a complete ban on final stress, so that it is manifested only in the plural. However, given that Seliščev provides only six such examples, such an interpretation can only be tentative. Arguing against this is the fact that these dialects are not far from those Serbian Torlak dialects where fixed penultimate stress has been generalized (see the following section).

6.2 Penultimate stress

The evidence is stronger for a Type 3 dialect base underlying penultimate stress. Some of the dialects of Lerin and Kostur, roughly in the same region as the area where penultimate stress is found, show a sporadic tendency towards penultimate stress in nouns (see Section 4.5.3), and, in the village of Armensko alone, in verbs, e.g. *nos'ite* 'you PL carry', *večer'ame* 'we eat supper', *vid'ime* 'we see' (Mazon 1923) At the other geographical extreme, the Serbian Torlak dialects in the environs of Prizren likewise give evidence of a transition from a Type 3 dialect to fixed penultimate stress (Remetić 1996: 29-37). At one extreme is the dialect of Prizren itself, which is essentially corresponds to a Type 3 dialect, similar to those of Skopska Crnogorja. In nouns and adjectives stress is stem-final but non-final. In verbs the present tense and the imperative have stem-final stress; the aorist has penultimate stress in the plural

---

[61] Seliščev also gives *igr'au* 3PL, but this constitutes stem-final stress and is thus typical of Type 3 dialects as well.

and initial/prefix stress in the singular, while the imperfect is stressed on the ending in all forms, including the 1SG; this last feature is unusual, but is also found in the Macedonian Type 3 dialects of Kajlar and Negotino (see Section 3.3.3.3). At the other extreme, in the dialect of Dvorane, fixed penultimate stress is found (Alexander 1975: 51-52). The intervening dialects of Mušutište and Delovec seem to display essentially the same system as Prizren, except that there is a tendency to generalize penultimate stress in present tense verbs,[62] though it should be noted that no other transitional features are noted by Remetić.[63]

6.3 Initial stress

The origin of initial stress in Macedonian is particularly hard to account for. Since in all other dialects the bond between stress and the end of the word is dominant, a major prosodic disruption must have occurred. What the direct ancestor of such a system might have looked like remains a purely speculative question.

One possibility is suggested by the dialects of Buf and Opcirina (see Section 2.8.3). These appear to be Type 3 dialects with a decided tendency towards penultimate stress (manifested in definite noun forms and present tense verbs, as in other dialects around Lerin), with *secondary* stress on the initial syllable. It may be that this was ultimately interpreted as initial stress with secondary stress on the penultimate syllable, which was subsequently lost.

Nearby, where the initial stress zone borders on the antepenultimate stress zone, elements of initial and antepenultimate stress may be mixed. At the one extreme, the dialect of Bukovo has antepenultimate stress with sporadic examples of initial stress, or at any rate pre-antepenultimate stress, e.g. the nouns *rˈasolnica* 'brine', *mˈatorica* 'sow', *zˈazabica* 'gingivitis', *bˈəserini* 'nits', *skˈolovranec* 'starling'; the adjective *kˈokoškino* 'chicken's'; the numeral *ˈedinaese* 'eleven'; and the adverbs *ˈesenoska* 'in the autumn', *nˈaopaku* 'upside-down' (MDA). The dialect of Graždeno (MDA) appears to combine elements of both in a way that defies systematization. At the other extreme, in the dialect of Dragoš fixed initial stress clearly predominates, but there are sporadic examples of antepenultimate stress, e.g. the noun *goˈedarnik* 'cattleherd', or the neuter singular adjective *belˈikao* alongside *bˈelikao* 'white' (MDA). It is unclear whether these represent evidence of a historical transition from antepenultimate stress to initial stress (or perhaps vice versa), or simply interference on the part of two completely independent accentual systems.

---

[62] Note that there is no correlation here between those verbs that display penultimate stress and the original accentual classes, as may be the case in the N Polog dialects.

[63] Remetić provides no examples of singular aorist or imperfect forms such that one could determine the fate of non-penultimate stress in these forms.

Chapter III. Kashubian

1 Introduction

Until the population transfers following WWII, Kashubian was a peninsula of Slavic extending into German speech territory; only at its SE end was it in contact with related Slavic dialects, i.e. Polish. In map K1 Lorentz's breakdown of the different dialects is given; although these are based on non-accentual features, Lorentz discusses accentual isoglosses in terms of these dialects, so they make useful reference points.

In terms of accentual typology Kashubian can be roughly divided into three zones (see map K2). In the N stress is free, while in the S it is fixed to the initial syllable;[64] the southernmost dialects with free stress however lack most of the paradigm-internal accentual alternations which often characterize inflected words in the dialects to the N. Some examples from noun declension (1a) and verb conjugation (1b) which illustrate the three types are given below:

(1)	*Free stress w/ accentual alternations*	*Free stress w/ no accentual alternations*	*Initial stress*	
a.	čarˈovn'ice	čarˈovn'ice	čˈarovn'ice	NOM-ACC PL 'wizards'
	čarovn'ˈicax	čarˈovn'icax	čˈarovn'icax	LOC PL
b.	pov'ˈadám	pov'ˈadám	pˈov'adám	1SG PR 'say'
	pov'adˈajǫ	pov'ˈadajǫ	pˈov'adajǫ	3PL PR

The extent of the transitional zone between the northernmost and southernmost dialects is difficult to pin down. Map K2 is extrapolated from the information given in the *Atlas językowy kaszubszczyzny* (*AJK*); the data from Lorentz (1958-59, 1925), however, suggest that the transitional zone is narrower.[65]

As with Chapter II, the discussion of Kashubian will treat prosodic and morphological factors separately. However, unlike Macedonian, Kashubian does not display a rich range of prosodic constraints affecting stress placement, so the treatment of prosody will be comparatively brief.

2 Prosody

In the dialects that retain some degree of prespecified stress only three prosodically-driven influences on stress placement are observable:

(i)   A ban on final stress, sensitive to both phonological and morphological factors.

---

[64]At the border with Polish penultimate stress is attested too (Lorentz 1958-59: 605-6).

[65]There are in fact numerous discrepancies in the data found in the three major sources on the dialects geography of Kashubian (Lorentz (1925, 1958-59), Lehr-Spławiński (1913) and the *AJK*). While they typically agree in relative terms, i.e. that one given isogloss is S of another given isogloss, they often disagree as to the location of these isoglosses. The bulk of the data discussed in this chapter is drawn from Lorentz (along with Bronisch (1896) for Jastarnia).

Data from Lehr-Spławiński and *AJK* are adduced where they illustrate phenomena not explored by Lorentz; however, isoglosses from one source will not be directly compared to isoglosses from another. In general, the *AJK* follows Lehr-Spławiński (1913) closely, even to the point of taking at face value the transposed isoglosses in his map (isoglosses "k" and "h" are switched, which is clear from the text and was pointed out by Lorentz 1914-15).

(ii) An apparent ban on pre-antepenultimate stress.

(ii) Secondary stress on the penultimate syllable.

2.1 Ban on final stress

Final stress is not found at all among verbs, except where contraction of the final two syllables has occurred (see below, 3.1.1.2); thus the following conditions on final stress apply primarily to nouns and adjectives.

2.1.1 Role of length

Long vowels favor the retention of final stress. While modern Kashubian no longer has distinctive vowel length, the original contrast between long and short is reflected in qualitative distinctions. I will nevertheless continue to refer to the distinct modern reflexes of long and short vowels as "long" and "short", since their role in accent placement presumably goes back to a time when length was still a relevant feature. The following chart gives the basic correspondences between older Kashubian (pre-XIII-XV century; cf. Topolińska 1974) and Modern Kashubian; the orthography used here for Modern Kashubian is essentially the same as that employed in the *AJK*.[66]

(2)

Older Kashubian (length)	Modern Kashubian (quality)
a	a
a:	á
e	e
e:	é
o	o
o:	ó
short nasal vowel	ą
long nasal vowel	ǫ
i	i after palatalized C ə elsewhere
i:	i
u	u after labial, dental and palatalized C ə elsewhere
u:	u

Note: The originally distinct CS front and back nasal vowels fell togeher in Lekhitic, and are here termed simply "nasal vowel". The acute accent over vowels indicates a (phonemically distinct) raised variant.

Already in the most archaic dialects (Slovincian, Jastarnia in the extreme NW and NE, respectively), stress is not found on short open final syllables, a situation that recalls that of the northern Type 2 dialects of Macedonian (see Chapter II, 2.7.1). However, stress is typically absent from short final closed syllables as well. The instances where stress does fall

---

[66] Throughout the literature there is little agreement on how to represent Kashubian vowels, with no two authors agreeing on a single system. For example, to represent the historically long vowels the *AJK* employs a superscript acute accent, Dejna (1993) employs a superscript dot, and Stankiewicz (1993) uses a macron. Lorentz, in fact, employed three different systems over the course of his work.

on short final closed syllables typically appear to be secondary developments, namely: (i) as a result of the deletion of a stem-final jer in masculine nouns with original stem-penultimate stress, e.g. *dobˈətk < *dobˈitŭk-* 'livestock'; (ii) foreign borrowings, e.g. *bankrˈot* < German *Bankrˈott* 'bankruptcy'; and (iii) in the genitive plural, where paradigmatic constraints seem to block retraction (see Section 4.2.1). Thus the only certain phonological factor in the retention of final stress is vowel length, whereby stress cannot fall on short final syllables. If vowel quantity is construed in moraic terms, the final mora lies outside of the domain in which stress assignment is possible.

   Note that the source of the length seems to play a role. Length has four sources in Kashubian, in common with other Lekhitic languages (cf. Topolińska 1964: 7): (i) original CS length was preserved where it was originally in pretonic position (before final stress and before a short stressed penult syllable); (ii) under original neoacute pitch; (iii) as a result of vowel contraction; and (iv) compensatory lengthening before a voiced consonant followed originally by a weak jer. Only the first three contexts favor the retention of final length. Length due to compensatory lengthening does not seem to influence the place of stress. In the context of the contemporary (i.e. 19th-20th century) system the lengthening of vowels before final voiced consonants is maintained as a synchronic rule (cf. Stankiewicz 1993), and will not enter into the following discussion.

2.1.2 Role of stem size

There is a tendency in nouns and adjectives for final stress to be disfavored in forms of more than two syllables, as evidenced by the following facts:

(i)   Stress falls on noun case endings only when the stem is monosyllabic (see Section 4.2).

(ii)   Post-stressing accentuation in nouns occurs only with monosyllabic stems (see Section 4.2.4.2).

(iii)   In most N Kashubian dialects stress on adjective endings occurs only with monosyllabic roots (see Section 5).

(iv)   The noun suffix *-ik* is stressed only in conjunction with monosyllabic roots (Lorentz 1958-59: 608).

(v)   In the dialect of Oksywie (N of E Kashubian), the noun suffix-*k* is associated with stem-final stress when the stem is monosyllabic, but nouns with this suffix may have retracted stress when the stem is polysyllabic, e.g. *topˈork* 'hatchet' but *ponˈʼedzolk* 'Monday' (Lorentz: 1958-59: 608). Elsewhere this suffix is typically associated with stem-final stress regardless of stem size.

It is unclear whether the motivation for this phenomenon is morphological, and thus sensitive to the distinction between monosyllabic and polysyllabic stems, or prosodic, and thus sensitive to the distinction between disyllabic and longer forms. That there is a morphological dimension is suggested by the fact that although most of the forms encompassed by (i-iii) above are disyllabic, some are trisyllabic, and by the fact that the words affected by (iv-v) have not only undergone retraction of final stress, they have switched to a different accentual class.[67] Nevertheless it could be that at the core of these

---

[67] Stress has not simply retracted from the final syllable in the nominative singular; these nouns have joined the unaccented type, with stress assigned by the endings.

phenomena are some purely prosodic constraints. If so, it is curiously reminiscent of the condition found in Macedonian, but reversed. Recall that throughout Macedonian dialects there is a tendency for final stress to retract in disyllabic but not in polysyllabic forms (see Chapter II, 2.7.2), while in Kashubian this is precisely the environment where retention of final stress is favored.

If however there is a prosodic motivation, it is far from clear what it would be. For Macedonian it was proposed that STRESS-FAITH and ALIGN LEFT were in conflict, both dominating FB, with the result that retraction of final stress onto initial syllables was favored. On analogy with this it would be possible to propose that the same constraint ranking was in effect in Kashubian, but that in place of ALIGN LEFT there was a constraint *banning* initial stress, thus something on the order of STRESS-FAITH, NON-INITIAL » NON-FINAL. However, given that half of the Kashubian dialects have fixed initial stress, such a proposal has little appeal. Perhaps the most one can say is that the location of stress can be defined not just in terms of individual syllables, but also in terms of privative oppositions, i.e. non-initial, non-final etc. The split between disyllabic and longer forms suggests that the salient feature of original final stress is that it was non-initial. Retraction to a stem-internal syllable, as would happen in polysyllabic forms, avoids final stress while retaining this feature intact. Retraction in a disyllabic form would lead to a violation of this specification. This is essentially the account given by Kuryłowicz (1952).

2.1.3 Role of syllable structure

There is some evidence that final stress is more readily retained when preceded by a consonant cluster, i.e. -VC'V# > -'VCV#, but -VCC'V# remains. This recalls the similar distribution of final stress among post-stressing nouns in Macedonian and Bulgarian dialects (see Chapter II, 4.3.2.2.1). In Kashubian this is seen in comparative adverbs, which in the more archaic dialects are stressed on the ending, e.g. *lep'é* 'better'. Towards the S, in E Kashubian and adjacent dialects (Lorentz 1958-59) as well as W Kashubian (Lorentz 1925: 103), final stress is retained only if preceded by a consonant cluster, e.g. *d'ali* 'further' but *mocn'é* 'more powerfully'. Outside of adverbs however this phenomenon is not in evidence.

2.2 Ban on pre-antepenultimate stress

Outside of Slovincian and adjacent dialects the effects of what appear to be a ban on pre-antepenultimate stress are apparent in nouns (see Section 4.3.2), and possibly in verbs (see Section 3.3.2.3), recalling the similar phenomenon in Macedonian. The reason for postulating such a ban is the fact that initial stress in Slovincian may correspond to antepenultimate stress in other dialects, i.e. *č'a rovn'ica* 'witch', *č'ervenejã* 'I give off a red glow' vs. *ča r'ovn'ica*, *červ'enejã*. If this does in fact represent a phonological constraint, it is one which has been highly morphologized, since its effects are limited to discrete morphological environments. Combined with the nearly complete absence of final stress in these dialects, this amounts to a (morphologized) disyllabic stress window, similar to that seen in Macedonian Type 3 dialects.

2.3 Secondary stress

According to Lorentz in *Gramatyka pomorska* (1958-59: 642) secondary stress is characteristic of the whole of Kashubian, falling on the penultimate syllable in cases where the main stress falls on a pre-antepenultimate syllable. However, he does not note it when not overtly discussing it; indeed, it typically absent in the texts in *Teksty pomorskie*. Further examples of the same phenomena come from Lorentz (1959), Topolińska (1967a, 1967b, 1969) and the *AJK*. While the existence of this secondary stress indicates a certain prosodic

affinity with Polish (and Sorbian as well, which like Kashubian has secondary penultimate stress), it has no demonstrable role in the rise of fixed stress.

3 Verbs

3.1 Morphology
The tense/mood categories that will be relevant in the following discussion are the present, past, imperative, infinitive and gerund. Although Kashubian retains distinct dual forms, these will not be treated here for the most part, as they do not contribute any additional information

3.1.1 Inflectional affixes

3.1.1.1 Present
There are four conjugations: the I conjugation, characterized by the theme vowel *-e-*, the II conjugation, with the theme vowel *-i-*, and the III conjugation, whose shape is the result of the coalescence of the stem-final vowel and the first vowel of the ending (see Chapter II, 3.1.2.3) and athematic verbs, whose endings lack a theme vowel, and which have the ending *-m* in the 1SG. In most Kashubian dialects the 1SG form of the III conjugation is borrowed from the athematic conjugation, e.g. *pov"adám* 'I say'; in most dialects of the NW and NE it patterns instead with the I and II conjugations, e.g. *pov"adają* 'they say'.

(3)

I conjugation	*II conjugation*	*III conjugation*	*athematic*	
-ą	-ą	-ą /-(á)m	-m	1SG
-eš	-iš	-(á)š	-š	2SG
-e	-i	-(á)	-Ø	3SG
-emə	-imə	-(á)mə	-mə	1PL
-ece	-ice	-(á)ce	-ce	2PL
-ǫ	-ǫ	-ǫ	-ǫ	3PL

The syllabic endings of the present appear to be pre-stressing (see Section 3.2.3).

3.1.1.2 Past
The past tense endings are the same for all verbs:

(4)   -ł   MASC SG
       -ła   FEM SG
       -ło   NEUT SG
       -lə, -li   ANIMATE MASC PL[68]
       -łə   INANIMATE PL

The endings are all inherently unaccented. In verb stems ending in *-a-* or *-ǫ-* , the stem-final vowel and the feminine singular ending *-la* may fall together*,* e.g. *pisała → pisa.*

---

[68] The realization of *l* vs. *ł* varies in the different dialects: in most it is manifested as [l] vs. [w], similar to Polish, but in much of NE Kashubian and in Slovincian the two have merged as [l]. The expected collapse of both plural forms does not occur in Slovincian, where the animate masculine ending is *-li*, with a long vowel.

3.1.1.3 Imperative
The endings are:

(5)

A	B	
-Ø	-ə	SG
-ta	-əta	DU
-ce	-əce	PL

In northern dialects the endings in column A occur with stems ending in *-j*, as well as with athematic stems; otherwise the endings in column B are found; the element *-ə-* is inherently accented. In southern dialects the endings in column A are rather the default endings, the column B endings being found only where the stem ends in a consonant cluster, or is asyllabic.

   The dual forms are given here as well, because the sources frequently cite them; with respect to accent the dual and the plural are identical.

3.1.1.4 Infinitive
The infinitive ending is *-c* for all stem classes.

3.1.1.5 Gerund
The gerund ending is *-ǫcə*, which is inherently accented. In some dialects the shorter ending *-ǫc* is also found.

3.1.2 Stem classes
The major stem class distinctions that are relevant to stress assignment are outlined below. In most cases the forms of the infinitive and the present are sufficient to gain a picture of the stem class. The terms "monosyllabic stem" and "polysyllabic stem" are understood to exclude any prefixes.

3.1.2.1 Monosyllabic stems
These can be divided into athematic verbs on the one hand, and a heterogeneous group of I conjugation verbs on the other.

3.1.2.1.1 Athematic verbs
The stem typically ends in a consonant, which is deleted before all the endings of the present except for the 3PL, e.g. from the root */ved-/* 'know': *v'e-š* 2SG, *v'e-Ø* 3SG but *v'edz-ǫ* 3PL.

3.1.2.1.2 Other monosyllabic stems
All other monosyllabic stems belong to the I conjugation. The stem is never longer than one syllable, and ends in a consonant or vowel. Stems ending in a consonant maintain the same shape in all forms, e.g. *n'es-c* INF, *n'eš-e* 3SG PR 'carry', with the proviso that a stem-final *-j* is deleted before an ending beginning in a consonant, e.g. *p'ij-e* 3SG PR but *p'i-c* INF 'drink'. Stems ending in a vowel (*-a*, *-é* or *-i*) behave like vocalic stems (see Section 3.1.2.2.1), with the stem-final vowel appearing only in the infinitive and past tense, e.g. *gna-c* INF vs. *gn'-e* 3SG PR 'chase'. There may also be some further stem allomorphy accompanying the deletion of the stem-final vowel (e.g. some stems ending in *-a* contain the fleeting root vowel *-e-* , e.g. *bra-c* INF, *b'eř-e* 3SG PR 'take', those in *-i* display a nasal consonant otherwise lacking, e.g. *ci-c* INF, *tn'-e* 3SG PR 'cut').

3.1.2.2 Polysyllabic stems
These are divided into the (i) vocalic stems; (ii) ej-stems; (iii) aj-stems; and (iv) -ova stems.

3.1.2.2.1 Vocalic stems
Vocalic stems end in a vowel, found in the infinitive and past tense and absent elsewhere. The a-stems and nǫ-stems belong to the I conjugation, the i-stems and jat' stems to the II conjugation:

(6)	*a-stem* ('write')	*nǫ-stems* ('pull')	*i-stem* ('do')	*jat'-stems* ('sit')	
	p'isa-c	cignǫ-c	čin'i-c	sedze-c	INF
	p'iš-e	cign'-e	čin'-i	sedz-i	3SG PR

The stem-final vowel of nǫ-stems is shortened to *ą* in the past tense, and as such is subject to contraction in the feminine, e.g. *cignąła* → *cigną.* Jat' stems terminate in a vowel which is the reflex of CS jat', which is realized as [*a*] before originally non-palatalized consonants and as [*e*] elsewhere. Thus the [*a*] reflex occurs in all past tense forms except the animate masculine plural (which originally contained a palatalized consonant), while [*e*] occurs elsewhere, e.g. *sedzalo* NEUT SG past vs. *sedzec* INF.

3.1.2.2.2 ej-stems
The stem ends in *-Cej*, the final *-j* being truncated before endings beginning in a consonant, e.g. *staˇrej-e* 3SG PR but *staˇre-c* INF 'grow old'. They belong to the I conjugation. The infinitive may optionally terminate in *-a*, which falls together with the preceding syllable, e.g. **staˇreja-c → staˇrá-c*, alongside *staˇre-c*. In the past tense they are formally identical to the jat' stems, even undergoing the same alternation of *a ~ e*, e.g. in Slovincian *staˇralo* NEUT SG ~ *staˇreli* ANIMATE MASC PL.

3.1.2.2.3 aj-stems
As with the their Macedonian counterparts (see Chapter II, 3.1.2.3), these were originally like the ej-stems, but in most forms of the present underwent contraction of the stem-final vowel and the first vowel of the ending, yielding long *á*, e.g. **gadaje > gadá* 'talks'. The 3PL present and, in some dialects, the 1SG present, remain uncontracted, e.g. *gadajǫ* 3PL, *gadają* 1SG.

3.1.2.2.4 ova-stems
These are characterized by an iterative/denominal suffix, realized as *-ova-* in the infinitive and past tense and *-uj-* elsewhere, e.g. *daˇr-ov-ac* INF, *daˇr-uj-e* 3SG PR 'give'. In Slovincian the imperative is formed with *-áj*, either resulting from the contraction of *-ova-* or simply borrowed from the aj-stems.

3.2 Accentuation
Slovincian in the NW and the dialect of Jastarnia in the NE have the most archaic systems of verbal accentuation, and will serve as the starting point.[69] In these dialects verbs are divided into two accentual classes: inherently unaccented and inherently accented. Unaccented stems

---

[69] No attempt has been made here to trace the development directly from CS accentual types; the intervening Kashubian innovations are both too profound and too little understood to contribute to the present discussion, which treats the evolution of fixed stress as a development internal to Kashubian.

have no accentual properties; where stress is not assigned by endings or the grammar, default initial stress appears. Accented stems have lexically marked stress, typically on the stem-final syllable, which may however be superseded by grammatically assigned stress. The relationship of stem class to accentual type is as follows: (1) All monosyllabic stems and the polysyllabic jat' stems are unaccented; (2) All other stem classes are inherently accented. The past tense and gerund are the forms where the distinction between accented and unaccented stems is overt, and so will be treated first.

3.2.1 Past
Unaccented stems have default initial stress in all forms, e.g. from Jastarnia:

(7)

monosyllabic ('help')	jat' stem ('sit')	ej-stem ('turn red')	
dˈopomok	dˈosedzál	čˈerven'ál	MASC SG
dˈopomogla	dˈosedzala	čˈerven'ala	FEM SG
dˈopomoglo	dˈosedzalo	čˈerven'alo	NEUT SG
dˈopomoglə	dˈosedzelə	čˈerven'elə	PL

Most ej-stems, which are formally identical with the jat' stems in the past tense, are likewise unaccented in the past.

Accented stems can be described in terms of the feminine and masculine singular. In the feminine singular they evince their underlying stem-final stress, while initial stress is found in the masculine singular. In Jastarnia, in common with the rest of N Kashubian, this initial stress characterizes the masculine singular alone, the remaining forms patterning with the feminine. In Slovincian stem-final stress is found only in the feminine, the remaining forms patterning with the masculine:

(8)

Jastarnia	Slovincian		
zˈaprovadzəl	zˈaprovadzəl	MASC SG	'lead to'
zaprovadzˈəla	zaprovadzˈəla	FEM SG	
zaprovadzˈəlo	zˈaprovadzəlo	NEUT SG	
zaprovadzˈəłə	zˈaprovadzələ	PL	

The system of Jastarnia looks as if it had its origins in the retraction of final stress, in as much as lexical stress is faithfully realized except where it would be final. The question remains though why this retraction should have resulted in initial stress. The alternation in Slovincian is harder to account for. The opposition of the feminine to other forms looks curiously like the reflexes of historically unaccented stems found elsewhere in Slavic, e.g. Russian *razdalˈa* FEM SG vs. *rˈozdal* MASC SG, *rˈozdalo* NEUT SG, *rˈozdali* PL 'distributed', which is ultimately due to inherent accent on *-a*. What if anything this has to do with the accentuation of Slovincian is unclear.

Slovincian contains a further complication with the ova-stems: stress in the non feminine singular forms falls on the suffix *-ov-* (note that contraction in the feminine singular forms of stems ending in *-a* is obligatory in Slovincian):

(9)   dar'ováł   MASC SG   'give'
        darov'á   FEM SG
        dar'ovało   NEUT SG
        dar'ovałə   PL

This feature is shared by the other N Kashubian dialects outside of the Hel peninsula (recall that these resemble Jastarnia in their opposition of the masculine to the other forms):

(10)   dar'ováł   MASC SG
        darov'ała   FEM SG
        darov'ało   NEUT SG
        darov'alə   PL

This feature has two possible interpretations: (i) The suffix *-ov-* is underlyingly accented, and has the property of blocking further retraction of stress; note that initial stress does occur in ova-stems when the *-uj-* allomorph of the suffix is used, e.g. in the 1SG PR *p'oda rują* 'I give'; (ii) The relationship between stem-final and retracted stress found in the other stems has been reinterpreted as entailing the advancement of stress in the feminine (and other forms outside of Slovincian). On that interpretation the ova-stems have underlying stress on the stem-penultimate syllable, which then is superseded by this grammatical operation in the feminine. Note that none of this applies in Jastarnia; ova-stems show initial stress in the masculine, just as other stems do.

3.2.2 Gerund

In Slovincian the inherent accent of the ending *-ǫcə* is evident with unaccented stems; accented stems manifest their lexically specified stress:

(11)a. *unaccented stems*
        přən'es'ǫcə   *monosyllabic*   'bring'
        zalec'ǫcə   *jat' stem*   'fly to'

    b. *accented stems*
        rosc'ignǫcə   *nǫ-stem*   'spread'
        třep''ecǫcə   *a-stem*   'tremble'
        nax'odzǫcə   *i-stem*   'come upon'
        sestař'ejǫcə   *ej-stem*   'age'
        vəgad'ajǫcə   *aj-stem*   'declare'
        vəriž'əjǫcə   *ova-stem*   'rip out'

Note that here the accented ej-stems and unaccented jat' stems are distinct, as opposed to the past tense, where they fall together both formally and accentually.

   In Jastarnia, on the other hand, the ending is stressed with the accented vocalic stems as well, e.g. nǫ-stem *dvign''ǫcə* 'move', a-stem *depc'ǫcə* 'trample', i-stem *noř'ǫcə* 'dive'. Only the suffixed stems (ej-, aj- and ova-stems) display stem stress. One possible interpretation of this redistribution is that in Jastarnia the underlying accent of the vocalic stems is bound to the vowel which follows the root; with the truncation of this vowel in the gerund the stem becomes unaccented, and so the underlyingly accented ending receives

surface stress (12a).[70] In Slovincian on the other hand (12b), the underlying accent is simply defined as being stem-final, without being bound to any particular segment; with the deletion of the stem-final vowel, stress automatically retracts. By the BAP it is the underlying stem stress which emerges as surface stress.

(12)   *a. Jastarnia*   *b. Slovincian*
       naxodzˈi-   naxodzˈi-   *base form of stem*   'come upon'
       naxodz-   naxˈodz-   *truncation of final vowel*
       naxodz + ˈǫcə   naxˈodz + ˈǫcə   *addition of ending*
       naxodzˈǫcə   naxˈodzǫcə   *surface form*

3.2.3 Present

The distinction between accented and unaccented stems seen in the past is not relevant in the present. Accent instead is correlated with stem class, namely:

(i)   Athematic stems have stem-final stress in the 3PL, initial stress elsewhere (13a).
(ii) The remaining monosyllabic stems, the vocalic stems and ej-stems have initial stress in the 1SG and stem-final stress elsewhere (13b).

(iii) aj-stems have stem-final stress in the 3PL and initial stress in the 1SG, while the remaining forms have stress on the syllable preceding the combined stem-final/desinence syllable (13c).

(13)
a. ('tell')	*b.* ('shine red')	*c.* ('ask')	
rˈozpovˈém	čˈervenejǫ	zˈapitajǫ	1SG
rˈozpovˈé	červenˈeje	zapˈitá	3SG
rozpov'ˈédzǫ	červenˈejǫ	zapitˈajǫ	3pl

Since the athematic stems are inherently unaccented, the initial stress found in most forms can be assumed to be simply default accentuation. The appearance of stem-final stress in the 3PL can be accounted for on the assumption that the syllabic endings are pre-stressing; note that all the other present tense endings are asyllabic. This same assumption can account for the apparent collapse of unaccented and accented stems in the non 1SG forms, where the endings are syllabic: the endings assign stem-final stress to unaccented stems, while accented stems have stem-final stress in any case. On the other hand the initial stress in the 1SG, which would originally have been characteristic only of unaccented stems, must be construed as grammatically assigned (as in Macedonian[71]), thus overriding the lexical stress of the accented stems.

The behavior of aj-stems matches that found in Macedonian dialects, as well as Serbo-Croatian: stem-final stress in the uncontracted 3PL vs. retracted stem stress in the contracted forms. The 1SG, which is uncontracted in Slovincian and Jastarnia, has initial stress like all

---

[70] It is also true that the stem typically becomes monosyllabic with the deletion of the stem-final vowel. However, this is probably a red herring, since underlyingly trisyllabic vocalic stems are affected in the same way in Jastarnia, cf. the unprefixed a-stems *kolib"ˈǫcə* 'swinging', *kləkocˈǫcə* 'clucking'.

[71] As will be shown below, in most Kashubian dialects the form of the 1SG ending plays a role, as in most Macedonian dialects.

other verbs.   In other dialects however contracted forms are found in the 1SG as well, and share the same place of stress with the contracted forms.

3.2.4 Imperative
Imperative accentuation depends largely on the form of the ending, the distinction among vocalic stems between accented and unaccented stems being irrelevant.   Where the imperative marker -ə- is used, the following rules obtain:

(i)   Stress is non-final.

(ii) The imperative marker -ə- is stressed.

(iii) Where (i) and (ii) would conflict, the initial syllable is stressed instead.

The result is that stress is initial in singular forms unaccompanied by enclitic pronouns (14a, c); otherwise-ə- is stressed (14b, d):

(14)   a. drˈobocə   SG   'flutter!
           b. drobocˈəce   PL   (Bronisch 1896)

           c. přˈən'esə   SG   'bring!'
           d. přən'esˈə=m'e   'bring me!'

Stems which take the imperative endings without -ə- can be divided into three groups:

(i)   Athematic stems, which are unaccented, show initial stress in all forms, e.g. řˈospov'ec SG ~ řˈospov'ecta PL 'tell!'.

(ii) The suffixed stems (ej-stems, aj-stems and ova-stems) manifest their lexically specified stress in the imperative, though following different conditions. In the aj-stems stem-final stress is found in both singular and plural, though in Slovincian there is a tendency for it to retract one syllable when in final position (15). The ej-stems are similar, except that stress regularly retracts from final position both in Slovincian and Jastarnia. In Jastarnia at least (data from Slovincian are lacking) the way retraction is realized depends on prefixation: stress retracts from the final syllable onto a prefix; otherwise it retracts one syllable (16).

(15)   přegadˈáj / přegˈadáj SG 'talk!'
           přegadˈájce   PL

(16)a. *unprefixed*
           kam'ˈén'éj   SG   'petrify!'
           kam'én'ˈéjce   PL

     b.   *prefixed*
           n'ˈeslabéj   SG   'don't weaken!'
           n'eslabˈéjce   PL

The ova-stems have stem-penultimate stress in the imperative. Though I assume here that it is lexically marked, it must be the result of a stem-internal accentual alternation, since otherwise stress seems to be bound to the stem-final syllable, e.g. *da rov'ala* FEM SG past, *da r'əjocə* GER, *da r'əje* 3SG PR 'give' (Jastarnia). The additional fact that in Slovincian the imperative displays yet a *third* allomorph of the suffix (borrowed from the aj-stems) makes the notion of accentual allomorphy not untenable. Jastarnia and Slovincian further differ in their treatment of the singular: while Slovincian has stem-penultimate stress as in the plural, in Jastarnia stress retracts onto prefixes, as in the other stem classes.

(17)

Slovincian ('give!')	*Jastarnia* ('don't give!')	
pod'aráj	n''edaruj	SG
pod'arájce	n'ed'arujce	PL

It would seem that in Jastarnia stem-penultimate stress in the imperative singular can appear only in the absence of prefixes (e.g. 16a); recall the similar phenomenon in Macedonian Type 1 dialects, e.g. *rab'oti* vs *p'oraboti* 'work!' from Berovo (Gabor 1979).

(iii) Monosyllabic stems ending *-j* display an alternation matching that of stems with the *-ə*-element, thus *z'ašij* SG ~ *zaš'ijce* PL 'sew!'. What needs to be accounted for is the accentuation of the plural: if the stem is unaccented, and the only target of stress assignment is *-ə-* , then on the account being offered here we should expect the same behavior as in athematic stems, namely initial stress. Perhaps this can be taken as evidence of the underlying presence of *-ə-* (which is historically justified, but then is equally justified for the athematic stems).

3.2.5 Infinitive

The accentuation of the infinitive is conditioned by the stem size and the length of the stem vowel:

(i) Stress falls on the penultimate syllable of all polysyllabic stems, whether they are inherently accented or not, e.g. the unaccented jat'-stem *zal'ecec* like the accented a-stem *prep''isac* 'write out'. In the ej-stems with terminal *-a* (see Section 3.1.2.2.2), which have undergone retraction, stress remains on the contracted vowel, e.g. *kam'en''ác < *kam'en''ejac* 'petrify' (Jastarnia).

(ii) Jastarnia and Slovincian differ in their treatment of monosyllabic stems. In Jastarnia the final syllable is stressed if long, else initial, e.g. *wotpo-č'ic,* where the stem *č'ic* 'cut' is long, but *d'opo-moc*, where the stem *moc* 'help' is short. In Slovincian all monosyllabic stem infinitives have initial stress, even when the stem is long, e.g. the long stem *př'eklic* 'curse'.

The general rule for the accentuation of the infinitive seems to be the following:

(i) Stress falls on a final syllable if long.

(ii) If the final syllable is short, stress falls on the stem-penultimate syllable.

(iii) Otherwise stress is initial.

Such is the situation in Jastarnia and most of N Kashubian except for Slovincian. Note that (ii) does not apply to short monosyllabic stems, in as much as they have no stem-penultimate syllable; hence they all receive initial stress. In Slovincian only the latter two rules apply.

3.3 Transition to fixed stress
Two developments characterize the transitional area between the archaic dialects of the NW and NE just described and the S Kashubian dialects with initial stress: (i) the complete elimination of final stress; and (ii) the elimination of accentual alternations within paradigms; i.e. the rise of columnar stress.

3.3.1 Loss of final stress
As pointed out above, even in the most archaic dialects the role of final stress is limited. It is eliminated from the few remaining environments in the following order:

3.3.1.1 Imperative
Final stress in the aj-stem imperative singular, e.g. *gadˈáj* 'speak!', is not consistently found outside Jastarnia. In other dialects of the NE and NW it is sporadic; outside of these areas, final stress is not found in this form at all (see map K3)

3.3.1.2 Infinitive
The first stages of the removal of final stress are seen in NW dialects. In polysyllabic stems, whose final stress (and length) was a result of vowel contraction, stress retracts by one syllable e.g. *vərˈozm'ác* 'understand'. The long monosyllabic stems may either pattern with the short stems and show initial stress (as in Slovincian), e.g. *pˈodəpřéc* 'support', or, according to Lorentz (1958-59), they may pattern with the polysyllabic stems, though he provides no unambiguous examples. In the area around E Kashubian final stress has been retracted to the penultimate syllable regardless both of stem size and the length of the final syllable. In S Kashubian final stress does not occur at all (see map K3)

3.3.1.3 Past
Starting in E Kashubian and SW Kashubian stress is retracted from the contracted forms of the feminine singular past, e.g. (*p'isˈala* →) *p'isˈa* > *p'ˈisa* 'wrote' (see map K3). In E Kashubian Lorentz reports that stress retracts to the preceding syllable; in SW Kashubian this is clearly the case for ova-stems, e.g. *da rovˈa* → *da rˈova* 'gave' (cf. Lorentz 1958-59: 640), though it is unclear how other stem types there are treated, since the examples given are all disyllabic.

3.3.2 Elimination of accentual alternations
The accentual alternations of N Kashubian occur between the stem, initial syllable/prefix and the endings. Moving from N to S the role of endings in stress assignment is lessened, and columnar stress on the stem or the initial syllable is increasingly found. Though obviously initial stress ultimately assumes the dominant role, columnar non-initial stem stress may be generalized in certain contexts as well, e.g. in the aj-stems in northern S Kashubian, and in all stem classes in E Kashubian. For ease of exposition these developments will be treated separately below, namely (i) generalization of initial stress in non aj-stem verbs; (ii) generalization of stem stress within the aj-stems; and (ii) generalization of stem stress throughout the verb system in E Kashubian.

3.3.2.1 Establishment of initial stress in non aj-stem verbs
Proceeding from N to S, initial stress assumes the dominant role within tense/mood paradigms in the following order: (1) imperative; (2) past tense; (3) infinitive; and (4) present and gerund. Not surprisingly, the readiness of a given paradigm to adopt initial stress is correlated with the importance and frequency of initial stress within that paradigm.

3.3.2.1.1 Imperative
Initial stress plays a central role in the accentuation of the imperative in the archaic dialects, being universal or nearly so in the singular, so it should not be surprising that this is the first tense/mood paradigm to generalize initial stress (according to Lorentz this occurs at the same time as the generalization of initial stress in the past, though the data from the *AJK* suggest that imperative was affected somewhat earlier; see map K4). The generalization of the accentuation of the singular is also seen in the aj-stems (see Section 3.3.2.2.1).

3.3.2.1.2 Past
Initial stress serves as the default position in N Kashubian (discounting the peculiarities of Slovincian), being found with unaccented stems, and substituting for final stress in conjunction with all accented stems other than ova-stems. As such initial stress fills the same sort of role it does in the imperative, and is in fact generalized at the same point. The spread of initial stress may have been encouraged by certain phonological and morphological developments:

(i)   The retraction of final stress from contracted feminine singular forms, which disrupts the former distribution of initial vs. stem final stress within the paradigm. Note that i-stems, which do not have such a contracted feminine form, are particularly resistant to the generalization of initial stress (or stem-penult stress, as in E Kashubian; see Section 3.3.2.3); cf. *AJK* map 13.

(ii)   The spread of the plural ending *-elə* in S Kashubian. This ending induces truncation of the stem-final vowel of vocalic stems (i.e. the accented element of inherently accented stems), and the stress of forms with this ending matches that of the masculine singular, e.g. *gˈád-elə* in place of earlier *gádˈa-lə* 'talked' (cf. Lorentz 1958-59: 638; 1925: 101).

The ova-stems, which have stem-penultimate stress where other stems have initial stress, show a tendency in W Kashubian to generalize precisely this place of stress, e.g. *da rˈovál* MASC SG, *da rˈovala* FEM SG 'gave'. Since this occurs at the same point as the generalization of initial stress in the other verb classes, this suggests that the generalization of initial stress was at the outset a morphological process, i.e. the establishment of columnar stress within the paradigm.

3.3.2.1.3 Infinitive
The generalization of initial stress seems to have occurred in the infinitive after the past and imperative but before the present, according to Lorentz's data (see map K4). Since the past and infinitive are formed from the same stem allomorph, it is not unlikely that the generalization of initial stress in the past exerted an influence here.

3.3.2.1.4 Present, gerund
In Slovincian and Jastarnia the role of initial stress is more limited in the present than in the imperative or past. Default initial stress is only seen in the athematic stems; otherwise the

syllabic present tense endings are pre-stressing, while the grammar assigns initial stress in the 1SG. As could be expected, the present tense is relatively resistant to the generalization of initial stress (see map K4).

The generalization of initial stress in the present presupposes both that the endings have lost their underlying pre-stressing accentuation, and that accented stems have lost their underlying stress. While the former must simply be assumed, the latter can be seen as concomitant with the changes seen in other forms. Recall that the division of stems into accented and unaccented is based on primarily on the behavior of the past and the gerund. However, in the gerund, outside of Slovincian only suffixed stems retain evidence of being underlyingly accented; even these show a tendency throughout N Kashubian to merge with the unaccented stems, displaying stress on the ending, e.g. *sta řej'ǫcə* in place of *sta ř'ejǫcə* 'aging' (Lorentz 1958-59: 636). In the past, the generalization of initial stress further effaced any evidence of the distinction between the two accentual classes. This being the case, there is no reason to suppose that there is any covert distinction between accented and unaccented stems in the present; all stems could just as well be construed as unaccented, with stem stress assigned by the endings. Under such conditions the initial stress of the 1SG can in fact be construed as the default position, which is ultimately generalized in all present tense forms.

The gerund, whose accentuation was likewise attributed to inherently accented endings, adopts initial stress at the same point as the present

3.3.2.2 aj-stems
The elimination of accentual alternations among the aj-stems is effected first through the generalization of columnar stem-penultimate stress rather than initial stress. This is presumably due to the relatively small role that initial stress originally played in this stem class.

3.3.2.2.1 Imperative
Outside of Jastarnia the retraction of final stress in the singular, seen sporadically even in Slovincian, is soon followed by the analogical retraction of stress in the plural, e.g. *gad'áj ~ gad'ájce >g'adáj ~ gad'ájce > g'adáj ~ g'adájce* 'speak!', suggesting that output-output correspondence between the singular and plural obtains.

3.3.2.2.2 Present
As noted above (Section 3.2.3), the initial stress associated with the 1SG ending *-ǫ* is absent in most of N Kashubian, which uses instead the athematic ending *-m*. The characteristic alternation of the aj-stems is due to the morphophonemically induced retraction of stress off of the contracted stem-final syllable, seen in all forms except the 3PL. In the S this stem-penult stress is extended to the 3PL as well, e.g. *zapit'aj-ǫ > zap'itaj-ǫ* 'they ask' (see map K5). This development corresponds geographically to the generalization of initial stress in the present of the other stem classes. If these changes constitute a generalization of default position, this would imply the prior reanalysis of the accentual alternation: instead of entailing a retraction of stem-final stress in all forms but the 3PL, it rather entailed the advancement of underlying stem-penultimate stress in the 3PL. The establishment of columnar stem-penultimate stress then resulted from the elimination of this alternation.

3.3.2.2.3 Past
The relocation of underlying stress to the stem-penultimate syllable, seen in the present, affects the past as well, so that where other stem classes generalize initial stress, the aj-stems

tend to generalize stem-penultimate stress, e.g. *pov"adál* MASC SG, *pov"adala* FEM SG 'said' (see map K5).

3.3.2.2.4 Initial stress

The aj-stems ultimately adopt initial stress throughout, as in the other stem classes. Lorentz (1925) reports that the present retains stem-penultimate stress longer than the imperative or past, though on the basis of his description it is hard to localize the isoglosses. In as much as initial stress was presumably borrowed from the other stem classes, the resistance of the present to initial stress may simply be a reflection of the later generalization of initial stress in the non aj-stems (see map K4).

3.3.2.3 Stem stress in East Kashubian

E Kashubian and neighboring dialects tend to generalize columnar stem in all verb classes (see map K4). In its early stages it looks as if it is the result of a constraint against pre-antepenultimate stress: where initial stress is found in other N Kashubian dialects, in the area around E Kashubian antepenultimate stress is found instead, e.g. in the 1SG present *červ'enej*ą 'I give off a red glow', *pod'a rəj*ą 'I give' in place of *č'ervenej*ą, *p'oda rəj*ą. Within E Kashubian proper there is a further tendency to establish columnar stress within the whole present tense paradigm by eliminating the alternation in the 1SG completely, e.g. *červen'ej*ą ~ *červen'eje*š. This also occurs outside of E Kashubian in ova-stem verbs, e.g. *poda r'əj*ą. Since retracted stress in the 1SG of these stems is surely secondary in these stems, one wonders if this may not represent an archaic feature, i.e. the failure of the 1SG alternation to have been established there in the first place.

In the past tense and imperative, stress both avoids pre-antepenultimate syllables and is columnar, e.g. *zaprov'adzəl* ~ *zaprov'adzəla*   'led to' in place of *z'aprovadzəl* ~ *zaprovadz'əla* (Lorentz 1958-59: 638). This is analogous to the generalization of initial stress in S Kashubian: in both cases stress is recessive and columnar, with E Kashubian showing the additional constraint that stress not fall on pre-antepenultimate syllables.

4 Nouns

4.1 Morphology

4.1.1 Major declensional classes

The endings of the four major declensional classes are given in (18), based on what is found in Slovincian; other endings or variants of endings significant to accentuation will be adduced later as necessary. Neither dual nor vocative forms will be considered here, as the data on them are too scanty to contribute much.

(18)

masculine	neuter	a-stem	i-stem	
-Ø	-o / -e	-a	-Ø	NOM SG
		-ą		ACC
-a, -u	-a	-ə (-i) /-e		GEN
-u		-e / -i		DAT
-u, -ə				LOC
-ą		-ǫ		INSTR

-ə (-i),-ov'e, -e	-a	-ə (-i) /-e		NOM-ACC PL
-Ø, -óv, -i				GEN
-óm				DAT
-ax, -éx		-ax		LOC
-ami, -mi, i		-ami	-mi, -ami	INSTR

Note: forms separated by a slash (/) represent allomorphs occurring with stems terminating in a morphophonemically hard (originally unpalatalized) or soft (originally palatalized) consonants; note that i-stem nouns all terminate in a morphophonemically soft consonant. The ending -ə of the a-stem genitive singular and the masculine and a-stem nominative-accusative plural represents an original short -i ; this induces palatalization of preceding velars, and so is realized as -i in that environment and -ə elsewhere (see (2) above), e.g. rąka NOM SG ~ rąk'i GEN SG 'hand' but rəba ~ rəbə 'fish'. Not noted in the chart is the fact that the genitive is used for the animate accusative with plural and with masculine singular nouns.

4.4.1.2 Special stem types
There are a number of stem types which show exceptional behavior which may be of significance to accentuation.

4.4.1.2.1 Consonant stem neuters
The consonant stem neuters, namely the n-stems and the ęt-stems, display three allomorphs in the course of declension:

(i)   In the nominative-accusative singular they are unsuffixed and have the ending -ą, e.g. n-stem rem'-ą 'strap' and - ęt-stem cel-ą 'calf'.

(ii) In the remaining cases of the plural they have a suffix terminating in a morphophonemically soft consonant, e.g. n-stem rem'-en'- and ęt-stem cel-əc-.

(iii) All plural forms have a suffix terminating in a morphophonemically hard consonant, e.g. n-stem rem'-on- and ęt-stem cel-ąt-.

As will be seen below (Section 4.2.2.1), the different suffixes may have different accentual properties.

4.4.1.2.2 Contracted stems
Neuter and a-stems which in CS terminated in the sequence -nǐ- underwent contraction of this stem-final syllable and the ending, producing lengthened variants of the short endings, e.g. cen'á ← *-nǐja 'price', kazan'é ← * -nǐje 'sermon'. In the a-stems these long vowels allow the maintenance of a post-stressing class, since the long endings are not subject to the retraction of stress from final short syllables.

4.2 Accentuation

The accentuation of nouns in Slovincian will serve as a model of the most archaic system. Whereas among the verbs the accentual systems of Slovincian and Jastarnia show roughly the same level of archaism, their systems of nominal accentuation are quite different, with Slovincian showing a preponderance of archaic features.

As in verbs, both stems and endings may be inherently accented or unaccented. In accented stems the place of stress is defined, with rare exceptions,[72] as the stem-final or stem-penultimate syllable. In unaccented stems the BAP operates: stress is assigned by inherently accented endings, otherwise default initial stress appears. However, the way inherently accented endings assign stress differs depending on stem size: (i) if the stem is monosyllabic, stress falls on the ending, unless the ending terminates in a short open syllable; (ii) if the stem is polysyllabic, the ending assigns stress to the stem-final syllable. I will use the term "desinence stress" as a cover term for stress which is assigned by an ending, with the understanding that this entails either stress on the ending or on the stem-final syllable, depending on the size of the stem; see Section 2.1.2 for a discussion of this phenomenon.

The contrast between the behavior of mono- vs. polysyllabic stems on the one hand, and unaccented vs. accented stems on the other, is shown below, using (animate) masculine nouns as examples. The inherently accented endings are: masculine and neuter locative singular -*u*, neuter nominative-accusative plural-*a*, and all the oblique plural endings, namely genitive -*óv*, -*i*, -*Ø*, dative -*óm,* LOC -*ax* and -*éx* and instrumental -*ami* and -*mi*. The interpretation of the a-stem singular endings is somewhat problematic, and will be discussed below. Forms with default initial stress are shown in boldface.

(19)	*unaccented*		*accented*			
	monosyllabic ('ox')	*polysyllabic* ('master')	*monosyllabic* ('brother')	*polysyllabic* ('worker')		
	vˈol	**gˈospodář̌**	brˈat	robˈotnik	NOM	SG
	vˈola	**gˈospodařa**	brˈata	robˈotnika	GEN	
	vˈolu	**gˈospodařu**	brˈatu	robˈotniku	DAT	
	volˈu	gospodˈařu	brˈatu	robˈotniku	LOC	
	vˈolą	**gˈospodařą**	brˈatą	robˈotniką	INSTR	
	vˈolə	**gˈospodaře**	brˈacə	robˈotnik'i	NOM	PL
	volˈóv	gospodˈařóv	brˈatóv	robˈotnikóv	GEN	
	volˈóm	gospodˈařóm	brˈatóm	robˈotnikóm	DAT	
	volamˈi	gospodˈařami	brˈatami	robˈotnikami	INSTR	
	volˈax	gospodˈařax	brˈatax	robˈotnikax	LOC	

Note that desinence stress with monosyllabic stems is retained if the ending is long *or* if it is a closed syllable, as in the case of the dative and locative plural (cf. Kuryłowicz 1960: 73). While it is undisputed that length is a factor which favors the retention of final stress in Kashubian (see Section 2.1.1), it is not clear what role the openness or closedness of the syllable plays, since outside of noun endings this does not seem to be relevant. While the dative plural ending is long, its length is due to the syllable-final voiced consonant, an environment not otherwise conducive to the retention of final stress. In fact, the treatment of

---

[72] Nouns derived from verbs with the stressed prefix *və-* likewise have initial stress. The nouns *přəjatel* 'friend' and *nepřəjatel* 'enemy' typically have initial stress throughout N Kashubian.

this ending vacillates in Slovincian, with retraction of final stress attested in a number of stems (Lorentz 1903: 172), suggesting perhaps that this environment was at least weakly conducive to the retention of final stress. The locative plural ending, on the other hand, is simply short; as an explanation it has been suggested that it owes its retention of final stress to analogy with its long allomorph *-éx* (Stankiewicz 1993). In the dialect of Jastarnia, on the other hand, length remains the sole precondition for the retention of final stress on endings (see Section 4.3.1.1).

    In the case of polysyllabic stems, the genitive plural in *-Ø* (rare with masculine nouns but common with a-stem and neuter nouns) constitutes a special case, where the retention of final stress is not typically connected with length. Final stress is maintained both with accented and unaccented stems regardless of the length of the final syllable, e.g. accented a-stem *sob'ak-Ø* 'dog', neuter *kop'ətk-Ø* 'hoof (dim.)'; unaccented a-stem *lop'at-Ø* 'shovel', neuter *řeš'ot-Ø* 'sieve'. As was suggested above for the monosyllabic stems, it may be that some kind of output-output correspondence constraint ties together the oblique plural forms, blocking retraction. The only context in Slovincian where this fails to occur is in the ęt-stems (see Section 4.2.2.1); in other dialects retraction also occurs off of the final syllable if it is a fleeting vowel (see Section 4.3.1.2).

    The account just given describes general principles of noun accentuation. In the following sections the peculiarities of individual declensions and stem types will be discussed.

4.2.1 Masculine

Since the accentuation of masculine nouns was given in figure (19), all that needs to be mentioned is that there are a few unaccented stems in which default stress does not fall on the initial syllable:

(i)   In unaccented stems with the suffixes *-ak* and *-ač,* the prefix may in some instances not be counted in the determination of default stress;   e.g. the exceptional   *po-v''ijok* 'swaddling', *po-sl'əgač* 'servant' vs. the regular *z'a-b'ijok* 'ruffian', *p'o-magač* 'helper' (Lorentz 1903: 180).

(ii) In derivatives formed with the verbal element *-dzej-* 'do', default stress falls on the syllable preceding this element, e.g. *dobr'odzéj* 'lord'.

4.2.2 Neuter

Neuter nouns are essentially identical to masculines, except that they have the nominative-accusative plural ending *-a*, which is inherently accented.[73] Since this is a short ending, it cannot itself bear stress, so that desinence stress is unambiguously manifested only with polysyllabic stems:

---

[73] In Jastarnia on the other hand the ending *-a* is apparently unaccented, e.g. *j'ezora* 'lakes' alongside *j'ezero* NOM SG, *jez'eru* LOC SG, *jez'orax* LOC PL). This occurs alongside another class of nouns which behaves as unaccented in the singular but with stem-final stress in the plural, e.g. *k'azədlo* NOM SG, *kaz'ədlu* LOC SG, *kaz'ədla* NOM PL. Other N Kashubian dialects appear however to pattern with Slovincian; Lorentz (1958-59: 615) reports that he was unable to confirm the existence of the *j'ezora* type even in Jastarnia.

(20)

monosyllabic stem ('circle')	polysyllabic stem ('sieve')	
kˈolo	řˈešoto	NOM-ACC SG *(short unaccented ending)*
kˈola	řešˈota	NOM-ACC PL *(short accented ending)*
kolamˈi	řešˈotami	INSTR PL *(long accented ending)*

Harder to account for is the fact that in two derivational classes desinence stress with the locative singular in *-u* fails to appear, namely diminutives with the suffix *-ko* (derived from consonant stem neuters, e.g. *cˈelǫtko* ← *celą* 'calf'),[74] and augmentatives with the suffix *-əšč-*, e.g. *lˈopacəšč*e ← *lopata* 'shovel'. Otherwise their accentual behavior suggests that they are unaccented stems, in as much as they have initial stress in the singular and stem-final stress in the plural:

(21)   lˈopacəšče   cˈelǫtko   NOM-ACC SG
       lˈopacəšču   cˈelǫtku   LOC
       lopacˈəšča   celˈǫtka   NOM-ACC PL

The underlying cause may be different in the two stem types. In the case of *-ǫtko* nouns, the absence of desinence stress in the locative singular is characteristic of the ęt-stems they were derived from (see following section), so that this might be a case of the derivative aping the original. Note that in the genitive plural of these derivatives the expected stem-final stress is retracted by one syllable, e.g. *votrˈočǫtk* 'babies'', likewise a characteristic of the ęt-stems.

   In the case of *-əšč-* nouns this account does not hold. It would appear simply that the suffix itself is prestressing in the singular, though why that is so is not clear. A possible clue is given by their behavior in Jastarnia, where they typically take the unaccented locative singular ending *-ə*, e.g. *drˈožəšča*, which is presumably the older ending, though they may also appear with *-u*, in which case desinence stress does appear, e.g. *drožˈəšču* 'path'. It may be that in Slovincian this accentual behavior was ascribed to the stem itself prior to the introduction of the ending *-u*.

4.2.2.1 Consonant stems
While the behavior of n-stems matches that of unaccented stems, the ęt-stems display unusual behavior in association with their different suffix allomorphs. In the singular the unsuffixed nominative-accusative is unaccented, while the oblique suffix *-əc-* is prestressing. In the plural the suffix *-ąt-* is stressed; note though that stress retracts when in absolute final position, i.e. where the genitive plural ending -Ø is used:

(22)   dˈobitčą   NOM-ACC SG   'animal'
       dobˈitčəca   GEN
       dobˈitčəcu   LOC
       dobitčˈąta   NOM-ACC PL
       dobˈitčąt / dobitčˈątóv   GEN

Although retraction of final stress from a short syllable is unsurprising in the context of Kashubian, it is not typical of the genitive plural (see Section 4.2), and must be due to some property of the suffix *-ąt-*; if retraction of stress from short final syllables in other stem types

---

74 Stankiewicz (1993: 305) incorrectly ascribes desinence stress to the locative singular of *-ǫtko* nouns.

is blocked by paradigmatic constraint, it may be that this particular suffix is somehow invisible. Note that outside of Slovincian this does not obtain, with ęt-stems behaving like other nouns in the genitive plural, e.g. *celʹǫt* (Jastarnia). In fact, the shortness of the plural suffix in the genitive is a Kashubian innovation. Originally the final syllable would have been lengthened in this form; cf. Polish *cielęta* NOM-ACC PL ~ *celǫt* GEN PL. This length alternation is still found in one word in Slovincian, with the corresponding retention of final stress, namely *vʹotrotčǫ* 'baby', with the genitive plural form *votrotčʹǫ,* with a long final syllable, alongside *votrʹotčǫt* with a short final syllable.

4.2.3 i-stems
With a very small handful of exceptions, monosyllabic stems have fixed stem stress and polysyllabic stems are unaccented. The only real peculiarity of the i-stems is that, in the singular, the pattern displayed by the few (Lorentz lists 12) unaccented monosyllabic stems does not fully correspond to that displayed by the polysyllabic stems. While unaccented polysyllabic stems show the expected desinence stress with the instrumental singular -*ǫ* and locative singular -*i*, the monosyllabic stems do not, except for four words which show desinence stress in the instrumental alone.

(23)	*polysyllabic* ('commandment')	*monosyllabic* ('axle')	
	zʹapov'edz	vʹos	NOM-ACC SG
	zʹapov'edzi	vʹosə	GEN
	zʹapov'edzi	vʹosi	DAT
	zapov'ʹedzi	vʹosi	LOC
	zapov'ʹedzǫ	vʹosǫ (solʹǫ)	INSTR
	zʹapov'edzi	vʹosə	NOM-ACC PL
	zapov'ʹedzi	vosʹi	GEN
	zapov'ʹedzóm	vosʹóm	DAT
	zapov'ʹedzax	vosʹax	LOC
	zapov'ʹedzmi	vosmʹi	INSTR

The reason for this behavior in the monosyllabic stems is probably to be sought in the marginal status of unaccented monosyllabic stems; what traces of them are left represent a class on its way to extinction. That the alternations of the singular should be eliminated first also characterizes the ultimate loss of desinence stress in all declensions (see Section 4.3.2.2).

4.2.4 a-stems
In the plural, unaccented a-stem nouns evince desinence stress in the same cases as in the other declensions. In the singular of monosyllabic stems desinence stress is seen in the instrumental, which is the only long ending, and hence the only case in which desinence stress could be found in conjunction with monosyllabic stems. Polysyllabic stems display two distinct alternating stress patterns. In one pattern, stem-final stress is found everywhere except the accusative singular and the nominative-accusative plural ("pattern 1" below). The second pattern is identical in the plural, but in the singular it displays stem-final stress only in the instrumental ("pattern 2" below). Forms of polysyllabic stems with initial stress are shown in boldface.

(24)	*monosyll stem*	*polysyllabic stems*			
		pattern 1	*pattern 2*		
	('chin, beard')	('arrears')	('Christian')		
	br'oda	n'edopl'ata	**krz'escijánka**	NOM	SG
	br'odə	n'edopl'atə	**krz'escijánk'i**	GEN	
	br'odą	**n'ˈedoplatą**	**krz'escijánką**	ACC	
	br'odze	n'edopl'ace	**krz'escijánce**	DAT-LOC	
	brod'ǫ	n'edopl'atǫ	krzescij'ánkǫ	INSTR	
	br'odə	**n'ˈedoplatə**	**krz'escijánk'i**	NOM	PL
	br'ód, brod'óv	n'edopl'at	krzescij'ánk	GEN	
	brod'óm	n'edopl'atóm	krzescij'ánkóm	DAT	
	brod'ax	n'edopl'atax	krzescij'ánkax	LOC	
	brodam'i	n'edopl'atami	krzescij'ánkami	INSTR	

While pattern 1 suggests that all the singular aaa cases except the accusative are inherently accented, pattern 2 suggests that only the instrumental singular is. Clearly, some other factor beyond the inherent accentual properties of the endings is at work here. Historically, pattern 1 reflects the original state of affairs, with default initial stress in the accusative only; cf. Russian *b'orodu* ACC vs. *borod'a* NOM, *borod'y* GEN, *borod'e* DAT-LOC, *borod'oj* INSTR. It is then pattern 2 which wants an explanation. Two factors seem to be at work:

(i)   Pattern 2 recapitulates the accentual alternation found in monosyllabic stems. Given the predominance of short endings in the a-stem singular, the discrepancy between the pattern displayed by polysyllabic stems (pattern 1) and monosyllabic stems is much greater than in other declensional classes. It may be that forms of the nominative, genitive and dative-locative of monosyllabic stems were construed as displaying not covert desinence stress, but rather default initial stress, since the surface manifestations of the two would be identical. This pattern may then have been extended to a class of polysyllabic stems, though why and under what conditions is not clear. However, it should be noted that in other declensions the behavior of monosyllabic stems does not seem to have any influence on polysyllabic stems; cf. the discrepancy in the nominative-accusative plural of neuters or the instrumental and locative singular of i-stems.

(ii) It represents the generalization of the stress of the accusative (Stankiewicz 1993: 302), a tendency found elsewhere in Slavic (e.g. in Russian dialects (Obnorskij 1927: 71-73, 296) as well as in Balkan Slavic (see Chapter II, 4.3.1.1) and Ukrainian (see Chapter IV, Section 2.1.1)). Note however that the stress of the accusative was extended only to those cases with short endings.

On this interpretation, pattern 2 represents a covert accentual paradigm, one which supersedes accentuation based on the interplay of inherently accented and unaccented endings. However, outside of Slovincian pattern 1 is clearly in retreat, showing a tendency to generalize stem-final stress in all forms. This suggests that in most of N Kashubian pattern 2 should be taken as representing the primary distribution of desinence stress vs. default stress within the paradigm, while pattern 1 represents a paradigmatic alternation adopted by a subset of nouns with lexically marked stem-final stress.

4.2.4.1 Soft stems

The a-stems whose stem-final consonant is morphophonemically soft share their dative and locative singular endings with the i-stems, as well as the corresponding accentual characteristic, namely that locative singular *-i* induces desinence stress only in polysyllabic stems:

(25)

polysyllabic ('witch')	*monosyllabic* ('earth')	
čˈarovnica	zˈem'a	NOM
čˈarovnicą	zˈem'ą	ACC
čˈarovnice	zˈem'e	GEN
čˈarovnici	zˈem'i	DAT
čarovnˈici	zˈem'i	LOC
čarovnˈico̧	zem'ˈo̧	INSTR

However, all the examples of unaccented monosyllabic stem soft stems given by Lorentz have stem-final consonants which are not only *morphophonemically* soft, but which also continue to be palatalized. Recall that this is an environment in which the distinction between original long and short **i* has been neutralized (see (2) above), so the apparent length of the locative ending is ambiguous in these forms.

4.2.4.2 Contracted á-stems

The á-stems have endings which are long as a result of vowel contraction, and thus capable of bearing stress. They are thus the only stem class which retains post-stressing accentuation. As with unaccented nouns, though, stress on the ending only occurs with monosyllabic stems:

(26)   cen'ˈá   NOM   SG   'price'
       cen'ˈo̧   ACC
       cen'ˈé   GEN
       cen'ˈi   DAT-LOC
       cen'ˈo̧   INSTR

       cen'ˈé   NOM-ACC   PL
       cen'ˈi   GEN
       cen'ˈóm   DAT
       cen'ˈax   LOC
       cen'amˈi   INSTR

Note that the declension is morphologically defective. The locative and instrumental plurals fail to display the expected length, the forms instead matching those of the a-stems. The genitive and dative plurals automatically overlap with endings of the a-stems, which themselves are long. Outside of Slovincian the oblique cases of the plural, i.e. those cases that are identical to those found among a-stems, are typically unaccented, as are the corresponding a-stem endings in these dialects; thus *kluzn'ˈé* NOM-ACC PL 'smithy', with stress on the ending but *klˈuzén'* GEN PL, *klˈuzn'óm* DAT PL, *klˈuzn'ax* LOC PL, *klˈuzn'ami* INSTR PL (Jastarnia).

4.3 Transition to fixed stress
The transition from the archaic system found in Slovincian to the fixed initial stress of S Kashubian entails (i) limitations on the positions stress can occupy (restricting final and pre-antepenultimate stress); (ii) the collapse of accentual classes; and (iii) a tendency to favor columnar stress within the paradigm.

4.3.1 Loss of final stress
The robustness of final stress depends on whether an ending or part of stem is involved. Final stress on endings is lost early, final stress on stems is retained considerably longer.

4.3.1.1 Endings
Only in the extreme NW (Slovincian and adjacent dialects) and NE (Jastarnia and the neighboring dialect of Kuźnica (Kussfeld)) does stress regularly fall on endings. This occurs in fewer environments in Jastarnia than Slovincian because length is here a necessary prerequisite for the retention of stress. Thus the dative plural-*óm* (whose length is due to the final voiced consonant) and locative plural-*ax*, which retain stress in Slovincian, are unstressed in Jastarnia.[75] That these endings nevertheless remain underlyingly accented is shown by the fact that polysyllabic stems evince desinence stress in these cases, just as in Slovincian.

In all the other dialects stress has been retracted from all endings (see map K6). Though there apparently are transitional zones both in the NW and NE, there is clear information only about the former, where there are three identifiable stages (Lorentz 1958-59: 607):

(i)   Already in Slovincian stress shows a tendency to retract from the dative plural (see Section 4.2).

(ii)   Stress shows a tendency to retract from all plural cases.

(iii)   Stress shows a tendency to retract from all singular endings as well.

In the rest of N Kashubian desinence stress is not found on noun endings at all, with the exception of adverbialized expressions such as locative singular *dom*�cu 'at home'.

4.3.1.2 Stems
Final stress on a stem syllable has two possible sources: it may be lexically marked stem-final stress, which appears in final position in the masculine nominative singular and in the genitive plural in -Ø, or it may be assigned by the genitive plural ending -Ø to unaccented stems. The genitive plural is the most unstable environment, and is regularly subject to retraction in E Kashubian (1958-59: 615; see map K6); though it is unclear whether a distinction is made between desinence stress and lexically marked stem-final stress. Where the final syllable has as its nucleus a fleeting vowel, stress is regularly retracted throughout N Kashubian outside of Slovincian:

---

[75] In theory one might expect to find end stress in the long optional masculine-neuter locative plural ending -*éx*, but Bronisch (1896) includes no examples with the ending — whence it may be concluded that this ending is not found in Hel.

(27)   *Slovincian*   *Jastarnia*
        žˈarno   žˈarno   NOM-ACC SG   'grain'
        žarˈen   žˈaren   GEN PL

In the masculine singular final stress is much more stable, being retained practically up to the point where fixed initial stress takes over (see map K6).

   Post-stressing á-stems represent a special case, in as much as they are the only context in nouns where stress on a final open syllable is not assigned by the ending, but instead by the stem. Final stress is retained through a good portion of N Kashubian. Recall though that outside of Slovincian final stress has been lost in the oblique plural cases. Outside of Jastarnia it is lost from the nominative-accusative plural as well, so that a post-stressing singular alternates with a stem stressed plural. The eventual retraction of final stress in the singular corresponds to the isogloss for the retraction of final stress from long open syllables in other contexts (see map K6), namely adjectives, e.g. *zlotˈi* 'golden', and pronouns, e.g. *tobˈǫ* 'you' INSTR. This suggests the retraction was largely phonologically motivated.

4.3.2 Collapse of accentual classes

Outside of Slovincian the three original accent classes displayed by nouns, namely:

(i)   stress fixed to the stem-penultimate syllable

(ii)   stress fixed to the stem-final syllable

(iii)   unaccented

are gradually eliminated, so that the ultimate passage to fixed stress affects a system in which accentual classes have ceased to play a role.

4.3.2.1 Trisyllable Law and the merger of accentual classes

Outside of Slovincian (and immediately adjacent dialects) noun accentuation is affected by the so-called Trisyllable Law (the "Dreisilbengesetz", cf. Lorentz 1925: 95; henceforth "TSL"), whereby stress does not fall more than three syllables from the end of the word; i.e., pre-antepenultimate stress is banned. The effects of the TSL can be readily seen in the behavior of nouns with the disyllabic masculine/neuter dative singular ending *-ovˈi* and animate masculine nominative-accusative plural *-ovˈe*. They induce stem-final stress, e.g. *kˈovál* NOM SG ~ *kovˈálovˈi* DAT SG, *kovˈálovˈe* NOM PL 'smith', yet the endings themselves do not appear to be inherently accented: they are not stressed with monosyllabic stem nouns in Jastarnia, nor is there any evidence that they are inherently accented in Slovincian, where the TSL is not in effect.[76] But being disyllabic, these endings put anything but stem-final stress in pre-antepenultimate position, so the advancement of stress in these cases can be seen as motivated solely by the TSL. While this accentuation is typical of Jastarnia, it is only irregularly attested outside of extreme NE Kashubian; nevertheless, as an option this pattern occurs as far S as Goręczyna (Lorentz 1959: 52).

   In fact, though, the differences between Slovincian and the other N Kashubian dialects entail far more than just the TSL as a mechanical rule. There has been a major restructuring of the accent classes. The behavior of noun accentuation outside of Slovincian can largely be

---

[76] Slovincian does not have the ending *-ovˈi* as such; rather, it has *-ovu* / *-oju*, apparently a portmanteau ending resulting from *-ovˈi* crossed with *-u.* It is found only with animate masculine nouns, and is inherently unaccented.

characterized by two principles: (i) default stress falls on the stem-penultimate syllable, not on the initial syllable; and (ii) all instances of stem-penultimate stress are construed as representing default stress.

4.3.2.1.1 Relocation of default stress

Outside of Slovincian the TSL prevents default stress from retracting beyond the antepenultimate syllable; compare the partial paradigms of *ča rovinica* from Slovincian and from elsewhere in N Kashubian:

(28)

Slovincian (without TSL)	Other North Kashubian (with TSL)		
čʼarovnʼica	**čarˈovnʼica**	NOM SG	'witch'
čʼarovnʼicą	**čarˈovnʼicą**	ACC	
čarovnʼˈico̦	čarovnʼˈico̦	INSTR	
čʼarovnʼice	**čarˈovnʼice**	NOM PL	
čarovnʼˈica	čarovnʼˈic	GEN	

Default initial stress is thus replaced by stem-penultimate stress. Yet even if the relocation of default stress had its origin in some kind of prosodic constraint, it is primarily a morphological device, as evidenced by the fact that stem-penultimate serves as the default even in forms where it is not replacing pre-antepenultimate stress, e.g. the unaccented noun *ča rˈovnʼik* in contrast to Slovincian *čʼa rovnʼik*.[77]

Curiously, among the "pattern 1" a-stem nouns (e.g. *godzˈəna* NOM SG ~ *gˈodzəną* ACC SG 'hour'), trisyllabic stem nouns which belong to this class in Slovincian do not turn up with default stem-penultimate stress in Jastarnia or elsewhere. Instead, they correspond to nouns with stem-final stress; thus Slovincian *kavalrˈəja* NOM SG ~ *kˈavalrəją* ACC SG 'cavalry' corresponds to *kavalrˈəja ~ kavalrˈəją* in Jastarnia, and not **kavalrˈəja ~ kavˈalrəją*. Only disyllabic stems such as *godzˈəna*, which would not be affected by the TSL, display this alternation outside of Slovincian. The reason for this discrepancy is probably to be sought rather within Slovincian than in any properties of the TSL. In the list given by Lorentz (1903: 190-191) none of the longer stems displaying the "pattern 1" alternation appear to be descendants of nouns which would have had the corresponding alternation in CS; they are either borrowings (*breva rˈəja* 'breviary', *kavalrˈəja* 'cavalry'), or derivatives which are unlikely to have belonged to the original CS unaccented type, e.g. *pʼeka rˈəja* 'bakery', *sodla rˈəja* 'saddler', *gospodˈa rka* 'economy', *nʼevʼedzˈəca* 'she-bear', *gospodˈənʼa* 'landlady'. This would suggest that the existence of the pattern 1 alternation in trisyllabic stems is a Slovincian innovation. The effect of the TSL might then have been merely to prevent the spread of this innovation beyond Slovincian.

---

[77] It could be that the various "recessive" forms, i.e. those with default stress, are bound together by an output-output constraint, requiring that they be stressed on the same syllable; thus stem-penult stress allows the "recessive" forms of *čarˈovnʼik* to maintain columnar stress within the confines of the TSL:

> ča[rˈo.vnʼik]
> ča[rˈo.vnʼi.ka]
> ča[rˈo.vnʼi.kʼi]

This parallels the account given in Chapter II, Section 4.5.1.2, for noun stress in Macedonian Type 3 dialects.

4.3.2.2 Reinterpretation of stem-penultimate stress

Where the effects of the TSL are evident, not only has default stress been reassigned to the stem-penult syllable, *all* instance of stem-penult stress have been construed as representing instances of default stress, with the corollary that all nouns that have stem-penultimate stress in Slovincian belong to the unaccented class elsewhere in North Kashubian:

(29)

Slovincian	Other North Kashubian		
rob'otnik	rob'otnik	NOM SG	'worker'
rob'otniku	robotn'iku	LOC SG	

In fact, the merger of these two accentual types seems to have served as a factor which favored the institution of the TSL. Among the i-stems, where the collapse of accentual classes was not an issue (recall that in Slovincian all polysyllabic i-stems are unaccented), the TSL was introduced later. Thus in Jastarnia the TSL obtains in all declensions except the i-stems, which retain default stress on the initial syllable, e.g. *v"'adomosc* NOM SG ~ *v"'adomosci* GEN SG ~ *v'adom'oscax* LOC PL 'news'. Elsewhere in N Kashubian, however, the i-stems follow suit, e.g. *v'ad'omosc ~ v'ad'omosci ~ v'adom'oscax*.[78]

4.3.2.2 Loss of the desinence stress in polysyllabic stems

Desinence stress in polysyllabic stems is eliminated first in the singular, then in the plural (see map K7). In the singular desinence stress with the locative *-i* and *-u* and the instrumental *-ǫ* are found in N and W Kashubian but not to the S. Locative singular *-u* appears to have greater vitality than the other endings (Lorentz 1958-59: 614). Stem-final stress in the singular still occurs in association with the dative in *-ov'i* (e.g. in Gorȩczyna; Lorentz 1959); this stress shift can however be attributed entirely to the TSL (see Section 4.3.2). The range of the a-stem "pattern 1" type (e.g. *godz'ǝna ~ g'odzǝnǫ*) is similar: in the areas where desinence stress has been eliminated in the singular, these nouns have joined either the unaccented or accented class.

With the loss of desinence stress in the singular unaccented nouns are left with two complementary accentual patterns: masculine, i-stem and a-stem nouns have desinence stress in the oblique cases of the plural and neuter nouns have desinence stress in all cases of the plural; otherwise, stem-penultimate stress is found. Starting in the southern part of N Kashubian (cf. Lorentz 1958-59: 615), neuters show a tendency to merge accentually with the other declensions, likewise displaying desinence stress only in the oblique plural cases, e.g. *k'olana* NOM-ACC PL vs. *kol'anóv* GEN PL 'knees' (map K7). Consonant stem neuters, whose stem-final stress in the plural is due to inherent stress on the plural suffix and not to desinence stress, remain unaffected by this development.[79] At this point the accentual types displayed by nouns are limited to:

(i)   Accented nouns, which have stem-final stress (30a).

---

[78] Gorȩczyna, one of the southernmost points where accentual alternations are attested at all in nouns, shows the same contrast of i-stems vs. other stems as is found in Jastarnia. This suggests that the absorption of i-stems into the general pattern may not have been universal.

[79] Note in this respect the instances in Gorȩczyna where the singular suffix has been extended to the plural, with a consequent loss of stem-final stress: *rem"'ona* NOM-ACC PL alongside *r'em'ena* (singular stem = *rem'en-*)

(ii) Unaccented nouns, which have stem-penultimate stress in the singular and nominative-accusative plural, and stem-final stress in the oblique plural cases (30b).

(iii) Consonant stem neuters, which have stem-penultimate stress in the singular and stem-final stress in the plural (30c).

These are illustrated below using neuter nouns:

(30)	*a. accented*	*b. unaccented*	*c. consonant stem*	
	('sermon')	('knee')	('livestock')	
	kaz'an'i	k'olano	d'obitčą	NOM-ACC SG
	kaz'an'a	k'olana	dobitč'ąta	NOM-ACC PL
	kaz'an'ax	kol'anax	dobitč'ątax	LOC PL

Ultimately, desinence stress in the plural too is eliminated, resulting in columnar stem-penultimate stress in originally unaccented nouns. Prior to this though there is a tendency for the unaccented class to absorb the two others. In Goręczyna (Lorentz 1959), a-stems do not display stem-final stress, but rather all behave as unaccented, though the other declensions continue to retain two accentual classes. The data from the *AJK* suggest that neuters with contracted endings, as in (30a), which have stem-final stress throughout North Kashubian, adopt the alternating pattern of unaccented stems in S Kashubian, at least with respect to the relationship between singular and plural, e.g. *k'azani* NOM-ACC SG ~ *kaz'anov* GEN PL (see map K9);   the forms of the nominative-accusative plural are unfortunately not given. Likewise according to the data from the *AJK*, consonant stem neuters (at least the ęt-stems) may also merge with the unaccented nouns, displaying default stress in the nominative-accusative plural, e.g. *c'eląta* NOM-ACC PL ~ *cel'ątax* LOC PL (map K8).

4.3.2.3 Loss of stem-final stress and the establishment of initial stress
Stem-final stress is ultimately replaced by stem-penultimate stress, both in areas where desinence stress in the plural is retained (as shown above) and where stem-penultimate stress is columnar throughout the paradigm. Stem-penultimate stress is in turn replaced by initial stress. This was likely the result of a two stage process, namely: (i) the replacement of stem-final stress by stem-penultimate stress; and (ii) the replacement of stem-penultimate stress by initial stress. For example, the data from the *AJK* for a-stems *macoxa* 'mother-in-law' and *kazalnica* 'pulpit' (map K10) show evidence of three accentual zones:

(31)	a. *2 accent classes*	mac'oxa	(*stem-final*)
		kaz'alnica	(*stem-penultimate*)
	b. *stem-penultimate stress*	m'acoxa	
	in all nouns	kaz'alnica	
	c. *fixed initial stress*	m'acoxa	
		k'azalnica	

Ultimately initial stress takes over the whole nominal system, probably as a result of the reinterpretation of stem-penultimate stress as initial in disyllabic stems (Topolińksa 1958: 384). It must be made clear, though, that the three developments that characterize S Kashubian, namely the loss of desinence stress, the loss of stem-final stress and the

establishment of initial stress, are overlapping processes. For example in Gorȩczyna all three are seen side by side: desinence stress has been lost in the singular, stem-penultimate stress has been lost in the a- and i-stems, and initial stress is found in place of stem-penultimate stress in masculine and i-stem nouns, and, optionally, in the a-stems, e.g. *jal'ov'ica* or *j'alov''ica* 'heifer' (Lorentz 1959: 53; the stress on the penultimate syllable is secondary; see Section 2.2.1). The nature of the data is often confusing; for example, the *AJK* typically shows disyllabic stems, so that it is impossible to distinguish stem-penultimate from initial stress.

5. Adjectives

Adjectives in Slovincian belong essentially to a single declensional type, with long endings as a reflex of the original definite adjective endings (see Chapter II, Section 5.1); the one notable exception is possessive adjectives, which may have the ending -Ø in the masculine nominative singular.[80] Stress is columnar throughout the paradigm, and in Slovincian may fall on the ending (post-stressing) or on the stem. Stress on the ending is possible because all the endings are long. The various possibilities are illustrated below, using the masculine nominative singular:

(32)	*stem-antepenultimate* 'butcher's'	*stem-penultimate* 'innkeeper's'	*stem-final* 'wide'	*post-stressing* 'wooden'
	řʼežnikov	karčmʼářov	sərʼokʼi	dřevʼanʼʼi

Stem-final stress is by far the most common. Stress on a prior stem syllable is possible only in the case of possessive adjectives, which are formed with the suffixes *-in-* (feminine) and *-ov-* (masculine). When formed from accented nouns, they retain the same place of stress (33a); when formed from unaccented nouns, stress falls on the syllable preceding the suffix (33b):

(33)a.   *accented noun*
řʼežnik 'butcher'   →   řʼežnikov 'butcher's'

  b.   *unaccented noun*
kʼarčmář 'innkeeper'   →   karčmʼářov 'innkeeper's'

Since stem-penultimate stress is not found outside of Slovincian, the class of possessive adjectives with stem-antepenultimate stress formed from them is correspondingly absent.

   In striking contrast to the behavior of nouns, stress on the endings is not limited to monosyllabic stems. However, the retention of this accentuation with polysyllabic stem adjectives could be accounted for by the same reasoning offered above to account for the retention of desinence stress on long endings in conjunction with monosyllabic stem nouns (Section 2.1.2). In the case of nouns, there is a paradigm-internal opposition of default stress and desinence stress; the retraction of final stress in polysyllabic stems leaves this opposition intact, whereas the corresponding retraction in monosyllabic stems would efface this opposition. In Slovincian and Jastarnia maintenance of this opposition is a higher priority than retraction of final stress. In the case of adjectives there is no paradigm-internal

---

[80] Otherwise reflexes of the old indefinite declension are preserved only marginally, typically as adverbs, though the occasional predicate form occurs (Lorentz 1903: 205)

opposition, but there is an opposition between the two (non-possessive) accentual classes, namely stem-final stress and post-stressing accentuation. Syncretism of this opposition in polysyllabic stem adjectives is avoided in precisely the same areas that the paradigm-internal syncretism of default stress and desinence stress is avoided in monosyllabic stem nouns. However, outside of Slovincian and Jastarnia final stress is retracted in polysyllabic stem adjectives, and only further S in monosyllabic stems (see map K11), so that there is an area where accent class distinctions are maintained in monosyllabic stems but not in polysyllabic stems, a fact which somewhat undermines the account just given, in as much as it suggests that there really is pressure to retract final stress specifically in *polysyllabic* stems. Ultimately, though, stress is retracted in monosyllabic stems too, with the isogloss corresponding to the retraction of stress in post-stressing á-stem nouns.

Thus, outside of northern N Kashubian there are only two accentual types among adjectives: possessive adjectives have stem-penultimate stress, while all other adjectives have stem-final stress, a distribution reminiscent of the Macedonian Type 3 dialects. Though there is little information about possessive adjectives, it is clear that stem-final stress in ordinary adjectives is retained quite far S, further S than stem-final stress in nouns (see map K11); presumably this can be attributed to the fact that stem-final stress is the only accentual option for non-possessive adjectives throughout most of Kashubian. Thus the ability to switch accent class membership, an option open to nouns, was not an option open to adjectives.

Chapter IV: Ukrainian

1 Introduction
The westernmost Carpathian Ukrainian dialects, which protrude like a peninsula into W Slavic speech territory (Polish to the N and Slovak to the S), have fixed penultimate stress, like the surrounding W Slavic dialects. It is generally agreed that penultimate stress was borrowed by the Ukrainian dialects from W Slavic (cf. Latta 1964, Shevelov 1979: 120). If this is taken as a working assumption, the question arises: when fixed stress is borrowed, is the process in any way different from that seen when fixed stress resulted from purely language-internal developments?

The immediate answer seems to be yes. The isogloss between free and fixed stress within the Ukrainian dialects is quite abrupt (Latta 1964, Paňkevič 1938, Stieber 1959, Verxratskyj 1899), without the diffuse transitional zone characteristic of Macedonian and Kashubian. Up to a W limit defined roughly by the rivers San and Osława (N of the Carpathians) and Laborec (S of the Carpathians), accentuation is essentially the same as in other Ukrainian dialects, at least typologically: there are no prosodic restrictions on stress placement, stress may be lexically marked and may alternate with respect to case, number, tense etc. Immediately to the W fixed stress is found. Henceforth I will refer to this isogloss as the San-Osława-Laborec (S-O-L) line (see map U1).

Abrupt as this isogloss is, there is general agreement that the dialects just to the E of S-O-L line do tend to favor penultimate stress at the expense of other positions (cf. especially Łukasik-Szulowska et al. 1989), a phenomenon presumably not unconnected to the fixed penultimate stress of the W. These dialects show various other peculiarities as well when compared to Ukrainian dialects further to the E, such as a minor tendency towards initial stress and prefix stress (Latta 1964, Paňkevič 1938), and a tendency to eliminate accentual alternations within paradigms. All these phenomena, however, have the character of isolated disturbances, with some lexical items being affected and others not (Latta 1964).

Nevertheless, since these phenomena parallel developments seen in Macedonian and Kashubian, they warrant being examined. Unfortunately, the data available do not allow for a comprehensive account. Though there are fully four dialect atlases devoted to this area (Hanudel' 1981-89, Latta 1991, the *Atlas gwar bojkowskich* (AGB) and Stieber's *Atlas językowy dawnej łemkowszczyzny* (AJDL)), the information that can be gleaned from them is typically limited to isolated word forms, largely nominative singular nouns. Only Broch (1900), Latta (1964) and Moravec (1975) provide any information on the relationship of stress to inflection, but even in these sources the data are limited. As a result the account given below will necessarily be sketchy.

Two preliminary notes are in order: (i) In as much as the distinction between the dialects with fixed penultimate stress and those immediately to the E of them roughly corresponds to the traditional distinction between Lemko and Bojko dialects (cf. Stieber 1938), I will use the designation "Lemko" to refer to the dialects with fixed penultimate stress that lie W of the S-O-L line, and "Bojko" to refer to the dialects with free stress E of the S-O-L line; this is the implicit approach of the AGB, which covers the area up to the W bank of the Osława. (ii) In contrast to the previous chapters, I will not describe the morphological and inflectional categories of these dialects. The absence of comprehensive data on inflection on the one hand, and the familiarity of E Slavic morphology on the other, would make such an undertaking superfluous. For the present purposes it will suffice to observe that the same basic morphological and inflectional categories found in Standard Ukrainian (and for that matter, throughout E Slavic) characterize the Carpathian Ukrainian dialects as well.

2. Accentual features of the W Bojko dialects

Previous studies have pointed out at least five accentual peculiarities of the W Bojko dialects (cf. Latta 1964, Łukasik-Szulowska et al. 1989, Paňkevič 1938): (i) the loss of final stress; (ii) the elimination of accentual alternations; (iii) the replacement of pre-penultimate stress by penultimate stress; (iv) prefix stress; and (v) the replacement of penultimate stress by initial stress. While evidence exists to support the claim that the first two phenomena represent actual tendencies, the latter three seem rather to represent isolated lexical phenomena of doubtful significance to the evolution of fixed stress.

2.1 Loss of final stress

2.1.1 Nouns

The loss of final stress primarily affects open syllables in disyllabic noun forms, i.e. the nominative singular and at least some oblique forms of a-stem and neuter nouns, and some oblique forms of post-stressing monosyllabic stem masculine nouns. In addition, a number of disyllabic masculine polnoglasie stems are affected. Thus the following nouns display retraction of final stress within the W Bojko dialects, at least in the nominative singular:

(i)   The a-stems *duh'a /tuh'a* 'rainbow', *os'a* 'wasp', *pčol'a* 'bee', *(s)kor'a* 'bark', *slez'a* 'tear', *sov'a* 'owl', *stryn'a* 'aunt', *verb'a* 'willow', *vod'a* 'water', *žown'a* 'woodpecker' (AGB, Łukasik-Szulowska et al. 1989); *blyx'a* 'flea', *wdov'a* 'widow', *zeml''a* 'earth' (AJDL); *mež̓'a* 'divider, boundary', *viwc'a* 'sheep' (Latta 1991, AJDL); *hor'a* 'mountain', *koz'a* 'goat', *noh'a* 'leg', *ruk'a* 'arm', *skal'a* 'rock', *sosn'a* 'pine', *st'in'a* 'wall', *vah'a* 'weight', *vojn'a* 'war', *zvizd'a* 'star' (Latta 1964); see map U2.

(ii)   The neuters *bahr'o* 'wheel segment', *jadr'o* 'kernel' *jarm'o* 'yoke', *žyt''a* 'life' (AGB); *dupl'o* 'cavity', *jank'o* 'Janko (personal name)', *tist'o* 'dough', *žal'o* 'stinger' (Latta 1991); *terl'o* 'grater' (Hanudel' 1980-89); *vidr'o* 'bucket' (Latta 1991, Hanudel' 1981-89); *jajc'e* 'egg' (Latta 1991, AJDL); *drywn'o* [81], *hórn''a* 'pot (dim.)', *pac''a* 'piglet', *pas'm'o* 'skein', *per'o* 'feather', *rebr'o* 'rib', *smit''a* 'trash', *stehn'o* 'thigh', *vyn'o* 'wine', *zern'o* 'grain' (Latta 1964).

(iii) The post-stressing monosyllabic masculines *dv'or* 'yard', *kl'''uč* 'key', *n'ož* 'knife', *sn'op* 'sheaf', *st'ol* 'table', *v'ol* 'ox', *v'oz* 'cart', *xr'est* 'cross', *xv'ost* 'tail' (Latta 1964).

(iv)   The masculine polnoglasie stems *por'ih* 'threshold' (Łukasik-Szulowska et al. 1989); *dol'on'* 'palm', *hor'ox* 'pea', *mor'os* 'frost', *per'ed* 'front' (Latta 1964).

The tendency for stress to retract off of final open syllables in disyllabic forms was seen above in Chapters II and III in the case of Macedonian and Kashubian. In a-stem nouns which originally belonged to the unaccented class (with default initial stress in the accusative singular and nominative-accusative plural), a pattern curiously reminiscent of Slovincian is found, with stress retracted from all singular cases except the instrumental:

---

[81] I have been unable to find a precise gloss for this word.

(1)	r'uka	NOM SG	'arm'
	r'uku	ACC	
	r'uky	GEN	
	r'uci	DAT-LOC	
	ruk'ou	INSTR	
	r'uky	NOM-ACC PL	
	r'uk	GEN	
	ruk'am	DAT	
	ruk'ax	LOC	
	ruk'ami	INSTR	(Moravec 1975)

The same accentuation is also found *n'oha* and *v'oda*. Such a pattern could result from the retraction of stress from final open syllables only.

However, there seem to be paradigm-internal factors at play here too, which are apparent only in polysyllabic stems. Observe the the singular paradigm given by Broch (1900) for the originally unaccented noun *hól'óva* 'head' (the acute accent over mid-vowels represents a raised vowel phoneme):

(2)	hól'óva	NOM SG
	h'ólóvu	ACC
	h'ólóvy	GEN
	h'ólóvi	DAT-LOC
	hólóv'ów	INSTR

As with the monosyllabic *ruka*, stress on the ending is found only in the instrumental. However, in the remaining cases the nominative, with stem-final stress, contrasts with the the accusative, genitive and dative-locative, with initial stress. Assuming that the original pattern entailed initial stress in the accusative singular and stress on the endings elsewhere, two developments are apparent: (i) stress is retracted from final open syllables; and (ii) where stress has been retracted, all oblique cases pattern with the accusative. Thus the stem-final stress of the nominative can be construed as the result of a (prosodically motivated?) retraction of stress by one syllable, while elsewhere the retraction of stress results from paradigmatic levelling of accentuation of the oblique cases.

Harder to account for is the behavior of the oblique forms of post-stressing masculine nouns, which show a mixture of retracted and unretracted stress that appears to have nothing to do with the phonology of the final syllable, e.g.:

(3)	v'ol	NOM SG
	vol'a	GEN
	vol'ovy	DAT
	v'olom	INSTR
	v'oly	NOM-ACC PL
	v'óliw	GEN	(Latta 1964)

In contrast to the a-stems, final stress is lost from closed syllables but retained on the final open syllable of the genitive singular; the same behavior is also seen in *st'ol* (Latta 1964).

Whatever the motivation is for this distribution of retracted vs. unretracted stress, it is presumably not prosodic.

2.1.2 Verbs

The W Bojko dialects, in common with the Lemko dialects and W Slavic, may employ the zero imperative marker, typically when the stem allomorph ends in a single consonant, e.g. *xvˈal'/xvalˈi* 'praise!', *kˈup/kupˈi* 'buy!', *hótˈów/hotovˈi* 'cook!' (Broch 1900).   Paňkevič (1938) attributes this to the accentual influence of Lemko dialects, but it seems that accent here is beside the point. Although the zero ending likely did originate in acope of the ending in post-tonic position, in the case of Bojko dialects it should probably be viewed as a purely morphological borrowing, in as much as the expected transitional forms are not found. That is, of the presumed historical sequence *kupˈi > kˈupi > kup*, only the two end points are found. This suggests that the forms with end stress forms did not undergo stress retraction within the Bojko dialects themselves, but were simply replaced with the western zero ending.

   For other verb forms the evidence is scanty. Some obstruent stem infinitives lose final stress E of the S-O-L line, e.g. *tr'astˈy* 'shake' (AGB); *towčˈi* 'pound' (Hanudel' 1980-89); *stréčˈi* 'meet', *l'ačˈi* 'pour'(Latta 1964); *bigtˈy* 'run' (Latta 1991); see map U3. This appears to go hand in hand with the loss of final stress in the past tense of obstruent stems (Latta 1964). However, not all obstruent stem infinitives are affected; e.g. *pečˈi* 'bake' (Latta 1991, AJDL) retains final stress up to the S-O-L line.   Other verb forms seem to retain final stress up to the S-O-L line. Stem-final stress in the past tense, which falls in final position in the masculine singular (e.g. *xodˈil* 'went'), is especially tenacious, and is maintained up to a point noticeably to the W of the S-O-L line (AJDL, Latta 1964, Verxratskyj 1901); see map U3.

2.2 Columnar stress

The W Bojko dialects show a tendency to eliminate some paradigm-internal accentual oppositions in nouns in favor of columnar stress. This occurs both in the case of nouns with inherited accentual oppositions, namely unaccented a-stems, as well as in nouns with new accentual oppositions that are produced by the retraction of final stress. Although some cases were cited above (Section 2.1.1) where the retraction of final stress proceeded on a form-by-form basis within the paradigm, most of the examples cited by Latta (1964) entail the wholesale replacement of stress on the ending by stress on the stem in all forms; thus not only *stolˈa > stˈola* 'table' GEN, but also *stolˈovy > stˈolovy* DAT (see map U4); likewise *sóvˈa*, *sóvˈamy* INSTR PL 'owl' *> sˈóva*, *sˈóvamy*. In masculine polnoglasie stems with stem-final stress the same has presumably occurred, though the data are scanty. From the material in Łukasik-Szulowska et al. (1989) the following progression from E to W is discernible (see also map U4):

(4)	*a*	*b*	*c*	*d*	
	porˈih	pˈorih	pˈorih	pˈorih	NOM SG
	porˈozi	porˈozi	pˈorozi	porˈozi	LOC

That is, stress is retracted first from the final syllable in the nominative singular, and then the subsequent alternation between it and the remaining forms (here represented by the locative singular) is leveled in favor of columnar stress. Similarly, the nouns *susik* 'grain bin', which has stem-final stress up to the S-O-L line, displays the plural form *sˈusiky* at one point along the Osława (AJDL), suggesting the (hypothetical) progression *susˈik ~ susˈiky > sˈusik ~ susˈiky > sˈusik ~ sˈusiky*; i.e. that the retracted stress of the nominative singular was extended to other forms within the paradigm.

As is clear from the above examples, the columnarization of stress is independent of any tendency to favor penultimate stress, in as much as it may entail the replacement of penultimate stress by antepenultimate stress (cf. (4b) vs. (4c)). It is likewise not necessarily connected with the avoidance of final stress, a fact strikingly illustrated by the behavior of the noun *holova*, which exhibits the following patterns, going from E to W (AGB-460, 461); see also map U5:

(5)   *a*   *b*   *c*   *d*
        holov'a   holov'a   h'olova   hol'ova   NOM SG
        h'olovu   holov'u   h'olovu   hol'ovu   ACC

In zone "a", the alternating pattern characteristic of originally unaccented nouns is found. Zones "b" and "c" both display columnar stress, but only in "c" is this combined with the avoidance of final stress (in "d" stress is antepenultimate, and only redundantly columnar). Ultimately, though, the favored accentuation in the westernmost Bojko dialects is simultaneously columnar and non-final, with the generalization of initial stress being found also in *borod'a* 'beard, chin' and *storon'a* 'side' (AJDL, Latta 1964); thus e.g. *storon'a* NOM ~ *st'oronu* ACC > *st'orona* ~ *st'oronu* > *stor'ona* ~ *stor'onu* (AJDL).

2.3 Replacement of pre-penultimate stress by penultimate
The elimination of pre-penultimate stress at some point E of the S-O-L line is observable in a small number of forms, mostly a-stem nouns. Thus the following eastern forms have penultimate stress at some point in the W: *z'aušnyca* 'earring', *z'avytka* 'mother of a bastard child' (AGB); *b'esida* 'speech', *p'oduška* 'pillow', *st'arosta* 'village chief' (Łukasik-Szulowska et al. 1989), *v'učyna* 'aunt' (AGB, Latta 1991), *j'aliwka* 'heifer', *m'acoxa* 'mother-in-law' (Latta 1991); *b'odinka* 'churn', *hlad'ylnica* 'iron', *p'oliwka* 'soup', *st'eranka* 'a kind of dumpling' (Hanudel' 1980-89); likewise the masculine noun *p'olomin'* 'flame' and the adjective *d'yxavyčnyj* 'asthmatic' (AGB). However, the data for the vast majority of nouns with pre-penultimate stress show that they maintain this accentuation up to the S-O-L line; the same is true for all other parts of speech.

2.4 Prefix stress
Paňkevič (1938) notes a tendency in W Bojko dialects to stress prefixes, e.g. *z'astawnyk* 'pawnbroker', *pr'oxopyly* '(they) grabbed', *od'oskočyw* '(he) jumped back'; cf. Standard Ukrainian *zast'avnyk*, *proxop'yly*, *vidsk'očyv*. This seems to account for most instances of what looks like the retraction of final stress in masculine nouns, e.g. *n'amul* 'slime', *n'arod* 'people', *pr'estol* 'altar', *z'amok* 'lock' (Latta 1964); *d'os'ah* 'extent', *p'oti'k* 'stream' (Paňkevič 1938).

2.5 Initial stress
Paňkevič (1938) and Latta (1964) report that the W Bojko dialects show a tendency to display initial stress in forms which have penultimate stress in E dialects. When one factors out prefix stress and instances of stress columnarization (e.g. the originally post-stressing *stol'ovy* > *st'olovy*), the examples fall into two classes:

(i)   Some infinitives, namely the Vj-stems *č'ekati* 'wait', *č'itati* 'read', *hl''adati* 'look', *tr'ymati* 'hold' (Latta 1964); the i-stems *k'uryti* 'smoke', *(po)s'ôčiti* 'seek' (Latta 1964); *k'ončyty* 'end', *r'odyty* 'give birth' (Paňkevič 1938); and the jat'-stems *x'ot'ity* 'want',

*l*ˈ*et'ity* 'fly' (Paňkevič 1938). The other forms of these verbs apparently remain unaffected.

(ii) Some a-stem and neuter nouns, namely *k*ˈ*olino* 'knee', *h*ˈ*odyna* 'hour', *k*ˈ*oryto* 'trough' (Paňkevič 1938); *h*ˈ*óluska* 'branch', *k*ˈ*ypjatok* 'boiling water', *p*ˈ*éčatka* 'seal' (Latta 1964); *v*ˈ*yvirka* 'squirrel' (AGB).

It seems unlikely that this represents any prosodically definable tendency towards initial stress; in fact, examples such as *pos*ˈ*ôčiti* do not even entail initial stress per se, but rather a shift from the stem-final syllable to the root syllable. At most one can suppose that these are isolated lexical phenomena, in as much as there is also evidence suggesting that the opposite tendency obtains, namely the shift of stress from the initial syllable onto the penultimate (Section 2.3 above). Note also the behavior of the compounds *dekoly* 'sometime' (*de* + *koly*) and *deščo* 'some (-thing)' (*de* + *ščo*). These are stressed on the first element in the E Bojko dialects (*d*ˈ*ekoly*, *d*ˈ*eščo*) but on the second element—and hence the final syllable—in the W Bojko dialects immediately adjacent to Lemko, thus *dekol*ˈ*y*, *dešč*ˈ*o*.

3 Characteristics of the transitional zone to the W of the S-O-L line

It is only in a narrow area to the W of the southern portion of the S-O-L line that one finds a system which is truly transitional between free and fixed stress, with prespecified stress characterizing only a limited number of word classes. Chief among these are past tense verb forms, which retain stem-final stress even when it is final (see Section 2.1.2). In adjectives, stem final stress is retained even in pre-penultimate position, e.g. in the masculine-neuter genitive singular (*d*ˈ*obroho* 'good', *j*ˈ*ednoho* 'one', *n*ˈ*ikoho* 'nobody' (Latta 1964); *mudr''*ˈ*iššoho* 'wiser' (Stieber 1959)) and dative singular (*t*ˈ*akomu* 'such a', *ves*ˈ*elomu* 'happy' (Latta 1964)). Further, final stress is found in possessive adjectives, e.g. the feminine singular forms *naš*ˈ*a* 'our', *vaš*ˈ*a* 'your', *svoj*ˈ*a* 'own (reflexive)' (Latta 1964).

Chapter V: Conclusion

1 Prosodic and morphological factors in the loss of free stress

As the preceding chapters have made clear, the loss of free stress and its replacement by fixed stress cannot be construed solely either as a prosodic or as a morphological innovation. Many, if not most, of the developments are ambiguous, sensitive to a combination of prosodic and morphological pressures. This in itself is no revelation, but having examined three instances of the evolution of fixed stress, one is tempted to wonder if there is any internal hierarchy; that is, can either prosody or morphology be cast in the role of prime mover? In order to illuminate this question it will help to outline the sorts of prosodic and morphological processes seen so far. The most important prosodic phenomena are presented in (1); the major section references in the corresponding chapters are given in parentheses:

(1) Prosodic features	Macedonian	Kashubian	Ukrainian
Ban on final stress (TROCHEE + FB)	(2.2)	(2.1)	(2.1)
...in disyllabic forms only (ALIGN LEFT + gradient STRESS-FAITH)	(2.7.2)	not found	? (2.1.1)
...on short/open final syllables	(2.7.1)	(2.1.1)	not found
...in -VC'V but not -VCC'V	(4.3.2.2.1)	(2.1.3)	not found
Ban on pre-antepenultimate stress (ALIGN RIGHT + DEP-STRESS)	(2.3)	(2.2)	? (2.3)
Prosodically assigned penultimate stress (ALIGN RIGHT without extrametricality)	(2.8.1, 2.8.3)	(secondary stress (2.3))	Chapter IV (all Lemko dialects)
Prosodically assigned antepenultimate stress (ALIGN RIGHT + NOINTERVENE-LEFT with extrametricality)	(all W Macedonian)	(as default in nouns (4.3.2.1))	not found
Prosodically assigned initial stress (NOINTERVENE-LEFT or ALIGN LEFT)	(2.8.2-3); or as default, replacing disfavored stress (2.7.2.1, 3.3.2.1-2, 4.3.3)	(all S Kashubian); as default in verbs (3.3.1.2, 3.3.2.1, 3.3.2.2.4, 4.3.2.3)	? (as default, replacing disfavored stress (2.5))

At the morphological level two major tendencies are evident: (i) The elimination of accentual alternations within inflectional paradigms in favor of columnar stress, typical of Macedonian Type 2 dialects and northern S Kashubian, and also found, in nouns at least, in western Bojko dialects of Ukrainian; and (ii) The collapse of distinct accentual paradigms in favor of a single pattern for all words of a given inflectional type; this may coincide with the extension of columnar stress (e.g. the absorption of unaccented nouns by the accented class in Macedonian Type 2 dialects; cf. Chapter II, Section 4.4.1) or work in opposition to it (e.g.

the absorption of accented nouns by the unaccented class in conjunction with the Trisyllable Law in N Kashubian dialects; cf. Chapter III, Section 4.3.2.1).

Considering the prosodic and morphological phenomena just outlined, the most striking facts are the special role played by the loss of final stress (i.e. the dominance of trochaic feet) and the relative independence of morphological change from prosodic constraints. This is suggested by the following points:

(i)   The one prosodic constraint common to all three languages is a ban on final stress. Other prosodic features are shared, but with different effects in the different languages: (a) A ban against pre-antepenultimate status, so important to Macedonian accentuation, plays only an uncertain role in Kashubian, and is restricted to nouns and adjectives. Besides, since S Kashubian is characterized by initial stress, this restriction is clearly not related in any strictly *prosodic* sense to the rise of fixed stress. (b) Under the BAP, which is assumed to have applied in Common Slavic, the phonology assigned default stress to the initial syllable of the word. However, in none of the languages examined here does initial position function as the *phonological* default, except where fixed initial stress prevails. Only in Kashubian can initial position be seen as playing a role in the intermediate stages of the evolution of fixed stress; even here, it is only manifested in verbs.

(ii) A comparison of Balkan Slavic with the other Indo-European languages of the Balkan Sprachbund (Albanian, Balkan Romance and Greek) suggests that there may be a correlation between the loss of final stress and the development of fixed stress. Although the non-Slavic Balkan languages share with Macedonian dialects certain restrictions on stress placement, typically maintaining a trisyllabic stress window at the end of the word, only Slavic has developed fixed stress, and only Slavic shows evidence of a ban on final stress. Admittedly, final stress in Balkan Romance has a low functional load, but this is due to prosodic restrictions that obtained in an earlier stage (see Section 2); new final stress arose through vowel contraction and borrowing in the post-classical stage, and there is no evidence that this was ever subject to any restrictions.

(iii) The morphological developments, whatever their relationship to phonology, proceed in a single direction: the burden of stress assignment is shifted from smaller to ever larger units. In the ancestral CS system accent was a property of individual morphemes. The only mediation between the individual morphemes and surface stress was the BAP. However, even in the most archaic contemporary dialects the effects of grammatical and lexical categories are apparent. In the areas transitional between free and fixed stress, e.g. Macedonian Type 3 dialects, the contribution of individual words, let alone their morphological components, is minimal to non-existent; accent is construed entirely in terms of grammatical categories or lexical classes.

(iv) The only prosodic constraint which is able to disrupt the prevailing morphological tendencies outlined in (iii) is the ban on final stress. For example, in E Kashubian the dominant tendency towards columnar stress in noun declension is disrupted by the retraction of final stress in the genitive plural. Other prosodic constraints are typically manifested in concert with morphological innovations, e.g. the removal of pre-antepenultimate stress in Macedonian coincides with the generalization of stem-final stress in most word classes, while the generalization of initial stress in verbs in Kashubian coincides with the elimination of paradigm-internal accentual alternations.

(v) Some of the morphological developments are clearly unconnected with phonology. For example, in Macedonian Type 2 dialects final stress is extended to singular obstruent stem aorists at the same point that it is highly disfavored in other contexts. Various phenomena found in Kashubian outside of Slovincian, e.g. the Trisyllable Law or the generalization of stress on the ending in the gerund, will have entailed the *removal* of initial stress in many forms, a step that can hardly be seen as directly contributing to the rise of initial stress.

These points suggest that the evolution of fixed stress can be construed as a two-step process, namely a prosodically motivated ban on final stress followed by a cycle of morphological innovations. The ban on final stress invariably introduced a level of accentual syncretism, which was apparently sufficient to set in motion further collapses: first accentual distinctions between affixes are lost, contributing to the rise of columnar stress, then between stems, leading to the elimination of accentual classes, till finally accentual prespecification is eliminated altogether. Stress is driven higher and higher in the grammatical heirarchy, from affix to word to word class, inflectional category or grammar. This typological shift in stress-assigning principles for prosody seems in turn to have increased the potential for prosodic change; with stress assignment governing whole classes rather than individual forms, any changes are transmitted to the entire class, and do not remain mere lexical peculiarities. Contrast for example the retraction of final stress in singular masculine nouns and in singular aorist verb forms in the Macedonian Type 3 dialects. In nouns, which retain lexically marked stress, the retraction of final stress appears to have been a gradual process, with a considerable transitional zone (see Chapter II, Section 4.5.1). In verbs, where final stress is assigned to all verbs across the board, the isogloss is quite abrupt, suggesting a sudden change (Chapter III, Section 3.3.3.2).

2 The role of outside influence

Fixed stress can arise independent of outside influence, as in the W Slavic languages, (including Kashubian),[82] or it can be borrowed, as is in the case of the Lemko dialects of Ukrainian. Although the allusion to borrowing could be seen as implying that the real explanation must be sought in the source language, Lemko is interesting in that it suggests that borrowing is not wholesale; rather it is incorporated into different subsystems at different rates. Given that the source was presumably a system of fixed penultimate stress, the role evidently played by such factors as the size of the word, word class and paradigmatic relationships must be attributed to the Ukrainian dialects themselves. These are of course the same factors which influenced the course of accentual change in Macedonian and Kashubian, so we can tentatively suppose that the pattern of borrowing recapitulates—albeit on a very small scale and probably at an accelerated rate—the autonomous evolution of fixed stress.

Antepenultimate stress in Macedonian most likely does reflect some outside influence, though exactly how this was effected remains disputed. As mentioned in Section 1, the non-Slavic languages of the Balkan Sprachbund maintain a trisyllabic stress window at the end of the word (granted, not always fully consistent), yet none have fixed stress, let alone fixed antepenultimate stress. Therefore, among the contemporary languages there can be no direct source for the accentual system of Macedonian. However, Ilievski (1981) proposes that the accentual system of *classical* Latin may have been the source. Stress in classical Latin fell on

---

[82] The notion that initial stress in Kashubian was somehow due to German influence, as was proposed in the 19th century, was discredited long ago; cf. Lehr- Spławiński (1913). I am not aware that anyone has ever attempted to attribute the initial stress of W and Ctl Slovak to Hungarian influence.

the penultimate syllable if heavy, else the antepenultimate syllable. If this system were to have been borrowed into Slavic and maintained even after the loss of syllable weight distinctions, the result would have been antepenultimate stress, assuming that *all* syllables were interpreted as light. This however seems unlikely, since by the time the Slavs entered the Balkans (V-VI century) Proto-Balkan Romance probably had a system where prespecification of stress was possible on any of the last three syllables, a result of the loss of vowel length distinctions on the one hand and vowel contractions on the other.[83] More likely Macedonian joined the common Balkan prosodic type that required that one of the final syllables be stressed (i.e., ALIGN RIGHT with extrametricality, assuming disyllabic trochaic feet). The loss of free stress itself would then have been a purely Slavic-internal phenomenon, with outside influence explaining the fact that fixed stress is typically antepenultimate in Macedonian.

---

[83] The loss of vowel length distinctions in Vulgar Latin is dated to the III-IV century (Bourciez 1946: 41). Final stress is most prominently represented in the old perfect tense verb forms, e.g. Arumanian *purt'a* 'carry' 3SG PAST (Gołąb 1984) < Latin *porta:vit*; the contraction of the final two syllables of such forms was already noted in the IV century, e.g. *fum'at* in place of *fum'avit* 'smoke' 3SG PERFECT (Bourciez 1946: 75).

References

Abbreviations of scholarly institutions:
BAN   Bâlgarska Akademija na Naukite
MANU   Makedonskata Akademija na Naukite i Umetnostite

Abbreviations of journal and serial titles:
BE   *Bâlgarski ezik*
ISSF   *Izvestija na Seminara po slavjanska filologija*
JF   *Južnoslovenski filolog*
MJ   *Makedonski jazik*
MP   *Makedonski pregled*
ROA   *Rutgers Optimality Archive*
SDZ   *Srpski dijalektološki zbornik*
SNU   *Sbornik za narodni umotvorenija*
TBD   *Trudove po bâlgarska dialektologija*
UMOPL   *University of Massachusetts occasional papers in linguistics*
ZFL   *Zbornik za filologiju i lingvistiku*

Alderete, John. 1997. Root-controlled accent in Cupeño. Ms., University of Massachusetts, Amherst. ROA-253.

Alexander, Ronelle. 1975. *Torlak accentuation.* (*Slavististische Beiträge* 94). Munich: Sagner Verlag.

--. 1978. Pravci morfofonološke promene u balkanoslavenskim dijalektima: akcentuacija imperativa. In *American contributions to the Eighth International Congress of Slavists.* Columbus: Slavica. 26-44.

--. 1983. Directions of morphophonemic change in Balkan Slavic: the accentuation of the present tense. In *American contributions to the Ninth International Congress of Slavists*. Columbus: Slavica. 9-50.

--. Remarks on the evolution of South Slavic prosodic systems. *American contributions to the Eleventh International Congress of Slavists.* Columbus: Slavica. 181-201.

--. 1994. The prosodic systems of Balkan Slavic, a partial typology. *ZFL* 37 (1). 23-48.

Ambrazas, Vytautas (ed.). 1997. *Lithuanian grammar.* Vilnius: Institute of the Lithuanian Language.

Anttila, Arto. 1995. Deriving variation from the grammar. ROA-63.

Atlas językowy kaszubszczyzny i dialektów sąsiednich (volume 15). 1978. Wrocław: Zakład narodowy imienia Ossolińskich.

Beckman, Jill. 1995. Shona height harmony: markedness and positional identity. In Jill Beckman, Laura W. Dickey and Susan Urbanczyk (eds.) *UMOPL* 18: *Papers in Optimality Theory*. 53-76.

Benua, Laura. 1997. *Transderivational identity: phonological relations between words.* Ph.D. dissertation, University of Massachusetts, Amherst.

Belić, Aleksandar. 1935. Galički dialekat. *SDZ* 7.

Bojadžiev, Todor. 1972. *Govorât na s. Sâčanli, gjumurdžijsko.* Sofia: Izdatelstvo na BAN (*TBD* 7).

--. 1991. *Bâlgarskite govori na iztočna i belomorska Trakija.* Sofia: Universitetsko izdatelstvo Sveti Kliment Oxridski.

Bojkovska, Stojka. 1981. *Meglenskiot govor.* M.A. Dissertation, University of Cyril and Methodius, Skopje.

--. 1992. *Radoviškiot govor.* Ph.D. Dissertation, University of Cyril and Methodius, Skopje.

Bourciez, Édourard. 1946. *Éléments de linguistique romane.* Russian translation (1952) *Osnovy romanskogo jazykoznanija.* Moscow: Izdatelstvo inostrannoj literatury.

Božkov, Rangel. 1984. *Dimitrovgradskijat (caribrodskijat) govor* (*TBD* 12). Sofia: Izdatelstvo na BAN.

Broch, Olaf. 1900. *Ugorusskoe narečie sela Ublii, Zemplinskago komitata.* Saint Petersburg: Izdanie otdelenija russkago jazyka i slovesnosti Imperatorskoj Akademii Nauk.

Bronisch, Gotthelf. 1896. Kaschubische Dialectstudien. *Archiv für slavische Philologie* 18. 321-408.

Brown, Dunstan, Greville Corbett, Norman Fraser, Andrew Hippisley and Alan Timberlake, 1996. Russian noun stress and network morphology. *Linguistics* 34. 53-107.

Burzio, Luigi. 1996. Multiple correspondence. Paper presented at the BCN Workshop on Conflicting Constraints, Groningen.

--. 1994. *Principles of English stress.* Cambridge, New York: Cambridge University Press.

Crowhurst, Megan and Mark Hewitt. 1995. Directional footing, degeneracy, and alignment. Ms., UNC Chapel Hill and Brandeis University. ROA-65

Deevy, Patricia. 1995. An Optimality-Theoretic analysis of stress in Macedonian. In Jill Beckman, Laura W. Dickey and Susan Urbanczyk (eds.) *UMOPL* 18: *Papers in Optimality Theory.* Amherst: Graduate linguistic student association. 137-166.

Dejna, Karol. 1993. *Dialekty polskie.* Wrocław: Zakład narodowy imienia Ossolińskich.

Drvošanov, Vasil. 1993. *Kajlarskiot govor.* Skopje: Institut za makedonskiot jazik Krste Misirkov, posebni izdanija 21.

Dumev, V. 1943. Vodenskijat govor. *MP* 3. 8-42; *MP* 4. 26-88.

Dybo, Vladimir A. 1981. *Slavjanskaja akcentologija.* Moscow: Nauka.

Dybo, Vladimir A., Galina I. Zamjatina and Sergej L. Nikolaev. 1990. *Osnovy slavjanskoj akcentologii.* Moscow: Nauka.

--. 1993. *Osnovy slavjanskoj akcentologii: slovar'.* Moscow: Nauka.

Ellison, T. Mark. 1995. *Phonological derivation in Optimality Theory.* Ms., University of Edinburgh.

Filiposki, Ilija. 1952. *Negotinskiot govor.* Skopje: Filozofski fakultet na univerzitetot.

Franks, Steven M. 1987. Regular and irregular stress in Macedonian. *International journal of Slavic linguistics and poetics* 35/36. 93-150.

--. 1989. The monosyllabic head effect. *Natural language and linguistic theory* 7. 551-563.

Gabor, Linda. 1979. *The morphology of the dialect of Berovo within the context of the Macedonian dialects.* Ph.D. Dissertation, Yale University.

Garde, Paul. 1976. *Histoire de l'accentuation slave.* Paris: Institut d'etudes slaves.

Gołąb, Zbigneiw. 1984. *The Arumanian dialect of Kruševo in SR Macedonia, SR Yugoslavia.* Skopje: MANU.

--. 1960-63. Dva makedonski govora (na Suxo i Visoka vo Solunsko). *MJ* 11-12 (1-2). 113-182; 13-14 (1-2). 173-276.

Groen, Ben M. 1977. *A structural description of the Macedonian dialect of Dihovo.* Lisse: Peter de Ridder Press.

--. 1981-2. Phonology of the Macedonian dialect of Bukovo. *MJ* 32-33: 159-170.

Halle, Morris and Michael Kenstowicz. 1991. The Free Element Condition and cyclic versus noncyclic stress. *Linguistic Inquiry* 22 (3). 457-501.

Halle, Morris and Paul Kiparsky. 1981. Review of Garde (1976). *Language* 57. 150-181.

Halle, Morris and Jean-Roger Vergnaud. 1987. *A metrical theory of stress.* Cambridge: MIT Press.

Hammond, Michael. 1989. Lexical stresses in Polish and Macedonian. *Phonology* 6. 19-38.

Hanudel', Zuzanna. 1981-89. *Lynhvystyčnyj atlas ukraïn'skyx hovoriv sxidnoï slovaččyny.* Vol. I (1981) and vol. II (1989). Bratislava: Slovac'ke pedahohične vydavnyctvo v Bratyslavi, viddil ukraïn'skoï literatury v Prjaševi.

Hayes, Bruce. 1995. *Metrical stress theory.* Chicago: University of Chicago Press.

Hendriks, Peter. 1976. *The Radožda-Vevčani dialect of Macedonian.* Lisse: Peter de Ridder Press.

Hill, Peter. 1981. On stress in south Balkan Slavic. *Slavistische Linguistik 1980.* Munich: Sagner Verlag. 27-37.

--. 1990. *The dialect of Gorno Kalenik.* Columbus: Slavica.

Hung, Henrietta. 1995. *The rhythmic and prosodic organization of edge constituents: an Optimality-Theoretic account.* Bloomington: Indiana University linguistics club publications.

Ilievski, Petar X., 1981. Učestvoto na grčko-romanskata jazična sredina vo formiranjeto na makedonskiot tretosložen akcent. *Prilozi na MANU* 6 (2). 35-58.

Inkelas, Sharon. 1989. *Prosodic Constuency in the Lexicon.* Ph.D. dissertation, Stanford University. Published 1990 (Garland: New York).

--. 1993. Consonant invisibility in Amele: evidence for domain windows. Paper delivered at the Rutgers Optimality Workshop.

--. 1994. Exceptional stress-attracting suffixes in Turkish: representations vs. the grammar. ROA-39 (to appear in print 1999).

--. 1997. The theoretical status of morphologically conditioned phonology: a case study of dominance effects. In G. Booij and J. van Marle (eds.) *Yearbook of morphology 1997.* Dordrecht: Kluwer.

Inkelas, Sharon and Cemil O. Orgun. 1998. Level (non)ordering in recursive morphology: evidence from Turkish. In S. Lapointe et al. (eds.), *Morphology and its relation to phonology and syntax.* Stanford: Center for the Study of Language and Information publications. 360-392.

Inkelas, Sharon, Cemil O. Orgun and Cheryl C. Zoll. 1995. Exceptions and static phonological patterns: cophonologies vs. prespecification. Ms., University of California, Berkeley and University of Iowa. ROA-124.

Ivanov, Dimitâr. 1932. *Gevgeliskijat govor.* Sofia: Makedonski naučen institut.

Ivanov, Jordan. 1971. Dvojno udarenie v bâlgarski ezik. *Izvestija na instituta za bâlgarskija ezik* 20. 107-186.

--. 1972. *Bâlgarski dialekten atlas. Bâlgarski govori ot egejska Makedonija 1.* Sofia: Izdatelstvo na BAN.

--. 1977. *Bâlgarski preselničeski govori: govorite ot Dramsko i Sjarsko* (*TBD* 9). Sofia: Izdatelstvo na BAN.

Ivić, Pavle. 1958. *Die serbokroatischen Dialekte, ihre Struktur und Entwicklung.* Volume I: *Allgemeines und die stokavische Dialektgruppe.* The Hague: Mouton.

--. 1968-69. Review of Koneski (1965). *JF* 27 (3-4). 463-484.

--. (ed.). 1981. *Fonološki opisi srpskohrvatskih/hrvatskosrpskih, slovenačkih i makedonskih govora obuhvaćenih opšteslovenskim lingvističkim altlasom.* Sarajevo: Akademija Nauka Bosne i Hercegovine.

--. 1987. Pravci razvoja prozodijskog sistema u slovenskim jezicima. *JF* 43. 1-15.

Ivković, M. 1921-24. Akcentski sistemi srpsko-makedonskih govora. *JF* 2 (2-3). 254-271; *JF* 4. 46-71.

Joseph, Brian and Irene Philippaki-Warburton. 1987. *Modern Greek.* London: Croom-Helm.

Kager, Rene. 1993. Stress in windows. Ms, Utrecht University.

Karanfilovski, Maksim. 1992. *Enidževardarskiot govor.* Ph.D. Dissertation, University of Cyril and Methodius, Skopje.

Kenstowicz, Michael. 1997. Uniform Exponence: exemplification and extension. Ms. Massachusetts Institute of Technology. ROA-218.

Kepeski, Krume. 1941 (reprinted 1993). *Prilepskiot govor.* Skopje: Kultura.

Kiparsky, Paul. 1976. Towards a reconstruction of the Indo-European accent. In Larry Hyman (ed.) *Studies in stress and accent* (*Southern California occasional papers in linguistics* 4). Los Angeles: University of Southern California.

--. 1991. Catalexis. Ms., Stanford University.

--. 1993. Variable rules. Paper delivered at the Rutgers Optimality Workshop.

Klavans, Judith L. 1995. *On clitics and cliticization.* New York: Garland.

Kočev, Ivan. 1970. Akcentologična interpretacija na ritmiko-intonacionnite grupi v jugozapadnite bâlgarski govori. *BE* 20 (2-3). 182-186.

Koneska, Milica. 1951. *Mariovskiot govor.* Skopje: Filozofski fakultet na univerzitetot.

Koneski, Blaže. 1957. Kičevskiot govor. *MJ* 8 (1). 31-90.

--. 1965. *Istorija na makedonskiot jazik.*Skopje: Kočo Racin.

--. 1967. *Gramatika na makedonskiot literaren jazik.* Skopje: Kultura.

Kortlandt, Frederik H. 1982 Sravnitel'no-istoričeskie kommentarii k bolgarskomu udareniju, *ZFL* 25 (1). 91-96.

Korubin, Blagoja. 1969. *Jazikot naš denešen* (volume II). Skopje: Naša kniga.

Kuryłowicz, Jerzy. 1952. Akcentuacja słowińska. *Rocznik slawistyczny* 7 (1). 1-18.

--. 1960. Uwagi o akcencie kaszubskim. *Slavia occidentalis* 20 (2). 71-77.

Kuševski, Metodi. 1958. Delčevski gradski govor. *MJ* 9 (1-2). 67-108.

Latta, Vasyl'. 1964. Systema naholosu ukraïns'yx hovirok sxidnoï slovaččyny. In K. K. Cilujko (ed.) *Ukraïns'ka dialektolohija i onomastyka.* Kiev: Naukova dumka. 108-116.

--. 1991. *Atlas ukraïn'skyx hovoriv sxidnoï slovaččyny.* Bratislava: Slovac'ke pedahohične vydavnyctvo v Bratyslavi, viddil ukraïn'skoï literatury v Prjaševi.

Lehfeldt, Werner. 1993. *Einführung in die morphologische Konzeption der slavischen Akzentologie.* Munich: Sagner Verlag.

Lehr-Spławiński, Tadeusz. 1913. Studja nad akcentem pomorskim. *Materiały i prace komisyi językowej Akademii Umiętnosci w Krakowie* 6. 359-452.

Lorentz, Friedrich. 1903. *Slovinzische Grammatik.* Saint Petersburg: Commissionaires de l'Academie Imperiale des Sciences.

--. 1914-15. Review of Lehr-Spławiński (1913). *Rocznik slavistyczny* 7.

--. 1924. *Teksty pomorskie.* Cracow: Polska Akademja Umiejętności.

--. 1925. *Geschichte der pomoranischen (kaschubischen) Sprache.* Berlin: Gruyter.

--. 1958-59. *Gramatyka pomorska* (vol. 1-2). Wrocław: Zakład narodowy imienia Ossolińskich.

--. 1959. *Der kaschubische Dialekt von Gorrenschyn.* Berlin: Deutsche Akademie der Wissenschaften zu Berlin.

Łukasik-Szulowska, W., J. Rieger and E. Wolnicz-Pawłowska. 1989. Tendencja do stabilizacji akcentu w ukraińskich gwarach karpackich na wschód od Osławy i Laborca. *Lódzkie towarzystwo naukowe: rozprawy komisji językowej* 35. 117-123.

Małecki, Mieczysław. 1933a. O zróýnicowaniu gwar Bogdańska w pd.-wschodniej Macedonji. *Lud słowiański* 3 (1). 90-106.

--. 1933b. Teksty gwarowe z Bogdańska. *Lud słowiański* 3 (1). 120-131.

--. 1934. Drobiazgi z Macedonji. *Lud słowiański* 3 (2). 266-287.

--. 1934-36. *Dwie gwary macedońskie; Suxo i Wysoka w Soluńskiem.* (vol. I. texts (1934), vol. II. dictionary (1936). Cracow: Gebethner i Wolff.

Mazon, Andre. 1923. *Contes slaves de la Macédoine sud-occídentale.* Paris: E. Champion.

--. 1936. *Documents, contes et chansons slaves de l'Albanie du sud.* Paris: Librairie Droz.

McCarthy, John. 1995. Extensions of faithfulness: Rotuman revisited. Ms., University of Massachusetts, Amherst. ROA-64.

--. 1998. Faithfulness and prosodic circumscription. In J. Dekkers, F. van der Leeuw and J. van de Weijer (eds.) *The pointing finger: conceptual studies in Optimality Theory* (to appear; also ROA-201).

McCarthy, John and A. Prince. 1993. Generalized Alignment. In Geert Booij and Jaap van Marle (eds.), *Yearbook of morphology 1993.* Dordrecht: Kluwer. 79-153.

--. 1995. Faithfulness & reduplicative identity. In J. Beckman, L. W. Dickey and S. Urbanczyk (eds.), *UMOPL* 18: Papers in Optimality Theory. Amherst: Graduate linguistic student association. 249-384.

Mirčev, Kiril. 1936. Nevrokopskijat govor. *Godišnik na sofiskija universitet, istoričesko-filološkijat fakultet* 32.

Mixajlov, Panče. 1954. *Gradskiot debarski govor.* Skopje: Filozofski fakultet na univerzitetot.

Mladenov, Maksim S. 1966. *Ixtimanskijat govor* (*TBD* 2). Sofia: Izdatelstvo na BAN.

--. 1977. Beležki po govora na s. Kufalovo, solunsko. *BE* 27 (6). 471-485.

Molerov, D. 1905. Vtorično udarenie v razložkija govor. *ISSF* 1. 173-182.

Molerovi, D. and K. 1954. Beležki za razložkija govor. *SNU* 48. 9-16, 429-574.

Moravec, Jan. 1975. K akcentologii nářečí ukrajinsko-slovenského pomezí (periferni přizvuková schémata substantiv F-a). *Zapysky naukovoho tovarystva KSUT (*i.e. *Kul'turnij Sojuz Ukraïns'kyx Trudjaščyx u ČSSR).* 37-50.

Ničev, Aleksandr. 1987. *Kosturskijat bâlgaro-grâcki rečnik ot XVI vek.* Sofia: Universitetsko izdatelstvo Sveti Kliment Oxridski.

Nikolaeva, Tatjana M. 1996. *Prozodija Balkan: slovo - vyskazivanie - tekst.* Moscow: Indrik.

Oblak, Vatroslav. 1896. *Mazedonische Studien.* Vienna: Akademie der Wissenschaften.

Obnorskij, Sergej P. 1927. *Imennoe sklonenie v sovremennom russkom jazyke.* Leningrad: Izdatel'stvo Akademii Nauk SSSR.

Orgun, Cemil O. 1996. *Sign-based morphology and phonology: with special attention to Optimality Theory.* Ph.D. dissertation, University of California, Berkeley.

Paňkevič, Ivan. 1938. *Ukrains'ki hovory pidkarpatskoï Rusy i sumežnyx oblastej.* Prague: Orbis.

Pavlović, Milovoj. 1939. Govor Sretečke Župe. *SDZ* 8. 1-360.

Peev, Kosta. 1979. Dojranskiot govor. *Makedonistika* 2. 3-191.

--. 1988. *Kukuškiot govor* (vol. I-II). Skopje: Studentski zbor.

Popova, Tatjana V. 1974. Morfonologičeskie čeredovanija glagola v odnom iz zapadnobolgarskix govorov. *Obščeslavjanskij lingvističeskij atlas. Materialy i issledovanija 1972.* Moscow: Nauka. 49-90.

Popova, Tatjana V. and Borjana Velčeva. 1974. Morfonologičnoto akcentno reduvane v glagolite ot II spreženie kato edin ot priznacite za dialektna tipologičeska xarakteristika. In L. Andrejčin (ed.) *V pamet na prof. d-r St. Stojkov. Ezikovedski izsledvanija.* Sofia: Izdatelstvo na BAN. 203-216.

Prince, Alan. 1990. Quantitative consequences of rhythmic organization. In M. Ziolkowski, M. Noske & K. Deaton (eds.), *Parasession on the syllable in phonetics and phonology.* Chicago: Chicago Linguistic Society. 355-398.

Prince, Alan and Paul Smolensky. 1993. Optimality theory: constraint interaction in generative grammar. Technical Report-2, Rutgers University Cognitive Science Center.

Reiter, Norbert. 1964. *Der Dialekt von Titov-Veles.* Berlin: O. Harrassowitz.

Remetić, Slobodan. 1996. Srpski prizrenski govor. *SDZ* 42. 319-614.

Reynolds, William T. 1994. *Variation and phonological theory.* Ph.D. Dissertation, University of Pennsylvania.

Rieger, Janusz (ed.). 1980-91. *Atlas gwar bojkowskich* (7 volumes). Wrocław: Zakład narodowy imienia Ossolińskich.

Ristujčin, Petre. 1994. Akcentskiot sistem na neretskiot govor. In Božidar Vidoeski and Olga Ivanovna (eds.) *Makedonskite dijalekti vo egejska Makedonija. Zbornik na trudovi od naučen sobir.* Skopje: MANU. 101-109.

Sawicka, Irena and Ljudmil Spasov. 1997. *Fonologija na sovremeniot makedonski standarden jazik*. Skopje: Detska radost.

Schallert, William J. 1984. *Accentuation in Macedonian dialects.* Ph.D. dissertation, University of California, Berkeley.

--. 1988. Fixed and mobile stress in the Balkan Slavic verb: synchrony. *American contributions to the Tenth International Congress of Slavists.* Columbus: Slavica. 335-361.

Seliščev, Afanasij M. 1929. *Polog i ego bolgarskoe naselenie.* Sofia: Makedonski naučen institut.

Shevelov, George. 1979. *A historical phonology of the Ukrainian language.* Heidelberg: Carl Winter.

Smolensky, Paul. 1995. On the internal structure of the constraint component of UG. Colloquim presented at UCLA.

Stamatoski, Trajko. 1956. Gradskiot tetovski govor. *MJ* 7 (2). 210-242.

Stang, Christian S. 1957. *Slavonic accentuation.*Oslo: Universitetsforlaget

Stankiewicz, Edward. 1968. The accent patterns of the Slavic verb. In *American contributions to the Sixth International Congress of Slavists.* The Hague: Mouton. 359-375.

--. 1993. *Slavic accentuation.* Stanford: Stanford University Press.

Steriade, Donca. 1997. Lexical conservatism and its analysis. Ms., UCLA.

Stieber, Zdisław. 1938. Gwary ruskie na zachód od Oporu (originally in *Drugi zjazd sprawozdawaczo-naukowy poświęcony środkowym i wschodnim karpatom polskim.* 3-10). Reprinted in Stieber, Z., *Świat językowy słowian* (1974). Warsaw: Państwowe Wydawnictwo Naukowe. 440-48.

--. 1956-64. *Atlas językowy dawnej łemkowszczyzny.* Lódź: Zakład narodowy imienia Ossolińskich we Wrocławiu.

--. 1959. Materiały akcentowe z dawnej łemkowszczyzny. *Slavia orientalis* 8 (2-3). 115-121.

Stoilov, X. 1904. Gornodžumajskijât govor. *SNU* 20 (33pp.).

--. 1905. Udarenieto v gornodžumajskija govor. *ISSF* 1. 183-216.

Stojkov, Stojko. 1967. *Banatskijat govor* (*TBD* 3). Sofia: Izdatelstvo na BAN.

--. (ed.). 1975. *Bâlgarski dialekten atlas III. Jugozapadna Bâlgarija.* Sofia: Izdatelstvo na BAN.

--. 1993. *Bâlgarska dialektologija.* Sofia: Izdatelstvo na BAN.

Šklifov, Blagoj. 1973. *Kosturskijat govor* (*TBD* 8). Sofia: Izdatelstvo na BAN.

--. 1979. *Dolnoprespanskijat govor* (*TBD* 11). Sofia: Izdatelstvo na BAN.

--. 1995. *Problemi na bâlgarskata dialektna istoričeska fonetika s ogled na makedonskite govori.* Sofia: Kačarmazov.

Todorov, Cvetan. 1937. Dvojno akcentuvane v bâlgarskija ezik. *Spisanie na BAN* 29. 107-202.

Topolińska, Zuzanna. 1958. Aktualny stan akcentu kaszubskiego. *Slavia* 27, 3. 381-395.

--. 1960-61. Za slovenskiot sloboden i nepodvižen akcent. *MJ* 11-12 (1-2). 73-79.

--. 1967a. Teksty gwarowe południowokaszubskie z komentarzem fonologicznym. *Studia z filologii polskiej i słowiańskiej* 6.

--. 1967b. Teksty gwarowe centralnokaszubskie z komentarzem fonologicznym. *Studia z filologii polskiej i słowiańskiej* 7.

--. 1969. Teksty gwarowe północnowokaszubskie z komentarzem fonologicznym. *Studia z filologii polskiej i słowiańskiej* 8.

--. 1964. *Stosunki iloczasowe polsko-pomorskie*. Wrocław: Zakład narodowy imienia Ossolińskich.

--. 1974. *A historical phonology of the Kashubian dialects of Polish*. The Hague: Mouton.

Ugrinova, Rada. 1951. *Govorite vo skopsko*. Skopje: Filozofski fakultet na univerzitetot.

Vaillant, Andre. 1950. *Grammaire comparée des langues slaves*; vol. I: *Phonétique*. Lyon: IAC.

Vaillant, Andre and Andre Mazon. 1938. *L'evangeliare de Kulakia*. Paris: Libraire Droz.

Vasiliev, Christo. 1969. Vorstufen zur gebundenen Betonung in südslavischen Mundarten. *Zeitschrift für slavische Philologie* 34 (2). 277-332.

Verxratskyj, Ivan. 1899, 1901. *Znadoby dlja piznanja ugorsko-ruskix hovoriv*; vol. I (1899): *Hovory z naholosom dvižnym;* vol. II (1901): *Hovory z naholosom stalym*. Lvov: Naukove tovarystvo im. Ščevčenka.

Vidoeski, Božidar. 1950. *Porečkiot govor*. Skopje: Filozofski fakultet na univerzitetot.

--. 1952. Mestoto na akcentot vo kratovskiot govor. *MJ* 3 (3-6). 58-63; 84-86; 105-107; 134-146.

--. 1954. Severnite makedonski govori. *MJ* 5 (1-2). 1-30; 109-198.

--. 1960-61. Osnovni dijalektni grupi vo Makedonija. *MJ* 11-12 (1-2). 13-31.

--. 1962. *Kumanovskiot govor*. Skopje: Institut za makedonskiot jazik Krste Misirkov, posebni izdanija no. 3.

--. 1962-3. Makedonskite dialekti vo svetlinata na lingvističkata geografija. *MJ* 13-14 (1-2). 87-108.

--. 1970. Akcentskite sistemi vo makedonskite dijalekti. *Literaturen zbor* 17 (3). 1-11.

--. 1977. Fonološkiot opis na govorot na seloto Gratče (kostursko). *Godišen zbornik. Filološkiot fakultet na univerzitetot* (Skopje), 3. 23-31.

--. 1978. Fonološkiot sistem na govorot na seloto Čegan (vodensko). *MJ* 19. 61-73.

--. 1979. Fonološki opis na govorot na seloto Tiološta (kostursko). *Prilozi na MANU* 4 (2). 5-16.

--. 1982. Prespanskite govori. *Prilozi na MANU* 7(2): 6-38.

--. 1983. Lerinskiot govor. *MJ* 34. 23-49.

--. 1984a. Fonološkiot sistem na govorot na seloto Ezerec (kostursko). *MJ* 35. 79-98.

--. 1984b. Oxridsko-struškite govori. *Prilozi na MANU* 9 (1): 5-40.

--. 1985. Bitolskiot govor. *Prilozi na MANU* 10 (2). 11-46.

--. 1985-86. Akcentskite sistemi vo makedonskite dijalekti vo Grcija (egejska Makedonija) i južna Albanija. *MJ* 36-37: 19-45.

--. 1987. Fonološkiot i prozodiskiot sistem na govorot na seloto Elešnica (razloško). *Prilozi na MANU* 12/1. 7-36.

--. 1989a. Petričkiot govor. *Prilozi na MANU* 14 (1). 5-42.

--. 1989b. Govorot na seloto Nestram (kostursko). *Prilozi na MANU* 14 (2). 47-78.

--. 1990. Govorot na seloto Sekavec (sersko). *Prilozi na MANU* 15 (1). 41-82.

--. 1991. Fonološkiot i prozodskiot sistem na govorot na seloto Negovan (solunsko). *Prilozi na MANU* 16 (2). 15-32.

--. 1991. Govorot na selata Plevna i Gorno Brodi (dramsko). *Prilozi na MANU* 17 (2). 5-87.

--. 1994a. Akcenatski sistemi u južnim srpskim govorima. *ZFL* 37 (1-2). 123-130.

--. 1994b. Makedonskite dijalekti vo Egejska Makedonija (obid za klasificakcija). In Božidar Vidoeski and Olga Ivanovna (eds.) *Makedonskite dijalekti vo egejska Makedonija. Zbornik na trudovi od naučen sobir.* Skopje: MANU. 23-60.

Vodeničarov, Petâr. 1989. Vtorično akcentuvane. *Ezik i literatura* 44 (5). 99-103.

Zaliznjak, Andrej A. 1985. *Ot praslavjanskoj akcentuacii k russkoj.* Moscow: Nauka.

Zoll, Cheryl C. 1996. *Parsing below the segment in a constraint based framework.* Ph.D. dissertation, University of California, Berkeley.

Appendix 1

Alphabetical list of points on Macedonian Maps. Numbers correspond to the points used in the Macedonian Dialects Atlas, regardless of the source of the data.

Ajvatovo	310	Kukuš	Ku
Armensko	A	Laki	250
Balavec	309	Lǝk	387
Barišta	65	Leskoec	101
Barovo	193	Leško	270
Bašino Selo	163	Ljubance	37
Belimbegovo	33	Ljubaništa	100
Berovo	261	Lobanica	376
Bogoslovec	233	Lugunci	162
Buf	357	Lukovec	337
Bukovo	120	Mačovo	257
Creševo	36	Marena	197
Crkvino	166	Markoveni	367
Čegan	341	Mirafci	199
Čerešnica	Č	Negovan	307
Divle	32	Neolani	N
Dračevo	156	Neret	Nr
Dragoš	117	Nikodin	177
Dunje	183	Nivici	388
Dvorište	262	Nivičino	218
Ekshisu	350	Padež	270
Ezerec	369	Paralovo	124
Gabrovo	211	Patele	353
German	384	Pexčevo	260
Globočeni	385	Plevna	299
Gorno Brodi	292	Podles	184
Gorno Kalenik	GK	Popadija	344
Gorno Kotori	356	Popǝlžani	355
Gorno Požarsko	343	Pravednik	186
Gradsko	185	Preod	31
Gratče	240	Puturus	127
Graždeno	390	Paralovo	124
Grnište	169	Puturus	127
Izvor	170	Rožden	191
Kalimanci	248	Rupišta	366
Karabunište	164	Sasa	246
Katlanovo	159	Savek	303a
Kirechkoj	317	Sekavec	304
Klenje	74	Skočivir	123
Knežje	30	Slimnica	392
Konopište	192	Smolare	213
Konsko	200	Star Istevik	256
Kostin Dol	243	Staravina	190
Kosturino	208	Steblevo	74a
Kučkovo	39	Stenje	102

Stinek	214
Suxo	306
Šulin	389
Tiolišta	362
Trabotivište	255
Tresino	340
Trojaci	178
Trpejca	99
Vataša	194
Vatilak	316
Vinica	242
Visoka	305
Vitolište	187
Vratnica	40
Zeleniče	352
Zelenikovo	157
Žernonica	58
Židilovo	1
Živojna	122

Appendix 2
Key to points on Macedonian maps.

A	Armensko	190	Staravina
Č	Čerešnica	191	Rožden
GK	Gorno Kalenik	192	Konopište
Ku	Kukuš	193	Barovo
N	Neolani	194	Vataša
Nr	Neret	197	Marena
		199	Mirafci
1	Židilovo	200	Konsko
30	Knežje	208	Kosturino
31	Preod	211	Gabrovo
32	Divle	213	Smolare
33	Belimbegovo	214	Stinek
36	Creševo	218	Nivičino
37	Ljubance	233	Bogoslovec
39	Kučkovo	240	Gratče
40	Vratnica	242	Vinica
58	Žernonica	243	Kostin Dol
65	Barišta	246	Sasa
74	Klenje	248	Kalimanci
74a	Steblevo	250	Laki
99	Trpejca	255	Trabotivište
100	Ljubaništa	256	Star Istevik
101	Leskoec	260	Pexčevo
102	Stenje	257	Mačovo
117	Dragoš	261	Berovo
120	Bukovo	262	Dvorište
122	Živojna	270	Padež, Leško
123	Skočivir	292	Gorno Brodi
162	Lugunci	299	Plevna
124	Paralovo	303a	Savek
127	Puturus	304	Sekavec
156	Dračevo	305	Visoka
157	Zelenikovo	306	Suxo
159	Katlanovo	307	Negovan
163	Bašino Selo	309	Balavec
164	Karabunište	310	Ajvatovo
166	Crkvino	316	Vatilak
169	Grnište	317	Kirechkoj
170	Izvor	337	Lukovec
177	Nikodin	340	Tresino
178	Trojaci	341	Čegan
183	Dunje	343	Gorno Požarsko
184	Podles	344	Popadija
185	Gradsko	350	Ekshisu
186	Pravednik	352	Zeleniče
187	Vitolište	353	Patele

355   Popəlžani
356   Gorno Kotori
357   Buf
362   Tiolišta
366   Rupišta
367   Markoveni
369   Ezerec
376   Lobanica
384   German
385   Globočeni
387   Lək
388   Nivici
389   Šulin
390   Graždeno
392   Slimnica