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BULGARIAN NOMINAL ACCENTUAL PARADIGMS AND THE PROBLEM OF AMBIGUOUSLY STRESSED ZERO MORPHEMES

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0. Introduction.

Bulgarian nominal stress has been the subject of a number of studies in recent years. While the work emanating from Bulgaria itself (e.g. Bojadžiev 1978 and 1982) has tended to be a simple enumeration of surface stress types without significant linguistic generalization, the work of Aronson (1968), Daniels (1976), and Scatton (1984a and 1984b) has attempted to describe the structural and systematic nature of Bulgarian nominal stress. Nevertheless, this paper will argue that the description can be significantly improved in several respects.¹ In particular, Aronson's view that the *-ov-* plural extension belongs to the desinence has led to several unnecessary complications of the system, which I hope to resolve by considering *-ov-* as part of the stem. While Daniels (1976) and Scatton (1984b) agree with many of Aronson's classifications of Bulgarian stress paradigms, one significant disagreement stands out and becomes crucial for evaluating the entire systematic picture. Aronson (1968:140–1) considers the stress of such words as *vid* 'view' / *vidát* / *vidove* to be an instance of mobility to the definite article, while both Daniels (330) and Scatton (1984b:95) interpret this example as singular/plural mobility. This represents one of a series of ambiguous stresses of the Bulgarian nominal system which this paper seeks to resolve by appealing to unambiguous cases.

1.0 Preliminary assumptions about definite articles and *-ov-* extension.

1.1 Segmentation of articles.

A uniform treatment requires the use of separate endings for noun number and article, in both singular and plural. Thus, I shall consider that the morphemic division of forms containing articles is as follows, with the article placed in parentheses for the sake of clarity, and using the plus sign

(+) to refer to the stem-desinence boundary and the hyphen (-) to refer to all other morpheme boundaries of the word, including the desinence-article boundary:

məž+#-(t-#)	‘man’	sol+#-(t-a)	‘salt’	žen+a-(t-a)	‘woman’	mes+o-(t-o)	‘meat’
(məžət)		(solta)		(ženata)		(mesoto)	
məž+e-(t-e)		sol+i-(t-e)		žen+i-(t-e)		mes+a-(t-a)	
(məžete)		(solite)		(ženite)		(mesata)	

This segmentation essentially agrees with the approach of Scatton (1984a: 125), except for the fact that I have used the zero symbol # in place of Scatton’s “*Ů.” Similar to the case of vowel-zero alternations in other Slavic languages, the presence of # in succeeding syllables leads to the deletion of the second # and the concomitant vocalization of the first (e.g. {məž+#-t-#}² is realized as *məžat*).

1.2 -ov- extension.

Analysis of stress will show that there is good reason to consider the plural -ov- extension³ to be part of the stem, not the ending, in contrast to virtually all previous treatments of the subject. If -ov- can be excluded from the ending, all nominal post-stem stress can be seen to conform to the simple surface constraint that the first stressable post-stem vowel gets stressed, uniting the stress of such apparently diverse plural forms as *koné* ‘horses’, *bregové* ‘shores’, *rogá* ‘horns’. Considering -ov- as part of the desinence, or post-stem portion of the word,⁴ greatly complicates stress in a manner uncharacteristic of other similar Slavic systems (e.g. East Slavic), since two differing desinential syllables could then be said to oppose stress in identical morphological environments (e.g. *stolóve* ‘chairs’ vs. *gradové* ‘cities’), i.e. with stress supposedly in the desinence in both cases.⁵ The description of this situation becomes easy to handle only if -ov- is considered stem-final and -e desinential. The stem status of -ov- is also clearly seen in the behavior of -ov- in plurals of -#c- derivatives, in which -ov- is inserted in the plural, not after the singular stem, but BETWEEN the root and suffix: i.e. singular {vol-#c+#}, plural {vol-ov-#c+i} (*vólec* ‘ox’, dim., *volóvci*). This paper takes the position that the more familiar -ov- extension that pluralizes most masculine monosyllables is also part of the stem.

My suggestion that -ov- be considered part of the stem can be treated morphophonemically in two different ways. One alternative would be to assume that -ov- is always present as a suffix, but is deleted in the singular, perhaps conditioned by the following zero-ending. This can be represented as follows, parenthesizing (ov) to indicate the deletion and surface absence of this suffix (although parentheses are certainly not a necessary part of this morphophonemic transcription):

grad-(ov)+#	stól-(ov) + #	list-(ov)-#c + #
grad- ov + é	stol- óv + e	list- ov -#c + é

The corresponding surface forms are:

grád 'city'	stól 'chair'	listéc 'leaf', dim.
gradové	stolóve	listovcé

A second alternative would be to consider that *-ov-* only appears in the plural, conditioned by monosyllabic masculine stems and the plural desinence. This solution would still allow *-ov-* to be analyzed as part of the stem, rather than the ending. However, for the purposes of this paper, I will morphophonemically transcribe stems in *-ov-* as in the above forms, indicating the suffix in all forms, but placing it in parentheses where it is subject to deletion.

2.0 Ambiguity of morphophonemic stress in forms with zero desinences.

2.1 General.

Whenever surface stress appears on a vowel preceding a morphological zero that gets deleted, there is a potential ambiguity of morphophonemic treatment of stress. In other words, the deeper stress will produce the correct surface output regardless of whether it is considered to be on the deleted zero or on the preceding vowel, but systematic considerations often argue for one treatment over the other, as I will demonstrate in more detail below. The use of the above indicated representations (with their use of many zero elements) for noun endings and articles can lead to an even greater need to solve the problem of ambiguous stress. However, if the zeroes are justified morphologically, the stress difficulties are no reason to reject these representations. On the contrary, the existence of a large number of potentially justifiable stresses can lead to a choice of the stress types which reflect greater system-wide regularity than the forced choice of surface stress, which has often occurred when the deeper zeroes are not recognized, or when the *-ov-* extension is placed in the desinence.

After illustrating the problem of ambiguity, the major stress types of the noun will be surveyed and choices will be made from among the list of ambiguous possibilities. Regular principles that result will be summarized, and then these results will be compared with the assumptions about stress that appear in the leading handbooks and treatments of Bulgarian stress. In these treatments many implied choices are made for stress patterns involving zeroes, especially in Aronson's system. Even though Aronson's choices can be considered justified and correct in many instances, he does not explicitly justify his particular choices of stress between zero element and

preceding vowel. One of this paper's goals is to point out the full range of choices in each case and to state why a particular choice is preferable to others. As a general principle, unambiguous patterns govern the determination of the ambiguous ones. In this way, the system obtains a simpler explanation and there is no unnecessary proliferation of patterns. Therefore, each instance of ambiguity will first require analysis to determine if an unambiguous pattern of the same type exists.

2.2 Unambiguous stress patterns.

The ambiguous stress patterns of the Bulgarian noun are found in those types which contain zeroes in the desinence or the desinence and article; either the masculine or feminine singular ending (e.g. {glas+#} 'voice', {sol+#} 'salt') alone, or the masculine singular in addition to the masculine singular article (e.g. {glas+#-t#}). The degree of ambiguity is heightened in the case of certain masculine \emptyset -noun stress patterns which are restricted to monosyllabic stems, since a monosyllabic stem with a zero-desinence has as much as four-way ambiguity, potentially representing stem-initial, stem-medial, stem-final, or desinential stress, while polysyllabic stems with the zero-desinence are only ambiguously stressed when the surface stress is on the stem-final syllable, in which it can represent either stem-final or immediate post-stem stress. Therefore, the unambiguous types are concentrated within the *o*-nouns⁶ and *a*-nouns, traditionally referred to as neuter and feminine, since they lack zero-endings.

2.21 Unambiguous immobile stress.

Both *o*-nouns and *a*-nouns have two stress patterns in common: constant stem-stress and constant stress on the immediate post-stem syllable. The fact that the desinential stress is on the first post-stem syllable can be seen in the articulated forms, which never stress the vowel of the article itself in either *o*-nouns or *a*-nouns. For example:

Constant Stem-Stress		Constant Desinence-Stress
	(<i>o</i> -nouns)	
kopít+o 'hoof'		mes+ó 'meat'
kopít+o-to		mes+ó-to
kopít+a		mes+á
kopít+a-ta		mes+á-ta
	(<i>a</i> -nouns)	
rǐb+a 'fish'		žen+á 'woman'
rǐb+a-ta		žen+á-ta
rǐb+i		žen+í
rǐb+i-te		žen+í-te

2.22 Unambiguous mobile stress.

2.221 Neuter (*o*-stem) number alternation.

In addition, neuter *o*-nouns have an unambiguous mobile type, which is not found in *a*-nouns. This type presents stem-stress in the singular, almost always on the stem-final (i.e. predesinential) syllable, and first post-stem stress in the plural, as follows:

igrál+o ‘toy’
 igrál+o-to
 igrál+á
 igrál+á-ta

2.222 Feminine zero-noun singular articulated-form alternation.

Another type of unambiguous mobility occurs in feminine *θ*-nouns. Stems of more than one syllable must be used to show the unambiguous pattern, since any monosyllabic stem followed by a zero can be ambiguously considered as either stem-stressed or desinence-stressed. Such a polysyllabic example is *zápoved* ‘command’, which illustrates an initial~final mobility, in which the singular articulated form is stressed on the second post-stem syllable (which coincides with the word-final boundary), with all other forms stressing the initial syllable (coinciding with word-initial) in the great majority of words in this stress type. Certain exceptions have stem-stress other than initial, but invariably have singular articulated stress on the word-final syllable. The pattern can be illustrated as follows:⁷

zápoved+#
 zápoved+#-tá
 zápoved+i
 zápoved+i-te

The existence of polysyllabic stems allows the clarification of the potential ambiguity of cases such as *sol/soltá*. Since the ambiguous form *sol*, which can be represented either as {sól+#} or {sol+#}, can easily be classified with the unambiguous *zápoved* pattern by recognizing the form *sol* as having a stem-stress and not a desinential stress, I assume that *sol* and *zápoved* belong to the same group.

2.3 Stress ambiguity in masculine zero-nouns.

Any monosyllable followed by a zero-ending presents a stress ambiguity. The categories of the section headings are based upon my ultimate resolution of the type of stress involved, after a choice amongst the ambiguities has been made.

2.31 Zero-noun immobile stress.

Immobile stress in \emptyset -nouns, as elsewhere, occurs in two varieties, constant stem-stress and constant desinence stress.

2.311 Zero-noun immobile stem-stress.

The masculine \emptyset -nouns which stress the same stem vowel in all four forms, such as *park* 'park', can easily be equated to the constant stem type, even though the singular non-articulated form *park* itself technically has an ambiguous stem or zero-desinence stress. Since I have preliminarily posited treating *-ov-* extension as part of the stem, rather than of the desinence, stress on this plural extension can be considered simply an instance of stem-stress, rather than desinential. The stress can be considered as constantly on the stem-final position in such instances (regardless of the segment in question), or alternatively, morphophonemically on the *-ov-*, which causes it to move leftwards when the extension is deleted in the singular:

$stol\text{-}\acute{o}v\text{+}\# \rightarrow st\acute{o}l\text{+}\#$
 $stol\text{-}\acute{o}v\text{+}\#\text{-}t\# \rightarrow st\acute{o}l\text{+}\#\text{-}t\#$
 $stol\text{-}\acute{o}v\text{+}e \rightarrow stol\text{-}\acute{o}v\text{+}e$
 $stol\text{-}\acute{o}v\text{+}e\text{-}te \rightarrow stol\text{-}\acute{o}v\text{+}e\text{-}te$

As I have attempted to demonstrate, in the case of the constant stem-stressed nouns of the zero type, it was possible to equate the somewhat ambiguous types with unambiguous types of other gender classes. As a working principle, then, I shall proceed to identify ambiguous types with existing patterns in other gender classes, where possible.

2.312 Zero-noun immobile desinential stress.

The stress pattern of words such as *glas*, *brjag*, *grad*, contains ambiguous stresses in the singular forms both with and without the article. They are as follows:

Surface *glás* could be: either {*glás+ #*} or {*glas+ #*}.
 Surface *glasát* could be: either {*glas+ #-t#*} or {*glas+ #-t#*}

This leads to four potentially competing stress patterns, based on the existence of the above sets of ambiguities (I shall ignore the underlying *-ov-* extension in these cases, since it is not relevant to the ambiguity, which rests on the issue of zero or pre-zero stress):

1. <i>glás+ #</i>	2. <i>glas+ #</i>	3. <i>glás+ #</i>	4. <i>glas+ #</i>
<i>glas+ #-t#</i>	<i>glas+ #-t#</i>	<i>glas+ #-t#</i>	<i>glas+ #-t#</i>
<i>glasov+ é</i>	<i>glasov+ é</i>	<i>glasov+ é</i>	<i>glasov+ é</i>
<i>glasov+ é-te</i>	<i>glasov+ é-te</i>	<i>glasov+ é-te</i>	<i>glasov+ é-te</i>

Each of these four morphophonemic patterns will generate the proper surface stress, but since each represents a very different sort of morphophonemic alternation, it will be useful to review what is implied by choosing each of these four patterns:

1. The first pattern would indicate the opposition of stem-stress in the singular non-articulated form to desinential stress in all others.
2. The second type shows constant stress on the desinential element and is not a mobile pattern at all.
3. The third pattern contains three different stress types in alternation: singular non-articulated stress on the stem, singular articulated stress on the second post-stem syllable, and plural stress on the first post-stem syllable.
4. The fourth pattern shows post-stem stress in all forms, but there is stress on two different post-stem positions, so that stress mobility within the post-stem portion of the word results. The first post-stem syllable is stressed in all forms except the singular articulated form, but in the single case of the singular article, stress is on the second post-stem syllable.

Obviously, only pattern two exactly matches a previously established type—the immobile desinential type that was observed earlier in the other gender classes—so that of the total of four possible ambiguous morphophonemic stress patterns, there is only the single acceptable solution of constant desinential stress on the first post-stem syllable. This decision establishes both constant stem and desinential stress patterns as the least marked,⁸ since they occur in *θ*-nouns, *o*-nouns, and *a*-nouns.

2.32 Zero-noun mobile stress.

The differing types of *θ*-noun mobile stress can be readily grouped on the basis of the unambiguous stress within the paradigm.

2.321 Zero-noun mobility with unambiguous stem-stress in singular articulated form and desinential stress in plural.

The stress of one form—that of the singular non-articulated form—is ambiguous in cases such as *bóg* ‘God’, *zvjár* ‘beast’, *kón* ‘horse’, and is paired with singular articulated forms that are unambiguously stressed on the stem (e.g. {*bóg*+*#-t#*}, {*zv’ár*+*#-t#*}) and plural forms that are unambiguously stressed on the first post-stem syllable (e.g. {*bogov+é-te*}, {*kon+é-te*}). The singular nonarticulated form’s ambiguity leads to these two possible patterns:

- | | |
|--------------------------|--------------------------|
| 1. <i>bóg</i> + <i>#</i> | 2. <i>bog</i> + <i>#</i> |
| <i>bóg</i> + <i>#-t#</i> | <i>bóg</i> + <i>#-t#</i> |
| <i>bogov+é</i> | <i>bogov+é</i> |
| <i>bogov+é-te</i> | <i>bogov+é-te</i> |

The two corresponding morphophonemic interpretations are:

1. Stem-stressed singular stress alternating with plural stress on the first post-stem syllable.
2. Desinential stress in all forms except the singular articulated form, which has stem-stress.

The first pattern is my choice, since it can be fully equated with the neuter pattern of words such as *igrálo/igralá*. Interestingly, all masculine stems with this stress pattern are monosyllabic, so that they alone cannot provide information as to whether there is any limitation in the particular stem syllable which is stressed in the singular. However, the neuter nouns have many polysyllabic stems with this stress pattern, and it can be seen that their stem stress is almost always stem-final. Since this is not inconsistent with the masculine monosyllables, this stress type can be defined as stressing the syllable right before the stem-desinence boundary in the singular, and stressing the syllable right after this boundary in the plural.

2.322 Zero-noun mobility with unambiguous initial stress in the plural.

The final case of ambiguous stress concerns the morphophonemic shape of such surface stresses as *sád* 'vessel'/*sádát*, which is paired with initial stress in the plural: *sádove/sádovete*. This situation leads to four potential morphophonemic patterns:

<i>sád</i> +#	2. <i>səd</i> +#	3. <i>sád</i> +#	4. <i>səd</i> +#
<i>səd</i> +#-t#	<i>səd</i> +#-t#	<i>səd</i> +#-t#	<i>səd</i> +#-t#
<i>sádov</i> +e	<i>sádov</i> +e	<i>sádov</i> +e	<i>sádov</i> +e
<i>sádov</i> +e-te	<i>sádov</i> +e-te	<i>sádov</i> +e-te	<i>sádov</i> +e-te

These patterns indicate the following types of alternations:

1. Stem-stress except for an immediately post-stem stress in the singular articulated form.
2. Number mobility, wherein an immediately post-stem stress in the singular alternates with a word-initial plural stress.
3. Singular articulated-form mobility on the word-final syllable, as opposed to initial stress in all of the other forms.
4. Number mobility, wherein singular word-final stress alternates with plural initial stress.

In this last set of ambiguities, type one can readily be rejected, since there is no other unambiguous pattern of immediately post-stem stress in the articulated form. Of course, this absence is based upon my recognition of cases such as *soltá* and *zapovedtá* as stressing the second post-stem syllable, rather than the first, on a deeper morphophonemic level: {sol+#+tá} and {zapoved+#+tá}. This pattern, in fact, is exactly matched by model number three, which leads to my conclusion that *sád* must be said to belong

to the same stress type as *sol* and *zapoved*. At first glance, types two and four above appear to be very acceptable types of stress mobility, opposing singular to plural on the basis of either initial~first post-stem syllable, or initial~final stress. Indeed, both Scatton (1984b:95) and Daniels (330) opt for type two as the solution. However, the only number-based stress alternation outside this ambiguous type is the one discussed above, in which the singular *stem-final* stress is opposed to plural stress on the first *post-stem* syllable. Setting up *səd* as an instance of number mobility would be tantamount to establishing an ambiguous pattern as the only one of its kind in the language, which is an unacceptable step in the terms of this paper's stated methodology. Therefore, pattern three represents the only possible selection. Interestingly, Aronson's solution (1968:140–1) agrees with mine, in contrast to that of both Scatton and Daniels, although this paper is the only one which specifically argues for this solution on the basis of the analogy of ambiguously stressed types to those that are unambiguous.

3.0 Implications for the full pattern of noun stress.

It has been shown that all types of ambiguous stress can readily be assigned to unambiguous types. This produces a rather interesting full pattern of stress types. In order to appreciate this structure, it will be necessary to consider \emptyset -noun types together, regardless of gender, based on the fact that these nouns all have a zero-ending in the singular. Following this step, it can be said that there is an ascending inventory of stress types, going from *a*-nouns to *o*-nouns to \emptyset -nouns.

3.1 Stress paradigms common to all noun classes: immobiles.

All nouns share in the stress patterns of the *a*-nouns, which contain only the immobile patterns of constant stem-stress and constant desinential stress on the first desinential syllable, making this a columnar stress:

	Constant Stem-Stress		Constant Desinential-Stress	
<i>a</i> -nouns	rīb+a	(rība)	žen+á	(žená)
<i>o</i> -nouns	kopít+o	(kopító)	mes+ó	(mesó)
\emptyset -nouns	párk(ov)+#	(párk)	glas(ov)+#	(glás)
	stol(óv)+#	(stól)		

3.2 Stress paradigms common to zero and *o*-nouns: number mobility.

Next in the hierarchy of stress patterns comes the more marked pattern of number mobility, which is absent in *a*-nouns, but exists in the other types, i.e., *o*-nouns and \emptyset -nouns. As such, it could be called non-*a*-stem number mobility. As noted above, this particular sort of mobility makes use of the stem-desinence boundary, placing singular stress on the vowel

immediately before the boundary and plural stress on the vowel immediately after this boundary, as follows:

	Predesinential Stress: Singular		First Post-Stem Stress: Plural	
<i>o</i> -nouns	igrál+o-(to)	(igrálo(to))	igral+á-(ta)	(igralá(ta))
\emptyset -nouns	bóg+#-(t#)	(bóg(at))	bogov+é-(te)	(bogové(te))
	list-ov-#c+#-(t#)	(listéc(at))	list-ov-#c+é(te)	(listovcé(te))

3.3 Stress paradigms only in zero noun class: article mobility.

Continuing the pattern, there is one last nominal stress type which is the last in the chain of increasing markedness. It is the singular article mobility, which occurs only in the \emptyset -noun class, although in both masculine and feminine genders. It contrasts to the central mobility of the number opposition, and can be characterized as marginal mobility, since all nouns of this type stress the word-final syllable in the singular article form and the vast majority of such nouns stress the word-initial syllable in the other three forms (excepting some compounds consisting of two roots and certain deviating derivational suffixes). The pattern can be illustrated as follows:

	Initial Stress: All Forms Except Singular Articulated	Final Stress: Singular Articulated
masc. \emptyset -nouns	sád+#, sád-ov+e-(te)	sád+#-t-#
fem. \emptyset -nouns	zápoved+#, zápoved+i-(t-e)	zapoved+#-t-á

3.4 Stem-class vs. gender as a classifier of stress patterns.

The singular desinence has been used as the main criterion in establishing the three above classes of \emptyset -nouns, *o*-nouns, and *a*-nouns. If gender is taken as the primary criterion, and feminine \emptyset -nouns are grouped with *a*-nouns, instead of masculine \emptyset -nouns, another interesting pattern is seen, according to which masculine nouns have four patterns, including two patterns of mobility, but neuter and feminines each have similar inventories, with constant stem and desinential stress, and also a mobile type, which is the singular~plural mobility in the case of neuters, and singular article mobility in the case of feminines. I believe that a system based upon the actual singular desinence (i.e. *-∅*, *-o*, *-a*) is preferable, since *a*-nouns actually include masculines, so that the traditional gender classification has drawbacks. As seen above, the description of stress paradigms based on the singular desinences yields a pattern which can be neatly described in the following diagram:

			$x + x$	$\#x \dots x\#$
ZERO- NOUN:	Immobile Stem (<i>park</i>)	Immobile Desinence (<i>grad</i>)	Number Mobility (<i>bog</i>)	Article Mobility (<i>sad, sol</i>)
	O- NOUN:	Immobile Stem (<i>kopito</i>)	Immobile Desinence (<i>meso</i>)	Number Mobility (<i>igralo</i>)
A- NOUN:	Immobile Stem (<i>kniga</i>)	Immobile Desinence (<i>sestra</i>)		

Number and article mobility, as symbolized, are generally distinguished on the basis of the fact that the former involves the alternation of stress contiguous to the stem-desinence boundary (represented as “ $x + x$ ”), while the latter’s alternation has contiguity to the word-boundary (initial or final) as its distinctive feature (represented as “ $\#x \dots x\#$ ”).⁹

4.0 Exceptional and Deviating forms.

A few isolated examples (e.g. *sǎlzǎ* ‘tear’/*sǎlzi*, *gospožǎ* ‘Mrs.’/*gospóži*, *zmijǎ* ‘snake’/*zmíu*) of number mobility in *a*-nouns exist, with a reversal in the usual pattern of singular pre-desinential and plural final stress, but, nevertheless, with a maintenance of the pre-desinential~first-desinential stress positions for number mobility.

4.1 Exception to pre-desinential and initial stress positions.

There are individual exceptions and anomalies in several of the types that have been established, which ought to be noted. For example, the number alternation has been introduced as a type of pre-desinential~desinential first syllable alternation, but there are some deviating examples of initial stress instead of the expected pre-desinential, e.g., *ézero* ‘lake’/*ezerǎ*, *pátilo* ‘woe’/*patilǎ*, *práviló* ‘rule’/*pravilǎ*. Some instances of apparent initial stress should actually be considered pre-desinential, since they involve inserted vowels, such as in *vjátǎr* ‘wind’/*vetrové*, which violates not only the pre-desinential rule, but the rule that mobile stress masculine \emptyset -nouns are supposed to be monosyllabic. Discounting the inserted vowel for the purposes of this process solves both anomalies.

As noted above, the singular article mobility is primarily a case of word-initial~word-final alternation, but a number of non-word-initial exceptions occur (although there are no exceptions to the word-final rule for the article form). Such exceptions include compounds, such as *živopís* ‘painting’, as well as nouns with particular derivative suffixes which determine stress, such as *-zǎn* in *bojázǎn* ‘fear’, *soblázǎn* ‘temptation’.

4.2 Statistical arguments.

Scatton (1984b) is based on the argument that statistically predominant stress patterns should be regarded as regular, while the very insignificant statistical types should be considered exceptional or anomalous. On the basis of this thesis, one might question the fact that I have recognized the type *bog/bogové* as an example of number mobility in θ -nouns, since there are only four nouns of this type with the regular use of the *-ov-* extension. However, a number of nouns lacking the *-ov-* extension (see list in Aronson 1968:138–9), such as *knjaz* ‘prince’/*knjazé*, fit this type. Curiously, Aronson has grouped these nouns with the *stoll/stolóve* type due to his view that the plural stress in both instances falls on the first desinential syllable (*-é* and *-óve*, respectively), while Scatton (1984b:96) has classified them as special cases of immobile stem-stress, since monosyllabic masculines without the *-ov-* extension automatically stress these plural endings. If one considers the *-ov-* as part of the stem, however, then the *knjaz* type shares the *-e* plural desinence with *bog(ov)+*, and both instances can then be considered as examples of masculine number mobility, with an invariant alternation of stem-final and first desinential syllables.

4.3 Variant stresses.

The possibility of variant stresses is a particular characteristic of the Bulgarian noun. In fact, for some entire stress classes free variation of stress in certain forms is the norm, rather than the exception.¹⁰ In the following section I will review those stress types that can have this variation and what it implies for the general structure.

4.31 Stress variation in nouns with stem-stress on *-ov-*.

Nouns which I have treated as belonging to the category of θ -nouns with constant stem-stress on the *-ov-* extension, which is deleted in the singular, regularly have stress variants, which fall into the one of the following two types:

1. Constant root-stress on the element preceding *-ov-*, instead of constant *-ov-* stress, which affects the vast majority of nouns of this type (e.g., *kólát* ‘stake’/*kólove* instead of *kólát/kolóve*).
2. In very few instances, constant desinential stress instead of *-ov-* stress (e.g., *dólát* ‘ravine’/*dolové* instead of *dólát/dolóve*).

Remarkably, this variation always takes the form of an immobile stress instead of stressed *-ov-*, either constant stem or constant desinence stress. My system accounts for this by stating that the so-called *-óv+e* mobility, accepted by virtually all extant treatments, is best treated not as mobility at all, but as constant morphophonemic stress on the *-ov-* element. Therefore, it is normal and expected that stress variants of this type uniformly take on immobile stress, rather than mobile. Those systems which consider such

cases as *kólət/kolóve* to be mobile are constrained to explain the switch from mobility to immobility as a variant stress of almost all such nouns.

4.32 Stress variation in masculine zero-nouns with article mobility.

Most masculine \emptyset -nouns with singular article mobility have variant stress paradigms with constant stem-stress (e.g., *kumát* 'godfather'/*kúmove* ~ *kúmət/kúmove*) or constant desinential stress (e.g., *vidát/vidove* ~ *vidát/vidové*), although Aronson (1968:141) counts at least 25 nouns of this type which admit no such variation. This variation illustrates the tendency for article mobility to be attached exclusively to the feminine \emptyset -nouns as a morphological class. This process demonstrates an extrapolation from the fact that *all* feminine \emptyset -nouns have article mobility to an incipient situation where *only* feminine nouns may be characterized by invariable article mobility, although the system has not yet reached this point.

5.0 A note on other extant stress systems of the Bulgarian noun.

I will now summarize some of the general points which differentiate my scheme from others. Virtually all previous classifications, including those of Aronson (1968), Bojadžiev (1978 and 1982), Maslov (1981:133) and Scatton (1984a and 1984b), differ from this one in their treatment of the *-ov-* extension as desinential. This leads to the statement that *stól(ət)/stolóve* is a mobile type, in contrast to my view that it is stem-stress. As noted, this view would find it hard to cope with the use of *-ov-* that is inserted between root and derivational suffix, in such cases as *vólec/volóvci*.

As noted above, my system differs from others in its attempt to equate all instances of ambiguous stress with unambiguous patterns. The previous practice of not explicitly justifying the solution of ambiguous stress patterns has led to varying interpretations of the stress pattern of certain nouns, which this paper has been able to resolve in favor of one of the extant interpretations (Aronson's classification of the *səd* type).

Another point of difference is my attempt to associate each alternation with a predominant, if not exclusive, position in relation to a morpheme boundary. I have associated the number alternation with stress on either side of the stem-desinence boundary, while singular article alternation is associated with the word-initial and word-final boundaries. This rule finds practical application if one compares Aronson's treatment of the alternation *gospodín(ət)* 'gentleman'/*gospodá* to mine (1968:132). Aronson treats this as a case of constant desinential stress, where the form *gospodín* counts as desinential since polysyllables are never end-stressed and, thus, automatically retract to the stem-final syllable. This means that, according to Aronson's rules, the stressed article of *gospodínət* must retract stress even when it is vocalized, depending on the number of stem syllables. This highly idiosyncratic behavior can be completely dispensed with in my sys-

tem, since this word represents an absolutely regular instance of the number alternation, seen in *bog*, *igralo*, and other cases, in which a singular stem-final stress shifts to the first desinential syllable in the plural.

Finally, I have established a hierarchy of stress paradigms as related to morphological classes, with \emptyset -nouns at one extreme in their use of all four accentual paradigms, and *a*-nouns at the other extreme in their use of only two such paradigms, with *o*-nouns occupying an in-between position with an inventory of three accentual paradigms. The most marked accentual paradigm is the one that occurs only in \emptyset -nouns of either gender—the singular article mobility¹¹—while the least marked types are the immobile stem-stress and desinential stress types common to all noun classes. As demonstrated, a global conception about the system of Bulgarian nominal stress is based on numerous small decisions about such notions as the morphological status of *-ov-*, the segmentation of the desinences and articles, and the determination of ambiguous stress.

NOTES

- 1 I am primarily interested in those nominal forms which do not have an invariable stress in all words of a particular grammatical form, such as the vocative and paucal with unchanging stem-stress. Therefore, I will be concentrating on singular and plural forms both with and without the definite article.
- 2 As in this example, morphophonemic transcriptions in the body of the text will be enclosed in braces.
- 3 The *-ov-* extension is regularly used in plural forms of monosyllabic masculine stems.
- 4 I will use the term “post-stem” to refer inclusively to both the desinential and articulated portions of the word. “Immediately post-stem” stress will refer to stress on the first syllable of the desinence and article, taken together.
- 5 This complication can be seen in Aronson’s stress classification (1968:137), in which masculine nouns with stem~desinential ($\alpha\sim\beta$) mobility are said to be “subdivided into two subtypes,” represented by *bóg* ‘God’ ~ *bogové* on the one hand, and *stól* ‘chair’ ~ *stolóve*, on the other.
- 6 I shall refer to morphological classes based upon the singular desinence, rather than the use of gender terms. Therefore, I recognize \emptyset -nouns (e.g., masculine *stól*, feminine *sol* ‘salt’), *o*-nouns (e.g., neuter *slovo* ‘word’), and *a*-nouns (e.g., feminine *kniga* ‘book’).
- 7 This pattern seems to contradict Daniels’ statement that the only Bulgarian instance of mobility “across two syllables” occurs in numeral compounds (328, 333).
- 8 I am assuming that a stress type which occurs generally across many morphological types is less marked than one which is more restricted in occurrence. This is not a simply matter of statistics or frequency, but of the implicational value of the stress types for morphology.
- 9 The link between type of grammatical stress alternation and choice of pre-desinential~desinential vs. initial~desinential mobility is highly reminiscent of Russian stress, in which stress mobility based on the number opposition (e.g., *kolbasá* ‘sausage’ vs. *kolbásy*) is of the pre-desinential type, but mobility based on case oppositions (e.g. *golová* ‘head’ vs. *gólovu*) is of the initial type.
- 10 Scatton’s approach to this variability (1984b:92–93) has been to concentrate on non-

variable nouns in the establishment of his system. My approach has been to consider both patterns as legitimate possibilities which must be described, in the case of variants.

- 11 While many tentative reasons could be suggested to explain why this type should exist only in the \emptyset -nouns, I would suggest the possibility of an interrelationship between the nature of morphophonemic \emptyset -noun desinences in the articulated form and the surface constraint that only the initial post-stem syllable can bear the surface stress, since only the article's zero-desinences have the phonological potential to transform a morphophonemic article stress into a surface stress on the first desinential vowel.

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