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Ronald F. Feldstein

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# THE INVERSE PROPORTIONALITY OF SEGMENTAL AND SUPRASEGMENTAL IN THE RUSSIAN VERB

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Ronald F. Feldstein, Indiana University

1. **Truncated and full stems in Russian conjugation.** Roman Jakobson's "Russian Conjugation" established a method for determining a single **basic** form for any given Russian verb. Russian verbs generally have more than one surface realization of their stems and frequently have a stem in which the final phoneme has been deleted (the **truncated stem**), in comparison to another stem which does contain this phoneme (the **full stem**). The **basic stem** is then arrived at by establishing the morphophonemic shape of the full stem. Every feature which appears in the basic stem does so only by virtue of its potential opposition to other entities, rather than by the fact that an automatic phonological rule causes it to occur.

Any stem in the full verbal paradigm can contribute information about any of the features which constitute the morphophonemic representation, or basic stem, of a verb. The only requirement is that the feature must be distinctive, rather than automatic. For example, the voiceless feature of the stem-final segment of the masc. past tense [str'ik] would not be taken as basic, since the voicing feature is suspended in word-final position. Taking another realization of this stem where voicing is distinctive, we find [g], rather than [k], e.g., [str'igú], [str'ígla]. Therefore, the final segment of the basic stem must be represented with distinctive voicing, i.e., *str'ig-*.

The number of segments in the basic stem is determined by the full stem, rather than the truncated stem. Since the morphophonemic shape of the full stem is equivalent to the basic stem, this has led to the commonly held view that the basic stem is "practically speaking, . . . simply whichever of the two stems . . . is the *longer*" (Townsend, 82). The notion that the basic stem is equal to the full (or longer) stem can be traced to an ambiguity within Jakobson's article itself, which often uses the term "full-stem" when the obviously intended meaning is not just any random surface realization

of the full stem but rather, its morphophonemic shape. In other words, the full stem is not exactly equivalent to the basic stem since there can be multiple realizations of the full stem, only one of which qualifies as basic.<sup>1</sup> However, Jakobson (17) states that "given the full-stem, it is as a rule possible to predict the exact form of the whole conjugational paradigm in regard to the stem, the desinence, and also the place of stress." Jakobson's own practice makes it clear that he had the basic morphophonemic form of the full stem (i.e., the basic stem) in mind.

This paper is an attempt to consider the differential contribution of stems of differing length to the basic, distinctive properties of the verbal stem. The commonly held view that the longer stem contributes virtually everything to the basic stem derives from the fact that the basic stem's segmental shape is equivalent to the morphophonemic shape of the full stem. In addition, there is a rather close correlation between the basic stem's number of phonemes and those of the full stem.<sup>2</sup> However, as I shall demonstrate, the truncated stem provides much more distinctive information than the full stem in the area of suprasegmental features. Further, this fact is part of a general pattern, according to which suprasegmental information given by Russian verbal stems is inversely proportional to their segmental length. Jakobson himself, in fact, used truncated stems to obtain information related to the **position** of stress. For example, in order to determine the morphophonemic shape of the root vowel of the stem *smotr'e-* one cannot make use of any of the actual realizations of the full stem, since they all contain an unstressed root vowel, e.g., [smatr'ét'], [smatr'él]. Therefore, Jakobson turned to the truncated stem in, e.g., [smótr'iš] to provide this information (17). In spite of the fact that both full and truncated stem realizations contribute to the basic stem's shape, there has been no systematic consideration of how these two stem types actually differ in what they tell us about any given verb. A number of treatments of Russian verbal stress do exist, but they generally concentrate on issues other than the structural difference between full and truncated stems. Stankiewicz, in a number of studies, has provided valuable information about the pattern of stress alternations which occur both in the Russian (and other Slavic) standard languages, and in Russian dialects. His paper "The Accent Patterns of the Slavic Verb" makes the pertinent observation that the shift of stress from suffix to pre-suffix vowel (in such cases as *nósiš'*) "is correlated with the truncation of the final stem vowel before any initial vowel of the verbal desinence" (75). This point implies that stress shift is caused by truncation, but emphasizes the syntagmatic aspect of the relation between stress and truncated stems and does not address the general question of paradigmatic stress opposition between different truncated stems as contrasted to the possible number of oppositions between different full stems. In the studies of Russian accentuation by Red'kin, Fedjanina, and Zaliznjak the Jakob-

sonian one-stem system is not discussed at all and there is no attempt to contrast the truncated and full stems in terms of accentual properties. Straková (150, 201) takes the position that only forms of the present tense and imperative constitute the true inflectional verbal system, while past tense forms are best treated as derived. Therefore, her system does not have to interrelate the truncated and full forms within the inflectional system of conjugation, since they are explained as the result of inflectional vs. derivational differences. The exclusion of the past tense from the unified verbal inflectional system does not seem accurate for the synchronic state of the Russian language.<sup>3</sup>

In order to introduce the idea of stem-length as a factor in accentual oppositions, let us consider examples of nonsuffixed and suffixed Russian verbal stem types in which present and past tense stems differ in size. In each case we will see that a stress opposition is manifested within the shorter stems, but becomes neutralized within the longer stems of the same verbs.

Among nonsuffixed verbs, obstruent stems usually manifest no stem size difference between present and past tenses.<sup>4</sup> On the other hand, sonorant stems regularly have this difference, with the stem-final sonorant truncated before past tense endings. Two different sonorant stems can be accentually opposed in the past tense—where the truncated stem is found—but then share a neutralized desinential stress in the present tense—when the full stem is used. These two cases can be illustrated as follows:

1. a. Full stem: neutralized desinential stress.  
E.g., *pereživút, proživút.*
- b. Truncated stem: initial ~ desinential stress.  
E.g., *péřežilo/perežilá, próžilo/prožilá.*
2. a. Full stem: neutralized desinential stress.  
E.g., *pereplyvút, proslyvút.*
- b. Truncated stem: stem-final ~ desinential stress.  
E.g., *pereplýlo/pereplylá, proslylo, proslylá.*

In the class of suffixed verbs, we are primarily interested in stems in which a full stem with a suffix is found in the past tense, but a truncated stem appears in the present, due to the loss of suffix vowel (e.g., the suffixed types in *-i-*, *-e-*, *-a-*, *-nu-*). In such cases we regularly see that the full stems have a neutralized suffixal stress,<sup>5</sup> but that the truncated stems can oppose mobile stress to desinential stress, as in these examples:

1. a. Full stem: neutralized suffixal stress.  
E.g., *zaposíla, zavertéla, zapsíala, zagljanúla.*
- b. Truncated stem: stem-final ~ desinential stress.  
E.g., *zaprošú/zaprosjat, zaverčú/zavértjat, zapíšú/zapíšut, zagljanú/zagljánut.*

2. a. Full stem: neutralized suffixal stress.  
E.g., *zaščítíla*, *zasidéla*, *zasmejála(s')*, *zavernúla*.
- b. Truncated stem: desinential stress.  
E.g., *zaščítját*, *zasidját*, *zasmejút(sja)*, *zavernút*.

Having seen how the truncated verbal stem can often favor the existence of more accentual oppositions than the stem which is segmentally larger, let us now take up the second issue: that this inverse relationship of segmental and suprasegmental complexity is really part of a more general pattern which applies to the Russian verbal system. According to this pattern, shorter verbal stems are accentually more complex than longer stems in several ways, not only within pairs of stems which belong to the same verbal paradigm, but in the comparison of any two verbal stems of unequal size. These facts emerge if we examine a series of surface realizations of verbal stems in descending order of size, taking note of the following accentual parameters in each case:

1. number of potentially stressable morphemes within each constant of uniform stem size;
2. number of potential paradigmatic (lexical) oppositions based upon stress within the given constant of stem size;
3. possibility of both stem and desinential stress within the same surface type, rather than only stem stress;
4. number of patterns of accentual mobility within the given stem size, which permit grammatical opposition on the basis of stress.

In each of these four cases there is a clearcut distinction between greater and lesser accentual potential. More stressable morphemes, more possible paradigmatic oppositions, the potential for both stem and desinential stress, and the use of accentual mobility, all are indicators of greater suprasegmental complexity. I will show that an increase in each of these four factors can be related to the smaller segmental size of the surface structures in question.

Before beginning a survey of stem types, let us first define how the concept of stem size is to be understood. The most basic measurement of stem size is based on the number of post-prefixal syllabic stem morphemes which occur. Hence, a surface stem with both a root and a suffix is considered larger than one with only a surface root. Secondly, a full surface root, which we define as one which contains at least enough segments to conform to the CVC pattern, is considered longer than a root which departs from the CVC pattern either by being nonsyllabic (CC-) or by lacking (through truncation) a final root consonant (CV-). A syllabic suffix is considered longer than a nonsyllabic suffix. The largest stem (type 1: e.g., *pros-i-la*) consists of a syllabic, nontruncated root plus a syllabic suffix. Next largest is a stem with full syllabic root but nonsyllabic suffix (type 2: e.g.,

*šag-n-(ut)*). The third type is represented by a nonsyllabic or truncated root followed by a suffix, where only one of the two post-prefixal stem morphemes is syllabic, i.e., either nonsyllabic root plus syllabic suffix or truncated syllabic root plus nonsyllabic suffix (type 3: e.g., *br-a-(la)* or *mi-n-(ut)*, respectively).

All of the stems indicated thus far contain both a root and suffix. Stems with a root as the only post-prefixal stem morpheme are considered smaller than those with suffixes. Type 4 contains a full syllabic root but no suffix (e.g., *proš-(u)* or *krad-(u)*). Type 5, smaller than type 4, is the case of a truncated root followed by no suffix (e.g., *ži-(la)* or *kra-(la)*). To summarize, these five types can be listed as follows:

1. Full root + syllabic suffix: CVC + (C)V(C)-.
2. Full root + nonsyllabic suffix: CVC + C-.
3. Nonfull root + suffix: either CC+V- or CV+C-.
4. Full root: CVC-.
5. Nonfull root: CV-.

A sixth type, consisting of only a nonsyllabic root and no suffix (e.g., *lg-(ut)*), could be added to the list. However, since it contains no syllabic post-prefixal morphemes, it is too small to be accentually relevant. Therefore, our hypothesis that stem size is inversely proportional to accentual complexity applies within the limits of syllabic stems.

It would be useful at the outset to define and illustrate the concept of accentual oppositions as it pertains to our study of Russian verbal forms. Ideally, such oppositions should be studied within identical morphological and segmental environments (such as the Russian nouns *múku* vs. *mukú*), so that observed differences of stress cannot be attributed to nonprosodic (i.e., segmental) factors. However, such identity is rare and cannot be maintained as a working principle. Nevertheless, it is essential to insist on the identity of basic morphological structure in reference to any two forms as an accentual opposition. Therefore, I will refer to verb forms as accentually opposed when the following two conditions are met:

1. There is complete identity of at least all prefixal, suffixal, and desinential morphemes, i.e., all morphemes except the root. This allows us to consider cases such as *zabralá* vs. *zaslála*, *poprósit* vs. *povtorít*, *zastávlju* vs. *zagovorjú* as accentual oppositions.

2. The roots display identity of basic syllabic structure, i.e., both surface roots must conform to either CV(CV)C, CV, or C/C patterns. These cases are examined separately in order to observe stress oppositions which are as close to minimal as possible.

It is necessary to emphasize that our arrangement of the data within five types of verbal stems of decreasing length may appear unusual from the perspective of the Jakobsonian one-stem system, since we are going to group the five stem sizes according to their surface structure, rather than their

stem-types.<sup>6</sup> For example, verb forms such as *žálo* and *veló* will be grouped together since the surface stem in both cases has the form CV. Conversely, I will not group verb forms such as *postávit'*, *postávjat* together, since they differ in the surface realization of the verbal suffix *-i-*, which is present in *postávit'*, but deleted in *postávjat*. Although verbal stems are not normally grouped as such in the single-stem system, I will demonstrate that verbal stems of similar surface structure share important features in the sphere of accentual properties.

**2. Survey of suprasegmental features according to stem length.** The longest stem type consists of an optional syllabic prefix, followed by a syllabic root and syllabic suffix, after which comes the desinence:

1. (prefix) – CVC root – (C)V(C) suffix – desinence

In terms of the accentual criteria listed above, this maximal stem size contains two stressable morphemes, the root and suffix. This allows only for stem stress in this type, since the desinence is not a potentially stressable syllable—with the sole exception of the verb *rodít'*, an anomalous verb in Jakobson's system for this very reason (25). Only a single two-way lexical opposition with respect to stress can occur within type 1; it is based upon the opposition of root vs. suffixal stress (e.g., *postávit'* vs. *poprosít'*). No stress mobility can occur in type 1, which thus excludes the use of stress as a morphophonemic device to oppose grammatical forms. These stress features will be seen to be minimal when compared to those of the shorter stem types which follow.<sup>7</sup>

Let us proceed to the second and next smaller stem type. Where type 1 contained both a full syllabic root and suffix, type 2 contains a full syllabic root followed by a nonsyllabic suffix. The surface nonsyllabic suffix consists of the phoneme /n/ which is left after the truncation of the *-nu-* suffix of the Jakobsonian system. Type 2 can be represented as follows:

2. (prefix) – CVC root – C suffix – desinence

This type is very much like type 1 in that it can have only two possible stress placements, a two-way paradigmatic opposition (e.g., *prýgnut* vs. *šagnút*), and it lacks stress mobility. However, it differs from type 1 in its potential desinential stress.

Next, decreasing the size of the previous type by the smallest possible amount, let us consider the case of a suffixed stem containing a nonfull root as the third surface stem-type. It happens that two somewhat different surface structures having similar accentual properties fit this definition, which requires us to split the third category into two parts. The first, type 3a, contains a nonsyllabic root followed by a syllabic suffix:

3a. (prefix) – CC root – V suffix – desinence

In this type, which frequently contains the suffix *-a-*, the stress can fall on either of the two immediately post-prefixal morphemes, as seen above in

both types 1 and 2. However, in type 3a these syllables are the suffix and desinence, rather than the root and suffix of types 1 and 2. Paradigmatically, type 3a is also similar to types 1 and 2 in allowing the paradigmatic opposition of two opposing stress types (e.g., *zaslála* vs. *zabralá*). However, type 3a disagrees with type 1 and agrees with type 2 in its use of desinential stress. Further, type 3a is the first type in the survey to permit the use of stress mobility, as seen in such cases as *zabrálo* ~ *zabralá*.

The second, type 3b, can be depicted as follows:

3b. (prefix) – CV root – C suffix – desinence

This case represents another instance of the truncation of a basic **-nu-** suffix to the consonant /n/, as seen in type 2. However, in type 2 the stem is longer than that of type 3b because the type 2 root is of the CVC structure; in type 3b the root has been truncated to CV. As a consequence, type 3b has a greater accentual complexity than does type 2. The accentual traits of type 3b are the same as those of type 3a: two possible morphemes for stress placement (but here, root or desinence instead of suffix or desinence, since type 3a lacks a syllabic root and type 3b lacks a syllabic desinence), a two-way paradigmatic opposition (e.g., *kínu* vs. *tonú*), and the possibility of both desinential stress and stress mobility within a paradigm (e.g., *tonú* vs. *tónut*). Thus, types 3a and 3b share accentual features and a stem structure which contains either CV-C or CC-V, i.e., two consonants and a vowel spread over root and suffix morphemes.

The first three types all contain a surface root and suffix. Type 4 is defined as a verbal stem which only contains a full root, which we understand as one that is both syllabic and nontruncated:

4. (prefix) – CVC root – desinence

In terms of the Jakobsonian system, surface type 4 can reflect either the absence of a suffix in the base form or the deletion of a suffix vowel. Accentually, this type resembles the previous three in its use of stress on one of two possible morphemes (the root or desinence in this case). However, while previous types have a maximally two-way paradigmatic opposition of stress, type 4 presents a three-way opposition: immobile root stress (*postávlju*, *postávjat*) vs. immobile desinential stress (*povtorjú*, *povtorját*) vs. mobile root ~ desinential stress (*poprošú*, *poprósjat*). This potential of three accentually opposed paradigmatic entities does not exist for any of the first three types. In agreement with types 2 and 3, type 4 can have desinential stress; in agreement with type 3, but not types 1 and 2, type 4 has stress mobility, as we have seen. These data indicate that the accentual complexity increases as we decrease the number of segmental units which comprise the verbal stem.

The fifth, and last, type of syllabic verbal stem represents the smallest possible number of segments in the verbal stem, as follows:

5. (prefix) – CV root – desinence



Here all three of the indicated morphemes can bear the stress, since even the optional prefix can be stressed and accentually opposed to both root and desinential stress—in contrast to all of the four types above: e.g., *zážilo* vs. *zažálo* vs. *zaveló*. Furthermore, type 5 presents the potential for the accentual opposition of four paradigmatic entities:

1. prefixal (or stem-initial) ~ desinential, e.g., *zážilo* ~ *zažilá*;
2. root (or stem-final) ~ desinential, e.g., *zaplylo* ~ *zaplylá*;
3. immobile root, e.g., *zažálo*, *zažála*;
4. immobile desinential, e.g., *zaveló*, *zavelá*.

In comparison to the preceding types, type 5 agrees with types 2, 3, and 4 in its desinential stress. As to stress mobility, type 5 agrees with types 3 and 4 in using mobility, but it stands alone in using two different types of mobility, as seen in illustrations 1 and 2 above. We have seen a gradual increase in the use of accentual features as the stem size has decreased, culminating in type 5, which stresses three morphemic locations, opposes four paradigmatic types, and has two varieties of mobility.

Table 1 summarizes the five surface stem-types in relation to the four accentual properties which we are considering. Table 2 lists pertinent examples for each type given in table 1 and illustrates the higher number of paradigmatic oppositions and mobile/immobile alternations among the segmentally shorter stems in comparison with longer types.

<b>Accentual Properties</b>				
	<i>Number of Stressable Morphemes</i>	<i>Maximal Paradigmatic Opposition</i>	<i>Desinential Stress</i>	<i>Number of Mobile types</i>
<b>Type 1:</b> CVC+(C)V(C)-	2	2-way	No	0
<b>Type 2:</b> CVC+C-	2	2-way	Yes	0
<b>Type 3:</b> CC+V- or CV+C-	2	2-way	Yes	1
<b>Type 4:</b> CVC-	2	3-way	Yes	1
<b>Type 5:</b> CV-	3	4-way	Yes	2

**Table 1. The accentual properties of the five types of surface verb stems.**

Types 1 through 5 are in decreasing order of size, indicating that as segmental size decreases, there is a corresponding increase in accentual complexity, as measured by the four properties listed.

	<b>Stress Placements</b>	<b>Paradigmatic Oppositions</b>
<b>Type 1</b>	Root and Suffix: <i>postávila,</i> <i>poprosíla</i>	2-way (no mobility): a. root stress ( <i>postávila</i> ) vs. b. suffixal stress ( <i>poprosíla</i> )
<b>Type 2</b>	Root and Desinence: <i>prýgnut,</i> <i>šagnút</i>	2-way (no mobility): a. root stress ( <i>prýgnut</i> ) vs. b. desinential stress ( <i>šagnút</i> )
<b>Type 3</b>	<b>3a:</b> Suffix and Desinence: <i>zaslála,</i> <i>zabralá</i>	2-way (one mobile type): a. suffixal stress ( <i>zaslál(a)</i> ) vs. b. suffixal ~ desinential stress ( <i>zabráló ~ zabralá</i> )
	<b>3b:</b> Root and Desinence: <i>kínut</i> <i>tónut</i>	2-way (one mobile type): a. root stress ( <i>kínu(t)</i> ) vs. b. suffixal ~ desinential stress ( <i>tonú ~ tónut</i> )
<b>Type 4</b>	Root and Desinence: <i>postávlju,</i> <i>povtorjú</i>	3-way (one mobile type): a. root-stress ( <i>postáv(lju)</i> ) b. desinential stress ( <i>povtor(jú)</i> ) c. root ~ desinential stress ( <i>poprós(jat) ~ poprošú</i> )
<b>Type 5</b>	Prefix, Root, and Desinence: <i>zážilo,</i> <i>zažálo,</i> <i>zaveló</i>	4-way (two mobile types): a. root stress ( <i>zažál(o)</i> ) b. desinential stress ( <i>zavel(ó)</i> ) c. suffixal ~ desinential stress ( <i>zaplýlo ~ zaplýlá</i> ) d. prefixal ~ desinential stress ( <i>zážilo ~ zažilá</i> )

**Table 2. Illustrations of the inverse relationship between verbal stem length and accentual complexity in the Russian verb.**

Types 1 to 5 increase their accentual complexity while decreasing their segmental and/or morphemic length.

The inverse relationship of segmental and suprasegmental features has important consequences for the system as a whole. In the first place, it points to a nonarbitrary balance of segmental and accentual resources within the verbal stems of Russian. While the distribution of accentual fea-

tures within the verb system has been accurately stated before by Stankiewicz and others, our approach has made it possible to understand the underlying motivation behind what might otherwise seem to be a haphazard distribution. As each new and slightly smaller stem size is considered, we see that the inventory of prosodic resources grows in size. The major division between the five types (as seen in table 1) is that of stems which contain a surface suffix (1, 2, and 3) and those which do not (4 and 5). Prosodically, the suffixed types can have only a two-way accentual opposition, while the nonsuffixed types have more than a two-way opposition. The shortest possible syllabic verbal stem (type 5) stands out in its use of three stressable morphemes, in its maximal four-way opposition, and in its two patterns of mobility. This is clearly a case of prosodic marking, which is in direct contrast to the unmarked prosodic situation found in type 1. At the same time, the segmental pattern of type 5 (CV-) corresponds to "the only universal model of the syllable" (Jakobson and Halle, 37), an obviously **unmarked** segmental type. Therefore, the concept of inverse proportionality can be applied not only to the relative volume of segmental and suprasegmental information transmitted, but to the fact that heavily marked segmental structures (type 1) are relatively unmarked prosodically, while the unmarked segmental structure (type 5) is fully marked on the prosodic level.

3. **Stem types in verbal paradigms.** Having seen the inverse relationship between segmental and suprasegmental information provided by the Russian verbal stem, let us return to the Jakobsonian verbal system to make a few final observations about the special role of the truncated stem in the determination of the morphophonemic stress of a Russian verbal stem. Type 1 stems are generally found in the past and infinitive forms of suffixed stems, often paired to shorter type 4 stems in the present and imperative forms of the verbal paradigm. Type 1 only admits a two-way stress opposition with no use of mobility, while type 4 can have a three-way accentual opposition and does use mobility (tables 1 and 2). Consequently, certain stress oppositions exist only in the truncated stem and are neutralized in the full stem of the given verb type. For example, the *i*-suffixed stems *poprosi-* and *pozvoni-* are accentually identical in all of their full forms (e.g., *poprosít'/poprosíla*, *pozvonít'/pozvoníla*), yet are accentually opposed in most of their truncated stems (e.g., *poprósiš'* vs. *pozvoníš'*).<sup>8</sup> The same relationships hold for all the other instances in which a truncated stem lacks a syllabic suffix found in the full stem. When both full and truncated stems retain at least one suffix vowel (i.e., the truncation eliminates a segment other than the sole suffixal vowel), there is no difference in the number of accentual oppositions and both stems fit the definition of type 1, in spite of the truncation (e.g., *čitá(t')*/*čitáj(ut)*, *interesová(t')*/*interesúj(ut)*).

In the case of verbs which are nonsuffixed at the morphophonemic level, the full stem is found in the present tense and imperative, and the maximal stress opposition here is three-way (e.g., *dúju/dújut* vs. *snímú/snímut* vs. *živú/živút*). When the nonsuffixed verbs present a truncated stem, such as in the past tense of sonorant and d/t stems, there can be a four-way stress opposition, as illustrated above in table 2 (e.g., *zadúlo/zadúla* vs. *zaveló/zavelá* vs. *zážilo/zažilá* vs. *zaplylo/zaplylá*).

These relationships show the significance of the stress pattern found among truncated stems. Curiously, Jakobson's classification of the stress pattern of verbs with mobile stress runs contrary to our main point about the need to consider the stress of truncated forms. Let us illustrate this on the basis of the stems *postavi-*, *poprosi-*, *pozvoni-*. Jakobson (18) classified suffixed basic stems with mobile stress as "unaccented" in opposition to the "accented" basic stems which lack mobility. Thus, according to his list of verbal accent types (23-24), the stem *poprosi-* would be treated as unaccented, while *pozvoni-* would be of the type with morphophonemic stress on the suffix vowel. This appears incorrect, since in the only instances of stress opposition between *poprosi-* and *pozvoni-*, the stem *poprosi-* has a stem-final stress in opposition to a desinential stress in *pozvoni-* (e.g., *poprósiš'* vs. *pozvoníš'*, *poprósit* vs. *pozvonít*). Therefore, it seems clear that *poprosi-* ought to be treated as having a basic stem stress on the suffix, while *pozvoni-* is best treated as having a basically unstressed stem. Indeed, these conclusions were reached by Stankiewicz ("The Accentuation," 188), in contrast to the opposite stress assignments found in Jakobson's work.<sup>9</sup> Jakobson correctly establishes the principle of maximal opposition as the basis of morphophonemic analysis, in which conclusions should be based upon the position "where the other alternant too would be admissible" (17). I would suggest that the same rule should apply to the suprasegmental features as well as the segmental.

Although the same techniques may apply to establishing segmental and suprasegmental oppositions in morphophonemic analysis, these two levels must be carefully distinguished, since the morphophonemic shape of segmental features is generally based upon the longer stem alternant, while the basic accentual pattern is best seen in the truncated stem alternant. The greater accentual neutralization shown by longer stems points to a dissimilar functional value of segmental and suprasegmental levels in the Russian verbal stem. Recent theoretical developments have raised serious doubt about the desirability of treating prosodic phenomena in the same way as segmental features.<sup>10</sup> This paper provides additional evidence for the need to differentiate between the segmental and suprasegmental levels of Russian verbal stems.

## NOTES

- 1 Due to the special nature of the Russian alphabet, pedagogical practice is often able to successfully avoid the fact that there can be multiple phonetic and phonemic realizations of the full stem. Since Russian orthography is morphophonemic, full stems given orthographically automatically come out as correct basic stems. However, if one were to try to establish basic stems for a language like Belorussian, in which the spelling is phonemic rather than morphophonemic, it would become necessary to choose which of the full stems should be considered basic and the confusion between the two different entities **full** and **basic** stem would not ensue.
- 2 In the overwhelming majority of cases where verbal stems differ in length, the basic stem's length is equal to that of the longest stem. The major exception to this rule in Jakobson's system is the unsuffixed obstruent type, in which the root vowel is subject to a vowel-zero alternation, such as past tense /ʒg-la/, but /ʒog-θ/, where ʒg- is considered the basic stem (Jakobson, 17).
- 3 Interestingly, Jakobson (15) included past tense forms in his notion of "finite forms," while Straková restricts "finite verbal forms" to "forms which express person, number, and tense" (201).
- 4 Except for stems ending in a dental stop t/d.
- 5 With the exception of the verb *rodit'*, a unique example of a suffixed verb with mobile stress in its full stem form in the past tense.
- 6 This step does not seem to need much justification since such abstract notions as the basic stem must be grounded in the phonetic facts. Shapiro's study of semiotic patterning in Russian conjugation also "presupposes, naturally, the belief that 'surface' variations—the actual stuff of language—do not vary unsystematically, but rather organize themselves into a semiotic, a system of signs" (69). However, in spite of these comments on Russian surface verb structure, Shapiro did not point out the inversely proportional relation which I hope to demonstrate in this paper.
- 7 Note that there is an apparent exception to our rule that only root and suffix are stressable in type 1; this occurs in the class of perfective verbs with the stressed prefix *vy-*. However, these verbs do not really change the structural picture of two permissible places of stress, no desinential stress, and no accentual mobility in verbs with syllabic roots and suffixes, since within the class of verbs containing *vy-*, followed by syllabic root and syllabic suffix, there are still only two possible stress placements with any given (surface) suffix, i.e., in any constant environment: prefixal vs. suffixal (e.g., *výsypala* vs. *vysypála*). This stress opposition is in complementary distribution with the just described opposition root vs. suffixal, based on the environmental difference of the prefix (*vy-* as opposed to all others). The fact remains that if the prefix and suffix are held constant, there are only two possible stress placements for stems having both syllabic roots and suffixes, which constitute the longest variety of verbal stem type.
- 8 These truncated stems maintain their accentual opposition in all forms except those which use the simple desinences *-u* and *-i*. It is a curious fact that stress opposition prevails in the unique combination of shorter stem plus more complex desinence, but is suspended in the cases of shorter stem plus simple desinence.
- 9 In "The Accentuation of the Russian Verb" Stankiewicz does not discuss the fact that his stress categories  $\alpha_1$  and  $\beta$  differ from those presented in Jakobson's work; however, in the earlier paper, "The Accent Patterns of the Slavic Verb," he states that "this analysis has as its point of departure R. Jakobson, 1948, from which it differs . . . in . . . the interpretation of the accentual pattern" (86). Unfortunately, there appears to be no detailed discussion of the specific accentual points of Jakobson which Stankiewicz modified.
- 10 For example, the work of Morris Halle and Jean-Roger Vergnaud, who note that linear phonological models were found to be deficient in the description of certain "tonal phenomena commonly found in various African languages" (83).

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