A Study on Russian Inflectional Accentology

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0. The present paper is an attempt to give an orderly description of Russian inflectional accentology, substantival and verbal. Since many works have been done on this subject matter, it would be useful for our purpose to point out briefly what they share and to discuss in some length what they do not. I will incorporate their achievements in the present paper, and for some controversial points, I will propose my own solution.

1. Previous descriptions on Russian inflectional accentology can be said to have clarified, among other things, the following facts. Firstly, many studies on the classification of lexemes in terms of their stress behavior (Red'kin 1971, Fedjanina 1982, Zaliznjak 1967 and 1980, Shapiro 1986, among others) indicate that there are several accentual patterns holding in the substantive and the verb. And every individual lexeme belongs to one of these patterns; put differently, to which accentual pattern a given lexeme belongs is essentially a property of the lexeme itself. Secondly, a certain grammatical distinction(s) can be made by means of, or with a help of, stress: cf. rukí, 'hand;GSg' vs. rúki 'hand;NPl', žená 'wife;NSg' vs. žëny 'wife;NPl', vodá 'water;NSg' vs. vódu 'water;ASg', žil 'live;M/Pt' vs. žilá 'live;F/Pt', etc. Thirdly, there are two sources for surface stress mobilities; morphophonemic and phonemic. The former involves mobilities motivated by certain morphological contexts; for instance, desinence-stress in the singular (oknó okná oknú oknóm okné) vs. stem-stress in the plural (ókna ókon

óknam óknami óknax). In contrast, the latter type of stress mobilities takes place when stress falls morphophonemically on a zero segment or on a vowel that is deleted at the phonemic level. For instance, the stress alternation in word-forms like stól stolá stolú stolóm stolé is not an instance of the morphologically conditioned stress mobility, but rather, one of the phonemic mobility. Stress falls morphophonemically on the zero morpheme (here, the NSg morpheme) is retracted from it to the immediately preceding syllable when the zero is not realized phonemically (and thus phonetically). The same can be said of the ISg form of some III-declension nouns, if one views the desinence of feminine ISg case as {oju}, where the final vowel is optionally (stylistically) deleted for II-declension nouns while the first vowel is obligatorily deleted for III-declension nouns. Now, since the first vowel is deleted during the inflectional process, the stress that falls on it must be moved one syllable backward; thus, glúš' (phonemic mobility) glušĭ glušĭ glúš' glúš'ju (phonemic mobility) glušĭ.[1]

While these facts can be said to be shared by many specialists on Russian stress, there are several problems that need to be discussed. For one thing, many scholars consider stress movement in the L-II case form as relevant to a grammar of the Russian stress. Thus, in Zaliznjak (1985: 16) the accentual pattern of those lexemes with the L-II is denoted <<+P2>>. In Halle's description (1973: 316) they belong to what he calls (cα). It is my contention however that the stress movement in the L-II case form is not an accentual property of lexemes having it, but rather a property of the case itself. If one wants to recognize stress shift in the L-II case form, as does in the ASg or in the NPl, then there must be more than one lexeme, which would be opposed accentually to each other (some lexemes having stem-stress, but others desinence-stress in their L-II case forms) without any

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1) This way of handling stress movement in the ISg case forms spares us the two accentual patterns which Zaliznjak (1980:32) called b′ and f″.

semantic meaning change. However, there is not found such an accentual opposition in Russian. This means that the stress protraction in the L-II case form in some masculine nouns ({ú}) and in some feminine nouns with III-declension ({í}) must be considered the accentual property of the case itself, rather than that of individual lexemes: the motivating source for the stress protraction is the case itself. One cannot say that the stress retraction in the ASg or the NPl is the accentual property of the case itself, since not all lexemes show the retraction in the ASg or in the NPl. Thus, it is a better decision that L-I and L-II are two subcases which are semantically (signification of 'pure location') and formally (stem-stress vs. desinence-stress, being accompanied by desinence alternation in case of masculine nouns) opposed to each other.

Another problem to be mentioned concerns the accentual rule which Halle terms CIRCUMFLEX rule. The purpose of this rule is to place stress on the initial syllable of word-forms that have "a stem without inherent stress" and further are "exempted from the Oxy rule (Halle 1974: 317 and passim)." Here, what the Oxy(tone) rule does is to assign stress to the final vowel (more specifically, to the desinence-initial vowel) in word-forms containing stems with no inherent stress. Thus, in Halle's description, stem-stress in vódu is assigned by the CIRCUMFLEX rule, since the stem {vod-} is inherently stressless and the word-form {vod-u} is specifically marked [-Oxy] as its idiosyncratic property in the lexicon.[2] The problem is however that Halle considers words like pórox 'powder' as being subject to his

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2) What is implied in Halle's description is that all inflected word-forms of a lexeme are stored in the lexicon. Without any discussion on this view in this paper, I simply assume that all word-forms of a lexeme are produced from the posited underlying base form by morphological rules, which formulate all declined case-forms in the substantive and all conjugated person-gender/number forms in the verb. What is stored in the lexicon is a set of underlying base forms with idiosyncratic properties on inflection that cannot be produced by the normal morphologoical rules.

CIRCUMFLEX rule (p. 315). Since these lexemes have consistent stem-stress throughout the paradigm, if one follows Halle's description, he is forced to mark all the declined forms of the stressless lexeme {porox-} as having [-Oxy], which we however consider a bad decision. The reason why Halle treats a lexeme of this kind as having stressless stem and being subject to the CIRCUMFLEX rule is that historically it had a circumflex accent. The Late Common Slavic accentology says that a morphological word without the acute accent has an ictus (prominence peak) in the initial syllable, which is traditionally called circumflex accent.[3] However, we also know that the CS ictus, the position of which in a word had been predictable (non-phonemic), was reinterpreted as phonemic stress, and the phonemic pitch lost its phonemicity later in the period of Old Russian; thus, not only the acute accent (CS *ko-^{H}ró-ba) but the circumflex accent (CS *^{L}pó-ro-xъ) were reinterpreted as stress accent (thus, CSR koróba, pórox). What this means is that since the periond of Old Russian the CS accentology has ceased to be operative. In view of this historical development, it is far more plausible to interpret stem {pórox-} as an inherently stressed one like {korób-}. The accentual behavior seen in such CSR words as zá gorod, ná dom (cf. fn 3), is best construed as historical remnants of the CS accentology, either being eliminated from the CSR phonology or being relegated as a non-productive pattern.

   Finally, it is a well-known fact that there is an important difference between two kinds of morphophonemic stress shift. In nouns showing

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3) The Common Slavic ictus assignment rule is roughly as follows: (1) an orthotonic word (a word having acute accent) places the ictus on the accented syllable (cf. CSR koróva, moróz, etc.), (2) a non-orthotonic word called enclinomenon places the ictus on its initial syllable (cf. CSR pórox, górod, béreg, etc.), (3) if a phonological word consists of a non-orthotonic word and a proclitic, the ictus is assigned to the proclitic (cf. CSR zá gorod, zá ruku, ná dom, náčal, próbyl, etc.), and (4) if it consists of a non-orthotonic word and an enclitic, the ictus is placed on the enclitic (cf. CSR načalsjá, prinjalsjá, etc.). Cf. Jakobson (1963).

stress alternation between Sg and Pl, stress falling on the desinence in the Sg shifts to the **stem-final** syllable in the Pl; e.g., <u>veretenó</u> 'spindle;NSg' vs. <u>veretëna</u> '-;NPl'. Contrastingly, in nouns with stress alternation conditioned by a certain case, stress falling on the desinence shifts to the **stem-initial** syllable in the case form; e.g., <u>storoná</u> 'side;NSg' vs. <u>stóronu</u> '-;ASg'. Needless to say, this distinction must be reflected in any description of Russian accentology. Now, what is problematic and makes different scholars different solutions is the case of nouns which show both accentual alternation and vowel-zero alternation. For example, desinence-stress in <u>pis'mó</u> 'letter;NSg' shifts to the stem-final stress in the Pl, thus <u>pís'ma</u>. However its GPl form is <u>písem</u>, not *<u>pisém</u>, which we would otherwise expect from the number-marking stress shift rule just mentioned. To handle this problem, Halle (1973:321) proposes what he calls METATONY-B, the effect of which is to move the desinence-stress occasioned by [+Oxy] rule two syllable, rather than one syllable, backward. The reason for forcing Halle to posit a rule like METATONY-B, which, we think, makes a grammar rather complicated and in fact misleading, may well be found in the fact that he assumes two underlying vocalic segments which Lightner called "jers", whose phonetic nature cannot be established simply because they never appear as such on the surface – they are either converted to /e/ or /o/ in some environments or elided to zero in others. Thus, <u>písem</u> is underlyingly represented as {pisьm+ъ ´}, where the stress is assigned on the "back jer" by the Oxy rule. Now if the usual Metatony rule would otherwise apply to this form (like <u>veretenó</u> vs. <u>veretëna</u>), then a spurious form would be produced; {pisьm+ъ´} -> (Metatony) pisь´m+ъ -> (Jer Realization) *pisém. To avoid this, therefore, Halle posits an additional accentual rule, which is the METATONY-B rule. Note however that the application of this rule is limited to those lexemes manifesting the vowel-zero alternation, which, in Halle's description, is captured lexically by positing the phonetically unidentifiable vocalic elements ("jers") in the place where

the mobile vowel surfaces. However, if we abandon assuming the jers in the Russian phoneme inventory and the vowel-zero alternation is described in terms of an "Epenthesis" rule,[4] we do not need to postulate a rule like METATONY-B. Moreover, in this way we can capture the intuitively clear fact that a word-form with a mobile vowel like písem and a word-form without it like veretën do share the exactly same kind of stress shift which contributes to distinguish two numbers in the substantive (pis'mó pis'má vs. pís'ma písem; veretenó veretená vs. veretëna veretën). To illustrate how our analysis produces surface word-forms písem and veretën,

	{p'is'm-´}	{v'er'et'on-´}
GPl formation rule	p'is'm-∅	v'er'et'on-∅
Inter-M[5] (Metatony)	p'ís'm-∅	v'er'et'ón-∅
Epenthesis	p'ís'em-∅	_____
	/p'ís'em/	/v'er'et'ón/

All we need is to state in the grammar of Russian accentology that Inter-M precedes Epenthesis in the rule-ordering.[6]

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4) For a detailed discussionon on this descriptive decision, see Choi Ms.
5) For a detailed discussion about this rule, see section 2.
6) It should be mentioned that there are some lexemes with vowel-zero alternation which appear to be best described by Halle's METATONY-B; e.g., úzel (vs. uzlá uzlú etc.), úgor' (vs. ugrjá ugrjú etc.), úgol' (vs. úgljá úgljú etc.), and a few more. Certainly, the rule can handle these examples. But, I doubt that we really need posit a special rule for the Russian grammar to handle those exceptional cases. Obviously stress shift of this kind is not productive in CSR. Witness the stress variation in úglja ~ ugljá. A grammar need not cover all the exceptional cases; as Sapir said, all grammars leak. Exceptions are the rule in any languages. Thus, we treat the deviant forms numerated above as exceptional cases of the phonemic mobility aforementioned; for the majority of lexemes that show vowel-zero alternation and columnar desinence-stress, word-forms with a mobile vowel (i.e., NSg and GPl) stress the mobile vowel, not the preceding stem-vowel; e.g., psalóm psalmá, lomót' lomtjá, ogón' ognjá, orël orlá, solovéj solov'já, mošná mošën, and

To summarize what is said up to now, firstly, the stress shift in the L-II case in some masculine I-declension and feminine III-declension nouns is viewed not as forming an independent accentual pattern in Russian, but rather as an accentual property of the case itself, secondly, we do not interpret such stems as pórox with historically circumflex accent as stressless, but rather as stressed, and finally, we do not posit an accentual rule like METATONY-B rule in a Russian grammar.

One final note. In this paper it is assumed that in Russian there are two stem types with respect to stress: tonic (stressed) and atonic (stressless). A tonic stem is a stem which places stress on an underlyingly given stem-syllable. When a stem is atonic, its word-forms place stress on the initial syllable of the desinence. Whether a given stem is tonic or atonic is determined by stress position in the NSg form for substantives and in the infinitive for verbs, except for lexemes, whose other inflected forms suggest other choice.[7] Bearing in mind these points made in this section and previous achievements, now let us discuss the substantival accentology.

2. In order to describe accentual properties of substantive-lexemes, it is necessary to classify them in terms of accentual patterns. A simple way of doing this is to recognize three "accentual paradigms" for each of four declensions (I-declension, II-declension, III-declension, and PI-declension); consistent stem-stress will be designated here A, and consistent desinence-stress, B. There is an accentual paradigm, designated traditionally C (Fedjanina 1982, for example), where a single case form stresses other syllable than the syllable on which all other

many more. Cf. {psalm-´} -> (Morph.. rule for NSg) psalm-ǿ -> (Epenthesis) psalom-ǿ -> (Phonemic M.) /psalóm/. Cf. section 2.

7) Substantival lexemes, where the NSg has stress in the stem-final syllable due to the Phonemic Mobility but other forms have desinence-stress, are considered atonic (e.g., {stol-´} for stól stolá stolú stolóm stolé). Similarly, velar stem verbs like péč', beréč, etc. have atonic stem; thus, {p'ok-´} for péč' pekú pečёš' pёk peklá.

remaining forms place stress. It is of some importance at this moment to appreciate the fact that there is no lexeme in Russian which in one and the same declensional paradigm would have a deviated stress in more than two case forms (ignoring the case of "case syncretism"). If a lexeme has a mobile stress paradigm, then the mobility will take place only in one case form (specifically, the Acc form in the singular paradigm and the Nom form or the Gen form in the plural paradigm). In this paper, such a 'mobile' paradigm will be designated ′′′. Thus, A′ means that all case forms stress a specific stem-syllable except for one case form with desinence-stress; similarly, B′ means desinence-initial stress in all case forms except for one case form with stem-stress.[8]

Since most lexemes have both Sg and Pl forms, their accentual pattern is characterized by combining two of the three accentual paradigms. The following combinations are found in the substantive: AA, AB, BB, BA, AB′, BB′, B′A, B′B′, and BA′.

AA   stem-stress both in Sg and Pl.
    I-declension, M: rák ráka ráki rákov; plén, véter, pórox, goróx, aëropórt, etc.
    I-declension, N: kréslo krésla krésla krésel; právilo, zóloto, bolóto, etc.
    II-declension: kárta kárty kárty kárt; kníga, múzyka, koróva, etc.
    III-declension: postél′ postéli postéli postélej; glúpost′, etc.
AB   stem-stress in Sg, and desinence-stress in Pl.
    I-declension, M: gol góla golý golóv; raz, xleb, šar, etc.;
        vek véka veká vekóv; dom, bort, verx, xólod, górod, béreg,

8) Further, if stress alternates in the inflection, the alternation occurs as a rule between stem-syllable and desinence-initial syllable. There are a few examples where stress alternates between stem-syllables; ózero vs. ozëra, kólos vs. kolós′ja, póvod vs. povód′ja, etc. However, one can view the kind of alternation seen in the latter two examples as motivated by the 'derivational' stem-extensional suffix (j). Cf. Worth (1968: 789-90)

véčer, véer, gólos, dóktor, kúpol, máster, kólokol, etc.

I-declension, N: mésto mésta mestá mést; póle, délo, móre, télo, zérkalo, krúževo, óblako, etc.

III-declension: vrémja vrémeni vremená vremën; výmja ímja, plámja, plémja, sémja, strémja, témja, nébo, čúdo, súdno.

BB   desinence-stress both in Sg and Pl.

I-declension, M: vrač vračá vračí vračéj; zont, ključ, kot, nož, slon, kovër, ogón', sapóg, etc.

II-declension: čertá čertý čertý čért; edá, erundá, kazná, kormá, stat'já, sumá, švejá, trebuxá, skam'já (- BA'), etc.

III-declension, M: put' putí putí putéj.

III-declension, F: voš' vši vóš'ju vši všej; gluš', ljubóv', lož', rož'.

BA   desinence-stress in Sg, and stem-stress in Pl.

I-declension, M: list listá líst'ja líst'ev; glazók, zubók, klok, kol, kopýl, loskút, prut, rožók, sopožók, ščenók.

I-declension, N: kolesó kolesá kolësa kolës; bedró, vedró, vesló, vinó, gnezdó, dno, oknó, pis'mó, kop'ë, voloknó, dolotó, polotnó, remesló, veretenó, etc.

II-declension: kolbasá kolbasý kolbásy kolbás; bedá, bloxá, vojná, grozá, desná, zvezdá, straná, tolpá, skorlupá, strekozá, pastilá, glubiná, krasotá, etc.

AB'   stem-stress in Sg, and desinence-stress in Pl except for N.

I-declension, M: bog bogá bógi bogóv; páren', volk, vor, gost', gus', zver', cërt, vólos, gólub', žëlud', kámen', lébed', lékar', lókot', nógot', óvošč, sážen', úgol', góspital', etc.

I-declension, N: úxo úxa úši ušéj; óko óka óči očéj.

II-declension: dólja dóli dóli doléj; derévnja.

III-declension, F: vešč' véšči véšči veščéj; vest', vetv', vlast', doč', kist', kost', mat', reč', smert', vólost', lóščad', méloč', nóvost', skórost', stépen', stupén', čétvert', dver', brov', gorst', klet', etc.

BB′ desinence-stress both in Sg and Pl except for NPl.

I-declension, M: kon′ konjá kóni konéj konjám; gvozd′, červ′, gruzd′ (~ AB′)

I-declension, N: plečó plečá pléči pleč plečám; krýl′co (~ BA)

II-declension: slezá slezý slëzy slëz slezám; bloxá, reká, volná, gubá, zarjá, kopčá, mežá, nozdrjá, svečá, ser′gá, stroká, strofá, tropá, ščepá, borozdá, golová, železá, polosá, prosvirá (prosforá), prostynjá, slobodá, skovorodá.

B′A desinence-stress in Sg except for A, and stem-stress in Pl.

II-declension: vodá vodý vódu vódy vod vódam; drogá, zimá, cená, spiná, dušá, verstá,

B′B′ desinence-stress both in Sg and Pl except for ASg and NPl.

II-declension: golová golový gólovu gólovy golóv golovám; doská, gorá, nogá, porá, ruká, reká, sredá, stená, stroká, ščepá, borodá, polosá, boroná, storoná.

BA′ desinence-stress in Sg, and stem-stress in Pl except for G.

I-declension, N: jajcó jajcá jájca jajíc jájcam; kol′có, oknó (~ BA), gumnó (~ BA).

II-declension: ovcá ovcý óvcy ovéc óvcam; sem′já, sestrá, svin′já, ser′gá (~ BB′), sud′já (~ BA), skam′já (~ BB), sud′bá (~ BA), doská (~ BA), zemljá (B′A′).[9]

There are several points to be discussed about some of these dissyllabic accentual patterns.

First, most dissyllabic masculine nouns with AB stress the initial syllable of their stem in the Sg (cf. the examples above). However, the reverse is not true; not all dissyllabic masculine nouns that place the stress on the stem-initial syllable in the Sg have AB (cf. pórox AA, véter AA, etc.). In trisyllabic stems having A, the stress may fall on the non-initial syllable (cf. proféssor professorá, kondúktor konduktorá,

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9) Besides the examples here, the following pluralia tantum nouns belong to this accentual pattern (A′): xlópoty, déti, and ljúdi. Cf. fn. 19.

diréktor direktorá, učítel' učiteljá, gospodín gospodá, etc.). It is notable that none of the feminine nouns have this accentual pattern. Stress variation (old AA ~ new AB) seen in many masculine nouns (cf. tókar', vórox, kúzov, kítel', kórob, kórpus, láger', nébod, órder, ómut, púdel', tráktor, instrúktor, prožéktor, etc) indicates that AB is the productive pattern for masculine nouns in modern Russian. In other words, many masculine nouns that once had fixed stem-stress throughout the sg and pl paradigms have now acquired the productive accentual mobility, i.e., accentual mobility conditioned by the grammatical number distinction. One might interpret this stress variation as reflecting a historical change from previous tonic (stressed) stem to atonic (stressless) stem in many of these nouns, which is implied in Halle's (1973) discussion.[10] It is of course true that vórox, kórob, etc., historically were atonic (enclinomena), but it is difficult to accept that they are still atonic in modern Russian (cf. section 1) and further that even previously tonic (acute) nouns such as máster, jákor', párus, etc. (Zaliznjak 1985: 132), which now have AB, should be treated as atonic. It would be most appropriate to view that the former examples (vórox, etc.) became tonic after the prosodic change from the pitch accent to the stress accent in the period of Old Russian, while the latter examples (máster, etc.) have remained tonic throughout the history of the language.

Secondly, all nouns that have stress alternation with the type BA are non-masculine except for a few masculine nouns, some of which have stem-extension (j) inducing consonant mutation in the plural (cf. klok klóč'ja, kopýl kopýl'ja, etc.) and the others have suffix (k) (cf. glazók glázki, zubók zúbki, etc.). The non-productivity of BA for masculine

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10) In Halle's description, as mentioned in section 1, those nouns having AB are marked [-Oxy] in all singular forms. This suggests that they are underlyingly atonic stems, which would have undergone the Oxy rule in all conjugated forms, but thanks to the marking [-Oxy] are subject to the Circumflex rule in their singular forms.

nouns is witnessed in the fact that <u>kazák</u> show stress variation, i.e., old BA ~ new BB. In this connection, it is interesting to note that, aside from neuter nouns that can utilize both types,[11] the alternation between desinence-stress in Sg and stem-stress in Pl (i.e., BA, B'A, and BA') is reserved for the II-declension feminine noun with the NSg desinence-stressed, while the stress alternation between stem-stress in Sg and desinence-stress in Pl (i.e., AB and AB') is most productive for the I-declension masculine noun and the III-declension feminine noun with the NSg stem-initially stressed. It follows from this that the two productive types of stress alternations conditioned by the number distinction are complementarily distributed with respect to gender and declension type.

Thirdly, the pattern AB', on the one hand, and the patterns BB' and B'B', on the other, both of which in the plural subparadigm show mobility (from desinence-stress to stem-stress in NPl), are different from each other in terms of stability of the mobility. The former, which manifests itself largely in the masculine noun and the III-declension feminine noun, is stable and productive for these nouns.[12] For the productivity of AB' for the masculine noun, witness the stress variation in <u>gruzd'</u> which is one of a few masculine nouns with BB' but now shows the variant stress (<u>grúzd' gruzdjá grúzdi gruzdéj</u> BB' ~ <u>grúzd' grúzdja grúzdi gruzdéj</u> AB'). In contrast, many II-declension feminine nouns with BB' or B'B' show stress variants, whose target pattern is BA.

bloxá (BB', BA), volná (BB', BA), zarjá (BB', BA), stroká (B'B', BB', BA), strofá (BB', BA), tropá (BB', BA), doská (B'B', BB', BA', BA), reká (B'B', BB', B'A, BA), stená (BB', B'A), sredá (B'B', B'A), ščeká (B'B', BB'), vodá (B'A', B'A), izbá (B'A, BA), kosá (B'A, BA),

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11) No neuter noun shows BB, however.
12) There are only two neuter nouns (cf. <u>óko</u> and <u>úxo</u>) and two II-declension feminine nouns (cf. <u>dólja</u> and <u>derévnja</u>).

etc.

What this stress variation suggests is that stress mobility conditioned by a particular case form in the plural (and also in the singular in B′B′ and B′A) is now losing its productivity for the II-declension feminine noun. This can be viewed as the diminution of the number of thus marked nouns in the Russian lexicon. This comparison between the I-declension masculine noun and the III-declension feminine noun having case-marking alternation, on the one hand, and the II-declension feminine noun with case-marking alternation, on the other, makes it clear that there is a crucial difference between these two classes of substantives in terms of productivity of the 'intra-paradigm' mobility (i.e., case-marking stress alternation). Taking into consideration this point and the point made in above paragraph, the traditionally accepted statements to the effect that in CSR the stress alternation of 'intra-paradigm' mobility is losing ground while the stress alternation of 'inter-paradigm' mobility (i.e., number-marking stress alternation) is becoming productive (cf. Krysin 1974), though essentially correct, must be qualified in such a way as suggested in our discussion. The non-productivity of 'intra-paradigm' mobility is valid not for all classes of substantives, but only for the II-declension feminine noun.[13] The productivity of 'inter-paradigm' mobility also depends on noun-classes; for I-declension masculine noun and the III-declension feminine noun, the AB type of mobility is productive, while for II-declension feminine noun the BA type of mobility is productive. In short, the attested stress innovations and the current distribution of stress mobilities in the non-neuter substantive must be stated with reference to gender and declension types. It should be noted at this point that although the number of II-feminine nouns marked with the 'Intra-paradigm' mobility

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13) In fact, the non-productivity of 'intra-paradigm' mobility is valid only for those II-declension feminine noun with the mono-syllabic stem. See immediately following discussion.

is diminishing it does not necessarily mean that the 'Intra-paradigm' mobility as an accentual rule is disappearing from the Russian grammar, since it is still grammatically effective for the I-masculine and the III-feminine noun marked as having the mobility as their accentual property in their lexical entry.[14] The grammatical validity of the 'Intra-paradigm' mobility in the Russian grammar is supported also by the fact that I turn to now.

Fourthly, those II-declension feminine nouns which have both disyllabic (and trisyllabic) stems and B' paradigm in the plural do not show the accentual variation mentioned above. See the examples below.

polosá (B'B', BB', but *BA), borodá (B'B', *BA), boroná (B'B', BB', *BA), borozdá (B'B', BB', *BA), železá (BB', *BA), prostynjá (BB', *BA), slobodá (BB', BA), skovorodá (B'B', BB', *BA), golová 'head' (B'B', *BA), golová 'leader' (BB', *BA), storona (B'B', *BA)[15]

B' accentual paradigm in the plural is quite stable in these nouns, which is contrasted with the instability of the B' paradigm in the mono-syllabic II-feminine noun. This observation then raises a question:

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14) Thus, the fact that, for example, skátert', which had 'Baritone' paradigm in Old Russian (i.e., columnar stem-stress; cf. Zaliznjak 1985: 133), now shows AB' but not AB indicates that the Intra-paradigm mobility is productive for the III-feminine noun. Note also that Borunova et al. (1983) prescribes skatertéj as incorrect.

15) Cf. in OSRJ (1983) and Zaliznjak (1980), prosvirá – prosforá '(communion) bread' is with BB'; Ožegov (1949/1982) reports prosvirá BA – (BB') with no information on prosforá; in the four-vol. academy dictionary (1987), prosvirá with BA – BB' and prosforá with BB'. Recently, in the dictionary of Ožegov & Švedova (1993), prosvirá is reported as having BA – BB', while prosforá has only BB', thus following the four-vol. academy dictionary. Interestingly, in Ožegov (1949/1980) BB' is put in the parenthesis, which is removed in the dictionary of Ožegov & Švedova (1993). This may well indicate that BA is being eliminated in favor of BB', which is the pattern that OSRJ (1983) and Zaliznjak (1980) assign to this lexeme.

why these two classes of II-feminine nouns respond differently to the
on-going accentual innovation? The answer to this question can be
sought in the fact that the 'Intra-paradigm' mobility is grammatically
valid in the current Russian grammar. It should be recalled that this
mobility is characterized as shift from desinence-stress to stem-initial
stress (or stem-stress to desinence-initial stress), conditioned by a
certain grammatical category (ASg or NPl case). In contrast, the
'Inter-paradigm' mobility is characterized as stress shift from
desinence-stress to stem-final (pre-desinential) stress, conditioned by
the grammatical number category. Now, if the lexemes with
non-monosyllabic stems would manifest the alternative accentual pattern
AB as, for example, reká (reká rekí vs. réki rek rékam) does, following
the stress position of the NPl case form (e.g., gólovv),[16] then it would
result in the following contrast: golová golový vs. gólovy gólov
gólovam, where the stress alternates between desinential syllable and
stem-initial syllable, which is the characteristics of the 'Intra-paradigm'
mobility, not of the 'Inter-paradigm' mobility. This type of accentual
alternation is nowhere attested in modern Russian.[17] This explains the
impossibility of introduction of the accentual innovation in the lexemes
under consideration. For nouns with monosyllabic stems like reká, the
innovation does not cause any conflict between these two types of
mobility; previously, reká rekí réki rek rekám > now, reká rekí réki rek
rékam.[18]

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16) The target case form of this accentual innovation is the Nominative.
17) Tiagotá appears to be an exception: tiagotá tiagotý tiágoty tiágot. However, this
    word is considered archaic in the literarty language (Zaliznjak 1980; OSRJ 1983).
    And when it means 'weight', tiágost' (AA) is used instead, while tiágota has AA
    in the meaning of 'trouble, difficulty' and usually the plural form is used. Cf. also,
    fn. 13.
18) It should be mentioned that the overt change from rekám to rékam involves a
    covert change in NPl réki, where overtly no accentual change has taken place.
    Specifically, previously, the stem-stress in réki was the result of the
    'Intra-paradigm' mobility (from desinence to stem-initial syllable), but now, is the

Finally, there are a handful of lexemes (BA') which have 'Intra-mobility' in the GPl. Most descriptions on Russian accentology do not acknowledge independency of this pattern (cf. Red'kin 1971; Halle 1973; Zaliznjak 1980; Fedjanina 1982) and treat the (morphophonemic) desinence-stress in the GPl as exceptional. This treatment appears to be reasonable, considering the fact that some of them acquire the alternative pattern, BA (e.g., old sudéb ~ new súdeb; substandard okón ~ standard ókon; sudéi ~ súdei; accepted gumën ~ gúmen). Further, it appears not very convincing to introduce one more lexical marking only for these nouns in the substantive. However, this pattern cannot be said to be totally devoid of productivity (cf. Worth 1968). For example, ser'gá, which previously permitted only BB' (ser'gá ser'gí sér'gi serëg ser'gám), now also admits BA', but not BA. In fact, sestrá, svin'já, ovcá, etc. once had the desinence-stress not only in the plural oblique case forms, but also in the NPl; a stress innovation took place at first in the NPl (i.e., sestrý > séstry) and later spread out to the other plural oblique forms except the GPl form (sestrám > séstram; cf. Zaliznjak 1985: 135; and also, consider the proverb vsem sestrám po ser'gám, where we find desinence-stress in the DPl form), thus now having BA'. The synchronic stress variation witnessed in the lexeme ser'gá can be said to follow the diachronic stress innovation attested in sestrá, svin'já, ovcá, etc. Now, if one considers that BA is the productive pattern for the II-feminine noun (cf. previously, žený ženám > now, žëny žënam), the blocking of the extension of stem-stress in the GPl of these lexemes becomes strange. It seems that this is partly because of some productivity of this accentual paradigm and partly because of their formal peculiarity, i.e., they all have a mobile vowel in the GPl.[19] Note the accentual variation in skam'já, which also has a

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result of the 'Inter-paradigm' mobility (from desinence to stem-final syllable). Similarly, while previously rék is derived through the phonemic mobility ({rek-ó} -> /rék/, now it results from the operation of the 'Inter-paradigm' mobility.
19) There are a few lexemes with BA', which do not show a mobile vowel; xlópoty

mobile vowel in the GPl; BB skam'jí skaméj skam'jám ~ BA' skám'ji skaméj skám'jam, which also indicates that the mobile paradigm (A') in the plural has some productivity. Whatever the source of blocking may be (cf. Choi Ms), therefore we can say that the GPl-marking stress shift is, though marginal (cf. súdeb, súdej, gúmen), effective in the 'present' Russian grammar.

Bearing in mind the points made in the foregoing discussion, now let us turn to our first goal: the way of describing the substantival accentology. I contend that stress assignment in the declined word-forms of a lexeme can be performed on the basis of stress properties of the lexeme; more specifically, whether the given lexeme is tonic or atonic and whether it has any special lexical marking with respect to stress alternation. As mentioned in section 1, whether a lexeme is tonic or atonic is determined by its unmarked case form, which is the NSg form. The grammar of stress assignment consists of two accentual rules and statement on the rule-ordering between relevant rules. The two rules are what I have called 'Inter-paradigm mobility (Inter)' and 'Intra-paradigm mobility (Intra)'. 'Inter' applies when a lexeme is lexically marked as having the number-marking stress alternation (INTER). Its effect is as follows: (i) to shift underlying stem-stress to desinence-initial stress or (ii) to shift underlying desinence-initial stress to **stem-final** (pre-desinential) stress. Which one of these two subrules is to be chosen is determined by whether the given lexeme is tonic or atonic; when tonic, (i) applies, and when atonic, (ii) applies. Further, 'Inter' applies to the whole subparadigm, i.e., to all the case forms of a subparadigm. On the other hand, 'Intra' applies when a lexeme is lexcially marked as having the case-marking stress alternation (INTRA). It consists of two subrules: (i) to shift underlying or derived stem-stress to desinence-initial stress

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(xlopót xlópotam), déti (detéj détjam), and ljúdi (ljudéj ljúdam). Note however that xlópoty is one of pluralia tantum, and déti and ljúdi have the different stem from the singular.

or (ii) to shift underlying or derived desinence-initial stress to
stem-initial stress. Again, when the underlying or derived stem is
tonic, (i) applies, and when it is atonic, (ii) applies. Finally, a
rule-ordering relationship between Inter and Intra must be established:
Inter must apply prior to Intra, which will be made clear in due course.
Let us demonstrate how to produce surface stress of declined
word-forms on the basis of what has been said in this paragraph.

All nouns with fixed stress throughout the Sg and the Pl (nouns
with AA or BB) pose no descriptive problem. They do not have any
special accentual markings in their lexical entry and thus do not
undergo any accentual rules. For instance, rak ráka ráki rákov will have
underlying stem {rák-}; also, {v'ét'er-}, {pórox-}, {zólot-}, {koróv-},
etc. Similarly, vrač vračá vračí vračéj will be represented as {vrač-´};
also, {čert-´}, {stat'j-´], {gluš-´}, etc. Two things must be mentioned
about atonic stems. First, the stress appearing on the underlying atonic
stems signals that it falls on the desinence-initial syllable; in other
words, when a given word-form is produced by a given morphological
case-formation   rule,   the   stress   automatically   falls   on   the
desinence-initial syllable; thus, {vrač-´} -> (NSg formation rule)
vrač-∅. Second, when the stressed morphophonemic zero disappears at
the phonemic level, the stress moves to the immediately preceding
syllable irrespective of whether the latter's syllabic nucleus is
underlyingly given or epenthetically inserted. This is what I have
termed 'Phonemic mobility' (cf. section 1); thus {vrač-∅} -> (Phonemic
mobility) /vráč/. To illustrate the production process of a word-form
with an epenthesized vowel, {ogn'-´}[20] -> (NSg formation rule)
{ogn'-∅} -> (Epenthesis) {ogon'-∅} -> (Phonemic M.) /ogón'/.

Nouns that have accentual patterns AB or BA will be specified in
their lexical entry as having [INTER], which informs that stress

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20) For arguments for representing the underlying base form of the lexeme with the
    vowel - zero alternation in this way and for positing the rule of Epenthesis, see
    Choi Ms.

alternates between all the singular forms and all the plural forms. Thus, {gól-} [INTER], {górod-} [INTER], etc.; {kol'os-´} [INTER], {kolbas-´} [INTER], etc. Lexemes thus marked will undergo the morphophonemic stress rule of Inter. From the fact that the underlying stress of a lexeme is determined on the basis of the surface stress of the NSg, it follows that the applicational domain of Inter must be plural forms. To illustrate how this works,

	{górod-}[INTER]		{kolbas-´}[INTER]	
	NSg-for.	NPl-for.	NSg-for.	NPl-for.
	{górod-ø}	{górod-a}	{kolbas-á}	{kolbas-í}
INTER	_____	gorod-á	_____	kolbás-i
	/górod/	/gorodá/	/kolbasá/	/kolbási/

For the correct stress assignment to the word-forms having a mobile vowel, we need to state in our grammar a rule-order holding between Inter and Epenthesis; the former applies prior to the latter.[21] Otherwise, a spurious form would be produced. Compare (a) and (b).

	{r'em'os'l-´}[INTER][+mobile]	{v'er'et'on-´}[INTER]
(a)		
GPl for.	r'em'os'l-ǿ	v'er'et'on-ǿ
Inter	r'em'ós'l-ø	v'er'et'ón-ø
Epenthesis	r'em'ós'ol-ø	_____
	/r'em'ós'ol/	/v'er'et'ón/
(b)		
GPl for.	r'em'os'l-ǿ	v'er'et'on-ǿ
Epenthesis	r'em'os'ol-ǿ	_____
Inter	r'em'os'ól-ø	v'er'et'ón-ø
	*/r'em'os'ól/	/v'er'et'ón/

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21) In fact, all morphophonemic stress rules are stipulated in such a way that they precede Epenthesis, which in turn precedes Phonemic Mobility.

The lexical entry of tonic stems with AB′ will have accentual information saying that stress alternates not only between the singular and the plural subparadigms, but also between the nominative and the other case forms within the plural paradigm. Thus, for example, {bóg-}[INTER][INTRA-NPl]. The latter marking informs our grammar that the lexeme will be subject to the morphophonemic rule of Intra, when its NPl form has been formulated by the morphological rule. But, in order to produce the correct output, our grammar must have a statement to the effect that Inter must apply prior to Intra. This stipulation on the rule-ordering is intimately related to the fact that Inter applies necessarily to underlying-initial representation, while Intra can apply either to underlying-initial representation or to derived representation. To show how this works,

	{bóg-}[INTER][INTRA-NPl]	{vólost′-}[INTER][INTRA-NPl]
NPl for.	bóg-i	vólost′-i
(a)		
Inter	bog-í	volost′-í
Intra	bóg-i	vólost′-i
	/bógi/	/vólost′i/
(b)		
Intra	bog-í	volost′-í
Inter	——	——
	*/bogí/	*/volost′í/
GPl for.	bóg-ov	vólost′-ej
Inter	bog-óv	volost′-éj
Intra	——	——
	/bogóv/	/volost′éj/

Lexemes with B′A are marked [INTER][INTRA-ASg]. Some of them alternatively have BA, which can be captured by putting

[INTRA-ASg] in the parenthesis. To show the stress assignment of the ASg and the NPl of these lexemes,

{cen-´}[INTER][INTRA-ASg]		{st'en-´}[INTER]([INTRA-ASg])	
ASg for.	NPl for.	ASg for.	NPl for.
cen-ú	cen-í	st'en-ú	st'en-í
Inter ____	cén-i	____	st'én-i
Intra cén-u	____	(st'én-u)	____
/cénu/	/céni/	/st'enú/~/st'énu/	/st'éni/

Lexemes with BB′ will have the marking [INTRA-NPl]; thus, e.g., {sl'oz-´} [INTRA-NPl]. And lexemes with B′B′ will have two different kinds of INTRA-markings; thus, {golov-´}[INTRA-ASg][INTRA-NPl]. Finally, lexemes with BA′ are marked as having [INTER] and [INTRA-GPl]; e.g., {s'ost'r-´} [INTER] [INTRA-GPl]. Incidentally, zemljá is the most complicated lexeme in terms of stress alternation; it has three accentual markings: [INTER][INTRA-ASg] [INTRA-GPl]. To demonstrate the derivation of some case forms of sestrá and zemljá,

{s'ost'r-´}[INTER][INTRA-GPl]		{z'em'l'-´}[INTER][INTRA-ASg/GPl]		
NPl for.	GPl for.	ASg for.	NPl for.	GPl for.
s'ost'r-í	s'ost'r-ø	z'em'l'-ú	z'em'l'-í	z'em'l'-ø
Inter s'óst'r-i	s'óst'r-ø	____	z'ém'l'-i	z'ém'l'-ø
Intra ____	s'ost'r-ø	z'ém'l'-u	____	z'em'l'-ø
Epen. ____	s'ost'or-ø	____	____	z'em'el'-ø
Ph.M. /s'óst'ri/	/s'ost'ór/	/z'ém'l'u/	/zém'l'i/	/z'em'él'/

This completes our discussion on the substantival accentology. In the next section, I will provide a grammar for the verbal accentology, showing that the exactly same set of accentual rules and the rule-ordering relationship as postulated in the substantival accentology hold also for the verbal accentology.

3. It is common practice in any description of verbal morphology to distinguish between vocalic and non-vocalic stems. A vocalic stem is a stem with a vocalic element at the stem-final position (e.g., {pisa-}, {smotr'e-}, {pros'i-}, {r'isova-}, {maxnu-}, {kolo-}), and a non-vocalic stem is a stem ending in a consonant, including a sonorant (e.g., {d'elaj-}, {b'el'ej-}, {moj-}, {žm-}, {živ-}, {m'ot-}, {v'od-}, {gr'ob-}, {p'ok-}, {b'er'og-}, {t'r-}). This distinction is important also for a description of the verbal accentology. In the substantival morphology, all stems end in a consonant and all desinences begin (morphophonemically) with a vowel (or zero). For this reason, no segmental deletion takes place, when a desinence is concatenated with a stem (cf. Jakobson 1948). In the verbal morphology, however, there are found four logically possible combinations in terms of concatenation of stem-final segment and desinence-initial segment: C+C, C+V, V+C, and V+V. Among these types, it is V+V sequence that bears significance for the accentology. More specifically, a descriptive problem arises when an underlying vocalic stem stresses the stem-final vowel, which is truncated before a vocalic desinence. For instance, the final stressed /á/ of the underlying stem {p'isá-} is truncated before, say, the 2Sg/Pr desinence {oš}, and the phonemic output becomes /p'íšoš/, where the stress moves one syllable leftward. The accentual shift of this type can be interpreted at least two different ways: morphophonemically and phonologically. The morphophonemic analysis is to interpret the left movement as an instance of the Inter-paradigm mobility. That is, before the stem-final stressed /á/ is elided, Inter applies to {p'isá-oš}, which, according to this analysis, would be marked [INTER], occasioning the stress shift and resulting in {p'isa-oš}, which is in turn realized phonemically /p'íšoš/ via 'Truncation' and what has been called 'Substitutive Softening'. This analysis however runs difficulty in the face of such stems as {govor'í-},[22] whose present forms consistently

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22) As mentioned in section 1, I assume that the underlying stress of verbal lexemes is determined by the surface stress position of their infinitive form. This

stress the desinence-initial syllable (<u>govorjú</u> <u>govoríš'</u> <u>govorít</u> <u>govorím</u> <u>govoríte</u> <u>govorját</u>). Since it is beyond doubt that the stress shift from stem-final position to desinence-initial position in the verb of this kind is occasioned by Inter, we would have to admit two different sorts of Inter, if we considered /p'íšoš/ as an instance of Inter; the effect of the former is to change the underlying tonic stem into the atonic stem, while that of the latter is to shift the stress from the stem-final position to the immediately preceding stem-syllable. This then would make a grammar on the Russian accentology rather complicated. In fact, there is an alternative way of handling the left movement in /p'íšoš/. It is to view it as an instance of Phonemic mobility, which says that the stress automatically shifts one syllable leftward when it falls morphophonemically on zero or a segment deleted at the phonemic level. Thus, {p'isá-oš} -> (Truncation & Substitutive Softening) p'iš#'-oš -> (Phonemic M.) /p'íšoš/; similarly, {r'isová-oš} -> (Truncation & Substitutive Softening) r'isuj#'-oš -> (Phonemic M.) /r'isújoš/. Note also that in this analysis there will be no need to mark the stem {p'isá-} as having [INTER], relieving thus the lexicon of such a marking.

In terms of accentual paradigms, the verb is completely parallel with the substantive. There are three accentual paradigms for each tense subparadigm (present and past) in the verb, too: columnar stem-stress (A), columnar desinence-stress (B), and mobile stress within each paradigm, designated ',' . Furthermore, there is only one inflected form for each subparadigm where stress shift takes place: in the present paradigm, stress shifts in the 1Sg form, and in the past paradigm, stress shifts in the F form. The 'prime' (Intra-paradigm) mobility in

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assumption is not without ground. One piece of evidence is adduced in synchronic accentual variations, which are seen in some verbs, and the target of which is the infinitive form; e.g., old <u>napilsjá</u> <u>napilás'</u> <u>napilós'</u> <u>napilís'</u> - new <u>napílsja</u> <u>napilás'</u> <u>napílos'</u> <u>napílis'</u>, inf. <u>napít'sja</u>; old <u>záčal</u>, <u>začalá</u> <u>záčalo</u> <u>záčali</u> - new <u>začál</u> <u>začalá</u> <u>začálo</u> <u>začáli</u>, inf. <u>začát'</u>; old or unaccepted <u>róznjal</u> <u>raznjalá</u> <u>róznjalo</u> <u>róznjali</u> - standard <u>raznjál</u> <u>raznjalá</u> <u>raznjálo</u> <u>raznjáli</u>, inf. <u>raznját'</u>; etc.

the present tense paradigm takes place for those vocalic stems whose underlying stress falls on the stem-final vocalic element; e.g., {pros'í-} prošú prósiš', {tonú-} tonú tóneš', {smotr'é-} smotrjú smótriš', etc. Neither non-vocalic stems[23] and nor those vocalic stems which stress underlyingly non-stem-final syllable show the Intra-paradigm mobility; {délaj-} *delajú délaeš', {čitáj-} *čitajú čitáeš', {pláka-} *plačú pláčeš', {otv'ét'i-} *otvečú otvétiš', etc. On the other hand, the Intra-paradigm mobility in the past tense paradigm is found as a rule for the non-vocalic tonic stem;[24] e.g., {pr'ád-} prjal prjalá prjálo, {kl'an-} kljal kljalá kljálo, {žív-} žil žilá žílo, {p'j'-} 'drink' pil pilá pílo, {-čn'-} 'begin' začál začalá začálo, {búd-} 'be' byl bylá býlo, {dd-} 'give' dal dalá dálo, etc.

The following accentual patterns are found in Russian verbs: AA, BB, AB, A'B, AA', (BA).[25]

AA　stem-stress throughout the present and the past paradigms

i) all derived aj-stems and ej-stems: délaju délaet délal délala; boléju boléet bolél boléla

ii) syllabic j-stems: dúju dúet dul dúla; móju móet myl mýla. Also, gret', znat', razút', zret', rdet', mlet', smet', spet', pret', tlet'; brit', kryt', nyt', vyt', ryt'.

iii) syllabic nasal stems: stánu stánet stal stála. Also, det', zastrját', styt'

iv) obstruent stems: lézu lézet lez lézla; sjádu, sjádet, sel séla.

v) nu-'inchoative' stems: móknu móknet mok mókla.

vi) nu-'semelfactive' stems: prýgnu prýgnet prýgnul prýgnula.

vii) polysyllabic Ca-stems: réžu réžet rézal rézala; koléblju

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23) Exceptions: some -njat' verbs, e.g., primú prímet, obnimú obnímet, etc., and mogú móžet.

24) Exceptions: monosyllabic -a stems, e.g., lgal lgalá lgálo, rval rvalá rválo, vral vralá vrálo, žral žralá žrálo, bral bralá brálo, dral dralá drálo, zval zvalá zválo, and rodíl rodilá rodílo.

25) There is only one lexeme with BA: lec', ljágu ljážet lëg leglá.

koléblet kolebál kolebála.

viii) ova-stems: ráduju ráduet rádoval rádoval; risúju risúet risovál risovála.

ix) one ča-stem: slýšu slýšet slýšal slýšala.

x) e-stems: vížu vídit vídel vídela. Also, nenavídet', zavíset', obídet'.

xi) i-stems: otvéču otvétit otvétil otvétila.

BB   desinence-stress throughout the present and the past paradigms - only for obstruent stems

i) t-stems: metú metët mël melá. Also, plestí, rastí, obrestí, rassvestí, cvestí, gnestí.

ii) d-stems: bljudú bljudët bljul bljulá. Also, brestí, vestí.

iii) b-stems: grebú grebët grëb greblá. Also, skrestí.

iv) k-stems: pekú pecët pëk peklá. Also, seč', vleč', teč', obreč'.

v) g-stems: beregú berežët berëg bereglá. Also, perenebréč', žeč', zaprjáč', steréč'.

vi) s-stems: pasú pasët pas paslá. Also trjastí, nestí, spastí, proiznestí.

vii) z-stems: polzú polzët polz polzlá. Also, veztí.

AB   stem-stress in the past and desinence-stress in the present.

i) ava-stems: dajú daët davál davála. All -davát', -znavát', and -stavát' verbs.

ii) pet': pojú poët pel péla

iii) non-syllabic stems: b'jú b'ët bil bíla. Also, šit'.

iv) non-syllabic nasal stems: žmú zmët žal žála. Also, žat', mjat', raspját'.

v) d-stems: padú padët pal pála. Also, klast', krast', prjast'.

vi) stric': strigú strižët strig strígla.

vii) gryzt': gryzú gryzët gryz grýzla.

viii) r-stems: trú trët tër tërla. Also, rasprosterét', merét', perét'.

ix) nu-'semelfactive' stems: maxnú maxnët maxnúl maxnúla.

x) gnut': gnú gnët gnul gnúla.

xi) non-derived ova-stems: zujú zuët ževál ževála. Also, klevát', kovát', sovát', blevát', plevát', snovát'.

xii) monosyllabic a-stems: šljú šlët slal slála. Also, tkat' (~ A'B).

xiii) Ča-stems: molčú molčít molčál molčála.

xiv) e-stems: sižú sidít sidél sidéla.

xv) i-stems: proščú prostít prostíl prostíla.

AA' stem-stress in all conjugated forms, except for 1Sg/Pr form.

i) nu-'semelfactive' stems: vzgljanú vzgljánet vzgljanúl vzgljanúla.

ii) simple u-stems: tonú tónet tonúl tonúla. Also, tjanút', minút', obmanút', pomjanút'.

iii) o-stems: koljú kólet kolól kolóla. Also, borót'sja, molót', polót', porót'.

iv) polysyllabic a-stems: pišú píšeš' pisál pisála.

v) Ča-stems: dyšú dýšit dyšál dyšála.

vi) e-stems: smotrjú smótrit smotrél smotréla.

vii) i-stems: prošú prósit prosíl prosíla.

A'B stem-stress, except for F, in the past and desinence-stress in the present.

ii) gnit': gnijú gniët gnil gnilá gnílo.

ii) non-syllabic j-stems: p'jú p'ët pil pilá pílo. Also, vit', lit'.

iii) v-stems: živú živët žil žilá žílo. Also, plyt', slyt'.

iv) non-syllabic nasal-stems: začnú začnët začál začalá začálo. Also, vzjat', perenját', unját'.[26]

v) kljast':kljanú kljanët kljal kljalá kljálo.

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26) Many prefixed -čn and -jm verbs stress the prefix-initial syllable in the past: náčal načalá náčalo, prínjal prinjalá prínjalo, etc. This accentual pattern is doubtless a historical remnant, and thus an unproductive pattern. Witness that some of these verbs, which had previously this pattern, have now acquired a variant stress pattern, where stress is assigned to the stem-syllable: začál začalá začálo, perenjál perenjalá perenjálo. This accentual innovation involves a covert change in the underlying property of the stem, i.e., from atonic stem to tonic stem. Previously, {zacn-'}[INTRA-M,N,Pl/Pt], (thus, začnú začnët záčal začalá záčalo), but now {zacn'-}[INTER][INTRA-F/Pt] (thus, začnú začnët začál začalá začálo).

vi) prjast' (AB): prjadú prjadët prjal prjálá prjálo.

vii) mono-syllabic a-stems: rvú rvët rval rvalá rválo. Also, ždat',
lgat', žrat', vrat', zvat', brat', drat', tkat' (AB).

As clear from the above classification, all verbal lexemes are tonic,
except for those lexemes with obstruent stems having BB. Recall that
it is assumed that the infinitive form determines 'tonicity' of the
underlying verbal stems. Verbs with a velar stem are best considered
atonic, even though their infinitive form stresses the stem-syllable;
thus, e.g., {p'ók-'} pekú pečët pëk peklá pekló, despite péč'. There are
some verbs which deserve special comment. Some non-syllabic stems
as {-jm}, {-cn}, {m'r-}, {p'r-}, {l'j-} and some non-vocalic stems such
as {živ-}, {bud-}, {dad-} show special kind of Inter-paradigm mobility,
when they are prefixed; e.g., pónjal ponjalá pónjalo pónjali, náčal načalá
náčalo náčali, úmer umerlá úmerlo úmerli, záper zaperlá záperlo záperli,
dólil dolilá dólilo dólili, próžil prožilá próžilo próžili, príbyl pribylá príbylo
príbyli, péredal peredalá péredalo péredali, etc. The stress falls on the
prefix-initial syllable in all the past forms, except the F where it is
assigned on the desinence. One may analyze these prefixed stems as
having underlyingly the prefix-initial stress, which for the present
forms shifts to the desinence (thus, in our descriptive terms, being
subject to Inter) and for the F/Pt form shifts to the desinence (thus,
being subject to Intra). Another possible analysis is to view them as
having tonic stems, thus M, N, Pl/Pt forms being subject to Intra (thus,
BB'). Whichever analysis may be chosen, it remains true however that
the accentual pattern of this type is a historical remnant, thus becoming
non-productive. Many of them have now acquired a new variant stress
pattern (AB' or AB), which has become the new norm; e.g., peremër
peremërla peremërlo peremërli, prožíl prožilá prožílo prožíli, prolíl prolilá
prolílo prolíli, dobýl dobylá dobýlo dobýli, peredál peredalá peredálo
peredáli, etc.

As is well known, there is one more location where another

'synchronic' stress innovation is taking place in the Russian conjugation. While the accentual innovation mentioned in the preceding paragraph takes place in the past paradigm for the non-vocalic stem, this one involves the present paradigm for the vocalic i-stem. Many i-stem verbs that previously had columnar desinence-stress in the present now allow the alternative pattern, i.e., stem-stress except for the 1Sg where stress falls on the desinence (i.e., AB ~ AA'); e.g., beljú bélít, gorožú goródít, dojú dóít, družú drúžít, kačú kátít, darjú dárít, etc. I will discuss what consequence this innovation would bear on the Russian grammar later in the concluding section.

Verbs with AA have underlying tonic stems with no special accentual markings; thus, {d'élaj-}, {čitáj-}, {bol'éj-}, {stán-}, {dúj-}, {móknu-}, {r'éza-}, {rádova-}, {r'isova-}, (v'íd'e-}, {otv'ét'i-}, etc. Verbs with BB have underlying atonic stems with no special markings: thus, {m'ot-´}, {bl'ud-´}, {gr'ob-´}, {p'ok-´}, {b'er'og-´}, {pas-´}, {polz-´}, etc. Verbs with AB have tonic stems which are specially marked [INTER], which triggers the application of the rule Inter in the formation of present tense forms; thus, {davá-}[INTER], {pój-}[INTER], {b'j´-}[INTER], {žm´-}[INTER], {pád-}[INTER], {žová-}[INTER], {prost'í-}[INTER], etc. Just as the rule applies to plural forms of the substantival lexeme specified as [INTER], so does it apply to present tense forms of the verbal lexeme marked [INTER]. It should be recollected that the underlying stress of all lexemes is determined on the basis of the surface stress of the NSg form in the substantive and of that of the infinitive form in the verb, which is identical as a rule with that of the past tense form. To show the production process,

	{žová-}[INTER]		{govor'í-}[INTER]	
	M/Pt for.	1Sg/Pr for.	M/Pt-for.	1Sg/Pr for.
	žová-l-ø	žová-u	govor'í-l-ø	govor'í-u
Inter	_____	žova-ú	_____	govor'i-ú
other MPs	_____	žuj#-ú	_____	govor'#-ú

/žovál/   /žujú/   /govor'íl/   /govor'ú/

Verbs with AA' have tonic stems marked [INTRA-1Sg/Pr]. Due to this lexical marking, the 1Sg/Pr form undergoes Intra, whose effect, as mentioned in section 2, is to shift from stem-stress to desinence-stress or from desinence-stress to stem-initial stress. Thus, for example, {vzgl'anú-}[INTRA-1Sg/Pr], {tonú-}[INTRA-1Sg/Pr], {koló-}[INTRA-1Sg/Pr], {p'isá-}[INTRA-1Sg/Pr], {smotr'é-}[INTRA-1Sg/Pr], {pros'í-} [INTRA-1Sg/Pr], etc. Since the truncation rule is effective in the Russian grammar (V+V -> #+V), the stress on the stem-final syllable automatically shifts to the immediately preceding syllable via Phonemic mobility.

	{tonú-}[INTRA-1Sg/Pr]			{smotr'é-}[INTRA-1Sg/Pr]		
	1Sg/Pr	3Sg/Pr	M/Pt	1Sg/Pr	3Sg/Pr	M/Pt
	tonú-u	tonú-ot	tonú-l-ø	smotr'é-u	smotr'é-i	smotr'é-l-ø
Intra	tonu-ú	___	___	smotr'e-ú	___	___
Trunc.&	ton#-ú	ton'#´-ot	___	smotr'#-ú	smotr'#´-it	___
MPs						
Ph.M.	/tonú/	/tón'ot/	/tonúl/	/smotr'ú/	/smótr'it/	/smotr'él/

There are some -njat' verbs with stress alternation both in the present and in the past paradigms; all of them (cf. but prinját') have a prefix ending in a consonant; e.g., obnimú obnímet óbnjal obnjalá óbnjalo; also, otnját', vnját', raznját', snját', prinját', voprinját', predprinját'. The stress pattern of these verbs can be designated B'A', which however must be considered a marginal and non-productive pattern; some of them have alternatively A'A', where A' in the past paradigm is clearly a productive accentual paradigm (cf. óbnjal ~ obnjál, obnjalá, óbnjalo ~ obnjálo, óbnjali ~ obnjáli). To illustrate the accentual derivation of those forms with B'A' ~ A'A',

{obn'ím-}[INTRA-1Sg/Pr] {obn'a-´}[INTRA-MNPl/Pt]˜{obn'á-}[INTRA-F/Pt]

	1Sg/Pr	3Sg/Pr	M/Pt	F/Pt	M/Pt	F/Pt
	obn'ím-u	obn'ím-ot	obn'a-l-ǿ	obn'a-l-á	obn'á-l	obn'á-l-a
Intra	obn'im-ú	____	óbn'a-l-ø	____	____	obn'a-l-á
MPs	____	obn'ím'-ot	____	____	____	____
	/obn'imú/	/obn'ím'ot/	/óbn'al/	/obn'alá/	/obn'ál/	/obn'alá/

The stem-stress in the present forms is the result of the application of Inter, which, along with the assumption that this class of verbs has the underlying stem {obn'a-´}, explains why the present forms place the stress not on the stem-initial syllable (*óbnimet), but rather on the stem-final (i.e., predesinential) syllable (obnímet). Further, the prefixal stress in the past forms can be naturally explained in our framework; M, N, and Pl forms are subject to Intra, which occasions the stress shift from the desinence to the stem-initial (more specifically, prefix-initial) syllable.

One final note on these verbs. In their lexical entry, they will be marked as having both [INTER] and [INTRA-1Sg/Pr, -MNPl/Pt], which appears highly idiosyncratic. The advent of the stress variant A'A' is in this regard no wonder; the Russian lexicon tends to eliminate such highly marked items from its inventory. Compare the above markings with [INTRA-1Sg/Pr, -F/Pt] which stems with A'A' have.

Finally, those verbs with A'B. They have stem-stress in the past forms, except for the F, and columnar desinence-stress in the present forms, being specified [INTER] and [INTRA-F/Pt]; thus, {gn'íj-}[INTER] [INTRA-F/Pt], {p'j´-}[INTER][INTRA-F/Pt], {živ-}[INTER][INTRA-F/Pt], {začá-}[INTER][INTRA-F/Pt], {kl'án-}[INTER][INTRA-F/Pt], {ždá-}[INTER] [INTRA-F/Pt], etc. To illustrate how grammar and lexicon interact,

	{ždá-}[INTER][INTRA-F/Pt]			{kl'án-}[INTER][INTRA-F/Pt]		
	1Sg/Pr	M/Pt	F/Pt	1Sg/Pr	M/Pt	F/Pt
	ždá-u	ždá-l-ø	ždá-l-a	kl'án-u	kl'án-l-ø	kl'án-l-a
Inter	žda-ú	____	____	kl'an-ú	____	____
Intra	____	____	žda-l-á	____	____	kl'an-l-á
Trunc.	žd#-ú	____	____	____	kl'á#-l-ø	kl'a#-l-á
	/ždú/	/ždál/	/ždalá/	/kl'anú/	/kl'ál/	/kl'alá/

4. Conclusion. In this paper, I tried to show that the Russian inflectional accentuation, both substantival and verbal, can be described by postulating two accentual rules in the Russian grammar: Inter-paradigm mobility and Intra-paradigm mobility, both of which are morphophonemic rules. The former deals with stress alternation between two subparadigms; the alternation between Sg and Pl in the substantive and the alternation between Pr and Pt in the verb. The latter handles stress alternation within a subparadigm; that is, the alternation between the Acc. and the other cases in the singular paradigm, the alternation between the Nom. (or the Gen.) and the other cases in the plural paradigm, the alternation between 1Sg and the other forms in the present paradigm, and finally the alternation between the Fem. and the other forms in the past paradigm. Since individual lexemes manifests different accentual properties, it is necessary to specify accentual information in their lexical entry. Thus, lexemes with the marking [INTER] will be subject to Inter, and those with [INTRA-X] will be subject to Intra in the X-form. The grammar espoused here needs to state the following rule-ordering relationship: Inter applies prior to Intra. Besides these two rule, we have a phonemic accentual rule, whose effect is to shift stress on a zero segment or on a deletable segment onto the immediately preceding syllable. This handles the following type of stress shifts: {stol-ǿ} stól vs. stolá stolú, {l'ubov'-óju} l'ubóv'ju l'ubóv' vs. l'ubví, {smotr'é-it} smótrit vs. smotrél smotréla, etc. Further, for those lexemes with stress alternation and mobile vowel, it

is necessary to give a statement to the effect that Epenthesis follows the two morphophonemic rules but precedes Phonemic Mobility; thus, {s'ost'r-´}[INTER][INTRA-GPl][MOBILE V] -> (Inter) s'óst'r-ø -> (Intra) s'ost'r-∅ -> (Epenthesis) s'ost'or-∅ -> (Phonemic Mobility) /s'ost'ór/. The reason for the rule-ordering between the two MP rules and Epenthesis is evident; we have to capture the fact that when a lexeme shows the alternation between desinence-stress in the Sg and stem-stress in the Pl, the stress falls not on the mobile vowel, but on the stem-vowel; p̲i̲s̲'m̲ó̲ p̲i̲s̲'m̲á̲ vs. p̲í̲s̲'m̲a̲ p̲í̲s̲e̲m̲ (*p̲i̲s̲é̲m̲). If Epenthesis applied prior to Inter, a spurious form would obtain; {p'is'm-∅}[INTER][MOBILE V] -> (Epenthesis) p'is'em-∅ -> (Inter) p'is'ém-ø */p'is'ém/ vs. -> (Inter) p'ís'm-ø -> (Epenthesis) p'ís'em-/p'ís'em/.

The discussion on synchronic stress variations indicates that the substantive tends to eliminate the intra-paradigm alternations (i.e., case-marking alternations), while the verb tends to introduce it (i.e., person- or gender-marking alternations). For example, i̲z̲b̲á̲ i̲z̲b̲u̲ - new i̲z̲b̲ú̲, k̲r̲ý̲l̲'c̲a̲ k̲r̲y̲l̲'c̲á̲m̲ - new k̲r̲ý̲l̲'c̲a̲m̲ (i.e., B'A, BA' > BA) vs. d̲r̲u̲ž̲ú̲ d̲r̲u̲ž̲í̲t̲ - new d̲r̲ú̲ž̲i̲t̲, d̲a̲r̲j̲ú̲ d̲a̲r̲í̲t̲ - new d̲á̲r̲i̲t̲, etc. (i.e., AB > A'A). The elimination of the intra-paradigm alternation from the substantive is closely tied with the well-known observation that the patterns with the inter-paradigm alternation become productive in the substantive (cf. Krysin 1974: 224-29). On the other hand, its introduction in the verb seems related to the fact that the patterns with the inter-paradigm alternation are found in a limited number of lexemes; in fact, there is only one verbal stem that has BA (l̲e̲č̲'̲: l̲e̲g̲ l̲e̲g̲l̲á̲ l̲e̲g̲l̲ó̲ l̲j̲á̲g̲u̲ l̲j̲á̲ž̲e̲s̲'̲; see above accentual classification of verbs). The telos of accentual innovations taking place in modern Russian then can be said to maximize the difference between these two major parts of speech. The inter-paradigm alternation in the substantive contributes to distinguish between two mumbers, the choice of which is determined referentially; i.e., the Sg form is chosen if the expressed noun refers to one object,

and the Pl form, if it refers to more-than-one objects. The intra-paradigm alternation between declined case forms, the choice of which clearly is determined syntactico-semantically, is now being eliminated. In short, in the substantival accentology, the referentially determined stress alternation becomes productive, while the syntactically determined stress alternation is losing ground. The exactly opposite picture obtains in the verb. The intra-paradigm alternation in the verb contributes to distinguish between the 1Sg and other person/number forms, one the one hand, and between the Fem. and other gender/number forms, on the other. These two grammatical categories manifested in the conjugated forms are the result of the syntactic agreement: ie., the choice between them is determined syntactically. They are not something to express properties of situation referred to by the verb. Contrastingly, the inter-paradigm alternation between tense categories, the choice of which is clearly referentially determined, is non-productive. In short, in the verb, the referentially determined stress alternation is non-productive, while the syntactically determined stress is gaining ground. This discussion then leads us to conclude that the synchronic stress variations (i.e., diachronic stress innovation) in modern Russian must be explained with reference to the two morphophonemic accentual rules and different utilization of them between the two major parts of speech.

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국문 요약

러시아어의 굴절강세에 관한 연구

최 성 호

본 논문은 현대 러시아어의 굴절 강세론을 단위-과정(item-process) 모델에 의거 기술함과 동시에 강세의 공시적 기술에 있어서 '통시적'인 강세의 변이(accentual variation)는 그 기술의 타당성을 입증하는 한 요소로 작용될 수 있음을 예시한다. 본 논문은 두 개의 형태-음운론적 강세규칙- '파라다임내 변동(Intra-paradigm mobility)'과 '파라다임 상호간의 변동(Inter-paradigm mobility)' -을 선정하고, 현대 러시아어에서 보이는 모든 강세의 변동 유형은 이 두 규칙으로 기술될 수 있음을 보인다. 어떤 한 어휘가 위의 두 강세규칙에 적용되는가의 여부는 그 어휘에 특유한 강세자질에 의해 결정된다. 이를테면, 어떤 어휘가 강세어간을 가지면서 또한 [INTER]라는 강세자질을 가지면, 이 어휘는 복수형에서 위의 '파라다임 상호간의 변동'이라는 강세규칙의 적용을 받아 비-강세어간이 되면서 강세는 어미의 첫 음절에 떨어진다. (예: {górod-} [INTER] => (Inter-paradigm mobility) 복수어간 {gorod-} gorodá gorodóv 등.) 한편, 본 논문에서 논의된 현대 러시아어에 보이는 강세 변이의 일반적인 추세는 다음과 같이 요약될 수 있다: '파라다임내 변동'은 명사의 경우 비생산적(non-productive)인 반면, 동사에 있어서는 생산적(productive)인 경향이 있으며, '파라다임 상호간의 변동'은 모든 곡용식의 명사에 있어서 그 생산성이 증대하는 반면, 이 규칙에 적용되는 동사의 수는 줄어 들고 있다. 이상과 같은 관찰로 본 논문은 현대 러시아어에서 강세의 개신(innovation)은 두 품사간의 차이를 극대화하는 방향으로 나아가고 있다고 결론을 내린다.