

From TORT to TŭRT/TRŭT: Prototype Patterning in the Spread of the Russian N(A)pl -á

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Ideally any piece of scholarly work should accomplish both practical and theoretical goals, both enabling the community of scholars to better understand a given phenomenon, and also expanding our understanding of how phenomena of that type behave in general. Judging a piece on the precision of its practical contribution can be accomplished immediately and with some degree of certainty. The value of the theoretical contribution is less tangible, since it is generally best appreciated when it is later successfully implemented to solve a practical problem beyond the domain for which the author created it. This is often a serendipitous event, beyond the control of the original scholar, yet it is crucial to the scholarly endeavor. Indeed, the whole culture of citation indexes exists as an attempt to identify and quantify the sharing of theoretical models in the scholarly community. Dean Worth is the author of many works that have inspired others to apply his frameworks and principles to further issues. In this article I will provide yet one more small example of how a model created by Worth can be extended beyond its original domain. Although the example is itself rather trivial, the implications for the organization of linguistic information are not. The empirical evidence involved defies any attempt to discover a rule that could govern it, suggesting instead that linguistic information is organized with reference to prototypes.

In his 1983 article entitled "Conditions on á-plural formation in Russian," Worth set out to discover the parameters of the set of nouns that use the N(A)pl stressed -á in Russian. He found that rather than delimiting a discrete set, it was more appropriate to describe these nouns in terms of a best example and variations on that theme. As a cognitive linguist, I recognize the strategy Worth invoked as the description of a radial category based upon a prototype. For solid practical reasons, Worth's description is limited to multisyllabic stems (the overwhelming majority of nouns that have N(A)pl -á have multisyllabic stems).¹ The present article will extend Worth's

¹ According to Shapiro (1985: 173), there are approximately 250 nouns for which dictionaries and grammars list the N(A)pl -á. As shown below, only 33 such nouns (13%) have monosyllabic stems.

In the Realm of Slavic Philology: To Honor the Teaching and Scholarship of Dean S. Worth From His UCLA Students. John Dingley and Leon Ferder, eds. Bloomington, IN: Slavica Publishers, 1999, 145–61.

prototype model to monosyllabic stems, and will also invoke prototypicality as a force in the historical development of the N(A)pl *-á*.²

The masculine N(A)pl *-á* is a characteristically Russian piece of morphology, nearly unique in the Slavic territory.³ The factors that contributed to the development of this ending include the existence of former dual endings in *-a*,⁴ the existence of NApl – Gsg syncretism in the neuter and feminine paradigms, the existence of collective forms in *-a*, and the spread of the oblique plural endings Dpl *-am*, Ipl *-ami*, and Lpl *-ax*, yielding a declension that could be interpreted as being both genderless and agglutinative, where *-a-* signals plural, and *-m*, *-mi*, *-x* signal the respective oblique cases (but the Gpl

² This article is an expansion of preliminary work on this topic presented in Janda 1996 (180–85).

³ This ending is conspicuously absent in neighboring Belarusian, and in most other Slavic languages N(A)pl *-a* is limited to a mere handful of nouns. Ukrainian shows the strongest productivity outside of Russian, but even here the ending is limited to about a dozen nouns, and in all cases an alternative Npl in *-y* is available. Bulgarian has only four masculine nouns with plural forms in *-á*; two of them refer to paired items (suggesting the dual number as the origin of the deviant ending): *rog* 'horn' and *krak* 'leg,' but two do not: *list* 'leaf' and *gospodin* 'sir.' Cummins (1991: 266) suggests the early development of a similar degendered plural in *-a* in Czech, later partially eliminated by "the normative endeavors of the founders of literary Czech."

⁴ Stankiewicz (1981: 50–51) rejects the possibility that Russian N(A)pl *-á* draws its origin from the dual, on the grounds that the old Slavic dual was probably not end-stressed. He explains it instead as an extension of the neuter NApl, encouraged by the spread of Dpl *-am*, Ipl *-ami*, Lpl *-ax*. Stankiewicz's view is, however, idiosyncratic; most scholars agree that the dual was important in this development. Gorškova & Xaburgaev (1981: 210) point out that the spread of N(A)pl *-á* in Russian began in the 15–17th centuries, by which time a considerable amount of reshuffling of accentuation patterns had already taken place. The prominence of paired items in the inventory of nouns that commonly occur with N(A)pl *-á* is also hard to ignore:

| | | | |
|-------------------|-----------------------|---------------|--------------------|
| <i>breg/bereg</i> | 'bank' | <i>bort</i> | 'side of a ship' |
| <i>rog</i> | 'horn (on an animal)' | <i>bok</i> | 'side' |
| <i>glaz</i> | 'eye' | <i>kraj</i> | 'side; edge; land' |
| <i>mex</i> | 'bellow(s)' | <i>rukav</i> | 'sleeve' |
| <i>povod</i> | 'rein' | <i>obšlag</i> | 'cuff' |
| <i>tormoz</i> | 'brake' | <i>postav</i> | 'millstone' |
| <i>žernov</i> | 'millstone' | | |

remains anomalous). In order to assess the roles of these factors in this development, we need to reconstruct the relevant stages this development went through in the history of Russian.⁵ East Slavic (in approximately the 13th century) presented the following picture of agreement for numerals (in direct cases):

- a singular and plural, with a special dual number for paired items
- '1' behaved as a pronoun and agreed in number, gender, and case; '2,' '3,' '4' behaved as adjectives and agreed in gender and case with nouns in the dual for '2' and in the plural for '3' and '4'; and numerals above '5' behaved as nouns and governed the Gpl of the nouns they quantified
- in most nominal and adjectival morphology the masculine and the neuter have similar declensions, opposed to feminine
- one of the primary functions of the genitive case is to mark quantification.

On the basis of these observations, the following chains of abductive-deductive reasoning⁶ were motivated:

An abduction was made that masculine and neuter pattern together, yielding the deduction that *-a* could serve as the NAVdu form for neuters (this eliminates most neuter forms in *-ě* which were parallel to feminine forms, but does not remove the neuter NAVdu *-i*, which survives yet in Russian, as in *koleni* 'knees').

- An abduction was made that the numerals '2,' '3,' '4' pattern together, since they are the only numerals that behave as adjectives.⁷ The deduction was made that the nouns they quantify draw on the same set of morphology, resulting in a contamination of construction types.

⁵ This account is based primarily on the information presented in Šaxmatov 1957 (207–18) and Gorškova & Xaburgaev 1981 (210–12).

⁶ The role of abductive-deductive reasoning in linguistic change is described in Andersen 1973.

⁷ The quantifiers 'both' (*oba, obe*) and '1 1/2' (*poltora*) are both related to '2' and behave similarly. From henceforth '2' includes reference to these numerals as well.

Thus in the 14th century there are attestations both of plural forms used with '2' and of dual forms used with '3' and '4.'

An abduction was made that the form used with '2,' '3,' '4' is closely associated with the N(A)pl and the Gsg, since these forms were now syncretic for neuters, and showed significant overlap in other paradigms. Thus the neuter *o*-stems and the *i*-stems emerged as prototypical paradigms with respect to syncretism of endings for the N(A)pl, Gsg, and adjectival numerals. The *a*-stems showed only slight deviation from this syncretic pattern, by allowing variation in the ending used with adjectival numerals. As shown in table 1, the masculine *o*-stems deviated most from this pattern, targeting them for analogical change.

Table 1: Prototypical Patterns for Syncretism

| <i>prototypicality</i> | <i>stem type</i> | N(A)pl | Gsg | '2, 3, 4' |
|------------------------|------------------------------|--------|-----|-----------|
| prototypical | neuter <i>o</i> -stems | -a | -a | -a, (-i) |
| patterns | <i>i</i> -stems | -i | -i | -i |
| slight deviation | <i>a</i> -stems ⁸ | -y | -y | -ě, -y |
| greater deviation | masculine <i>o</i> -stems | -i/-y | -a | -a, -i/-y |

This distribution of endings in major paradigms in the late 14th–early 15th centuries led to the deduction that these three forms should be syncretic, following the pattern in most neuter *o*-stems and in *i*-stems. The *a*-stems yielded by replacing -ě with -y with '2,' '3,' '4.' Since the masculine *o*-stem paradigm was further removed from prototypicality, its course of development was more complex.

At this point it is likely that the old dual forms no longer signaled 'pairedness' in any coherent fashion, nor did they signal any other number; they had lost their specific identity in the number system. Dual forms were thus in themselves numberless forms, neither

⁸ This table glosses over the significant relationships between the *a*-stem Gsg and DLsg (and also between the soft and hard paradigms), which took another two or three centuries to be fully resolved, but the trend was already toward Gsg -y. In this table, -i and -y are listed separately although their merger in Russian probably took place in the 12th century because of the morphophonemic alternations that took place before -i but not -y.

singular nor plural, requiring numerals to be interpreted. Subsequent to this point the historical development of Russian departed from that of Belarusian and Ukrainian. Whereas the peripheral location of Russian supported the retention of the dual somewhat longer, creating a situation in which the use of formerly dual forms with '2,' '3,' '4' predominated, the opposite was true of the other East Slavic languages, where the preponderance of forms were plural and the dual forms were quickly edged out.

The former NAVdu forms in Old Russian were ambiguous in terms of case marking, parallel to N(A)sg forms used with '1' and to Gpl forms used with numerals '5' and over, and formally associated with both the N(A)pl and the Gsg. Thus both the number and case of these forms were available for reinterpretation, yielding an identification as one or the other of the formally associated case-number assignments. In modern Russian, this identification is unambiguously expressed only in the presence of agreeing adjectives. The presence vs. absence of a numeral plays an important role in this process. Quantification by a numeral supports the identification of the ambiguous form as a genitive, whereas the absence of a numeral does not. Thus with '2,' '3,' '4' the *-a* desinence with masculine nouns is now formally recognized as a Gsg and has eclipsed *-i/-y*. This ending is accompanied by Gpl adjectival morphology (singular adjectival endings were not implemented presumably due to the fact that '2,' '3,' '4' clearly could not make singular reference). The identification of *-i, -y* with feminine nouns in collocation with '2,' '3,' '4' remains ambiguous, as evidenced by the interchangeable use of both N(A)pl and Gpl adjectival endings. Where quantification was not overtly marked by '2,' '3,' '4' the ambiguous form was interpreted as N(A)pl, which led to the spread of *-a* to the N(A)pl of the masculine *o*-stem class, where it competes with *-i/-y*, but, as noted above, this development was also influenced by the existence of collectives in *-a*, the spread of *-am, -ami, -ax*, and the restructuring of mobile accentual paradigms.

Over time scholars have noted both the expansion and (more rarely) retreat of the N(A)pl *-á* morpheme, as observed in attestations from the 15th through 20th centuries (Shapiro 1985, Worth 1983, Panov 1968, Ivanova 1967). Studies of N(A)pl *-á* in both the 19th and 20th centuries suggest that this morpheme is usually associated with affective language, able to take on both positive and negative emotional coloring, a fact that has likely restricted its access to literary codification (Terlov 1987). Aside from only two exceptions involving nouns with fixed end stress (the formerly dual *rukavá* 'sleeves' and

the analogical *obšlagá* 'cuffs'), N(A)pl *-á* is possible only for nouns with accentual patterns that permit end stress in the N(A)pl as opposed to stem stress in the singular. However this simple prosodic constraint merely identifies the group of nouns that is excluded from the phenomenon; it defines the category negatively but not positively. Even among nouns with the requisite accentual pattern N(A)pl *-á* is the exception rather than the rule, and the task of identifying the nouns that have this special plural is better understood as a prediction of probabilities than as a rule-governed phenomenon. Worth (1983) has provided the most satisfying description, identifying the model member of this category as a disyllabic or polysyllabic pleophonic stem, with penultimate stress assigned prior to pleophony and jer insertion (thus *kólokol* 'bell,' is actually **kólkol*). In his words (Worth 1983: 261):

the segmental conditions on *-á*-plural formation consist of what might be called a kind of neo- or pseudo-pleophony, joining together into a single, albeit not yet adequately described structural class three genetically disparate groups of words:

- 1) actual East Slavic pleophonic words (*béreg* 'bank,' *gólos* 'voice,' *tétereč* 'grouse,' *kólokol* 'bell')
- 2) Russian stems which partially imitate the segmental phonology of pleophonic forms (*pótrox* 'entrails,' *tórmox* 'brake')
- 3) native and borrowed (usually German) words with reversal of medial and final consonant classes, as compared to pleophonic forms (*věčer* 'evening,' *tópol* 'poplar,' *sóbol* 'sable,' *štépsel* 'socket,' *šómpol* 'cleaning rod').

What Worth describes here is a radial category centered around the prototypical pleophonic ("tort") stems.

Worth's analysis does not discuss the distribution of N(A)pl *-á* among monosyllabic stems in any detail, and this is not surprising, since there are only thirty-three nouns for which this ending has been codified in the literary language. The distribution for monosyllabic stems, however, betrays structure similar to the one discovered by Worth for multisyllabic stems, focusing on the prototypical shape of CVmidRC/CRVmidC, where C indicates a consonant or consonant cluster, Vmid indicates a mid vowel, and R indicates a liquid (*r* or *l*); i.e., nouns arising from *türt/trüt* groups and their look-alikes. This

finding, elaborated below, is consistent with the observation of an affinity between *tort* and *türt/trüt* stems.⁹

The following is an account of a modest study of the stems listed in Švedova *et al.* 1982 and major dictionaries as examples of monosyllabic nouns that do exhibit the N(A)pl -á ending and of similar nouns with the requisite stress pattern (stem stress in singular, but end stress in plural) for which this ending is not sanctioned in the literary language. According to these sources, there are ninety-eight masculine monosyllabic stem nouns in Russian representing eleven stem types (sequences of C, R, Vmid, and Vnon-mid) that are prosodically capable of supporting this ending, but the N(A)pl -á is codified in the literary language for only thirty-three nouns belonging to six stem types. Table 2 presents the stem for which N(A)pl -á is officially recognized in the literary language, and Table 3 lists the stems for which this ending is not recognized.

Table 2: Words that have N(A)pl -á in the Literary Language*

(*Words that also use -y/-i are asterisked; numbers refer to stem types)

2) CVmidRC

| | |
|--------------|--------------------|
| <i>bort</i> | 'side (of a ship)' |
| <i>verx</i> | 'summit' |
| <i>grom*</i> | 'thunder' |
| <i>korm</i> | 'fodder' |
| <i>sort</i> | 'sort' |
| <i>šelk</i> | 'silk' |
| <i>štom*</i> | 'storm gale' |

⁹ Janda 1995 explored affinities between *tort* and *türt/trüt* stems in relation to the "second locative" -ú ending. Of the 148 masculine nouns that exhibit this ending, 138 have monosyllabic or nonsyllabic stems, and *türt/trüt* stems figure prominently in this group. The remaining ten nouns that have polysyllabic stems all derive from monosyllabic stems, either via word-formation or pleophony of *tort* stems. The second locative in -ú can be thought of as the converse of the N(A)pl in -á. Whereas the N(A)pl -á is based upon *tort* stems, and can be extended exceptionally to *türt/trüt* stems, the second locative takes *türt/trüt* as its norm and can be extended to *tort* stems. Together, these facts point to an association between the two stem types, perhaps once motivated by the ablaut patterns possible for liquid diphthongs, which could produce both *tort* and *türt* stems from a single root.

3) CRVmidC

| | |
|--------------|--------------------|
| <i>breg</i> | 'bank' |
| <i>grob*</i> | 'coffin, grave' |
| <i>sled*</i> | 'track, footprint' |
| <i>xleb</i> | 'bread' |
| <i>xlev</i> | 'barn' |

4) RVmidC

| | |
|------------|----------|
| <i>les</i> | 'forest' |
| <i>log</i> | 'gully' |
| <i>rog</i> | 'horn' |

5) CVmidC

| | |
|-------------|--|
| <i>bok</i> | 'side' |
| <i>vek</i> | 'century' |
| <i>ves</i> | 'weight' |
| <i>god*</i> | 'year' |
| <i>dom</i> | 'house' |
| <i>mex*</i> | 'fur; bellows, wine-skin' |
| <i>sneg</i> | 'snow' |
| <i>stog</i> | 'rick' |
| <i>sčēt</i> | 'bill' |
| <i>tok*</i> | 'bird's mating place; threshing-floor' |
| <i>tom</i> | 'volume' |
| <i>ton</i> | 'tone' |
| <i>cvet</i> | 'color' |
| <i>cex*</i> | 'guild' |
| <i>xod*</i> | 'gait' |

8) CRVnon-midC

| | |
|-------------|--------------|
| <i>glaz</i> | 'eye' |
| <i>kraj</i> | 'edge; land' |

9) RVnon-midC

| | |
|------------|----------|
| <i>lug</i> | 'meadow' |
|------------|----------|

Table 3: Words that do not have N(A)pl -á in the Literary Language

| Word and gloss | Cited with N(A)pl -á in Ivanova 1967 | N(A)pl -á accepted by speaker 1 | N(A)pl -á accepted by speaker 2 |
|---|--------------------------------------|---|--|
| 1) CVmidR | | | |
| <i>bor</i> 'coniferous forest' | yes | no, clashes with <i>borá</i> 'NE wind on Black Sea' | no |
| <i>pol</i> 'half' | yes | no | no |
| <i>xor</i> 'choir' | no | yes, sounds archaic | yes |
| 2) CVmidRC | | | |
| | yes | no | no |
| | yes | yes | yes |
| | yes | no | yes |
| | yes | yes | yes, as technical term |
| 4) RVmidC | | | |
| | yes | no | no |
| | yes | no | yes |
| | no | no | no, because of clash with <i>raja</i> 'paradise' Gsg |
| 5) CVmidC | | | |
| | yes | no | no |
| | yes | no maybe in some contexts | no |
| <i>zob</i> 'bird's crop' | yes | yes | maybe |
| <i>kon</i> 'kitty (games)' | no | no plural | no |
| <i>mozg</i> 'brain' | yes | no | no |
| <i>nos</i> 'nose' | yes | no | no |
| <i>pot</i> 'sweat' | no | no plural | no |
| <i>most</i> 'bridge' | yes | no | no |
| <i>sboj</i> 'head, legs, entrails (meat)' | no | no | no |

6) CVnon-midR.

| | | | |
|---|-----|-------------------------------|---|
| <i>bal</i> 'ball' | no | no | no |
| <i>val</i> 'shaft' | no | no | no, clashes with <i>volá</i> 'ox' Gsg |
| <i>žir</i> 'fat' | | yes, as a term | no |
| <i>mir</i> 'peace, world' | | yes, as a term | maybe Russian symbolists would use it |
| <i>pal</i> 'bollard, pawl' (naut.); 'fire' (dial.) | no | no plural | no |
| <i>par</i> 'steam' | yes | yes, as a term | no, clashes with <i>porá</i> 'time' |
| <i>pir</i> 'feast' | no | no | no |
| <i>syr</i> 'cheese' | no | maybe among cheese workers | no |
| <i>tyl</i> 'rear' | yes | no | yes |
| <i>šar</i> 'sphere' | no | no | no |
| <i>jar</i> 'ravine' | no | no | no |

7) CVnon-mid RC

| | | | |
|------------------------|----|----------------|----------------|
| <i>spirt</i> 'alcohol' | no | yes, as a term | yes, as a term |
|------------------------|----|----------------|----------------|

8) CRVnon-midC

| | | | |
|----------------------------------|-----|-------------------------|---|
| <i>glas</i> 'voice, tune' | no | no | yes |
| <i>grunt</i> 'soil' | no | farmers might use it | construction workers might use it |
| <i>klub</i> 'club; puff' | yes | no | yes for meaning 'puff' |
| <i>krug</i> 'circle' | yes | no | maybe |
| <i>plug</i> 'plough' | yes | yes, colloquial | yes, young urbanites would say this |
| <i>priz</i> 'prize' | yes | no | maybe a villager would say this |
| <i>prud</i> 'pond' | no | no | yes |
| <i>sklad</i> 'storehouse' | yes | yes | no |
| <i>strug</i> 'plane, boat' | yes | maybe | maybe |
| <i>fljus</i> 'dental abscess' | no | no | maybe |
| <i>šljax</i> 'highway' | no | no | maybe |

9) RVnon-midC

| | | | |
|----------------------|-----|-------|-----------------|
| <i>lad</i> 'harmony' | no | no | no |
| <i>raz</i> 'time' | yes | maybe | yes, colloquial |
| <i>rjad</i> 'row' | yes | no | maybe |

10) CVnon-midC

| | | | |
|-----------------------------|-----|--|--|
| <i>bas</i> 'bass' | yes | no | yes |
| <i>buj</i> 'buoy' | no | no | yes |
| <i>bunt</i> 'mutiny' | yes | no | maybe |
| <i>dub</i> 'oak' | yes | no | no |
| <i>dym</i> 'smoke' | no | maybe in poetry | no |
| <i>zad</i> 'back' | yes | no | no |
| <i>koas</i> 'beverage' | no | yes, as a term | no plural |
| <i>kub</i> 'cube; still' | yes | yes, as a term | no |
| <i>kus</i> 'morsel' | no | no | no |
| <i>mys</i> 'promontory' | yes | yes, as a term | maybe among sailors |
| <i>niz</i> 'nether parts' | yes | yes, because Dpl is <i>po nizám</i> | no |
| <i>paz</i> 'groove' | no | yes, as a term | no |
| <i>paj</i> 'share' | no | no | no |
| <i>pan</i> 'gentleman' | no | no | no |
| <i>pud</i> 'unit of weight' | no | no | no |
| <i>sad</i> 'orchard' | yes | no | no |
| <i>sup</i> 'soup' | yes | yes | no |
| <i>taz</i> 'basin' | yes | no | no |
| <i>us</i> 'whisker' | no | no | no |
| <i>čas</i> 'hour' | no | no | no |
| <i>škaf</i> 'cupboard' | no | no | no |
| <i>šktiv</i> 'pulley' | yes | yes, as a term | yes |
| <i>štab</i> 'headquarters' | no | yes, soldiers might say this | maybe peasants who had never been to war would say this |
| <i>jus</i> 'nasal vowel' | no | yes | no |

11) CVmidCR¹⁰

| | | | |
|--------------------|----|----|----|
| smotr 'inspection' | no | no | no |
|--------------------|----|----|----|

Table 3 contains the results of various tests that were done with this set of nouns. The first test was a search for the noun among the entries of attestations of N(A)pl -*á* given by Ivanova (1967: 69–77). Ivanova's database can be thought of as a maximal projection of the extent of N(A)pl -*á* in modern Russian; Ivanova cites every instance of N(A)pl -*á* to be found in sources from the 19th and 20th centuries, twenty-seven sources are grammars and dictionaries of Russian (among them sources such as Dal's *Tolkovyj slovar'* that include dialectal forms), and the remaining thirty-eight are literary works by Russian and Soviet authors (also including authors such as Majakovskij and Šoloxov, who do not shy away from unusual or dialectal forms). In all, Ivanova lists 648 words for which N(A)pl -*á* has been attested. Of these, only about 250 are literary forms; the use of N(A)pl -*á* with the remaining 400 words is classed as specific to some circumstances, being identified as archaic, regional, folkloric, poetic, professional jargon, or colloquial. Ivanova cites N(A)pl -*á* forms for thirty-five (54%) of the sixty-five words in table 3.

The words in Table 3 were also presented to two native consultants, who were asked whether they thought that other speakers of Russian might use the N(A)pl -*á* form (the assumption was that because both consultants were teachers of Russian, they were thoroughly versed in the prescriptive norms of the literary language, and would reject the possibility that they themselves would ever use such forms). The table summarizes their responses. The consultants were not given a slate of multiple choice alternatives, nor were they coached in any way about how they should respond, but were free to give as much or as little information as they wanted. Their responses show that speakers draw on their knowledge of a variety of domains when judging the acceptability of forms, among them their knowledge of paradigms, of linguistic categories, and of cultural factors. Before answering, Speaker 1 typically rehearsed the plural paradigm out loud, checking the N(A)pl -*á* form against the Dpl, Ipl, and Lpl. For this speaker, the suggested abduction that nouns can have an agglutinative plural paradigm (with -*á*- marking

¹⁰ Because stem type 11) CVmidCR contains only one stem with uniformly negative results, it will be ignored in the remainder of the analysis.

plural number and subsequent segments marking oblique cases) may well hold true. In a number of instances, one of the speakers countered that the noun in question had no plural at all (much less the N(A)pl -á); the nouns identified as being singular only were: *kon* 'kitty' (games), *pot* 'sweat', *pal* 'bollard, pawl' (naut.); 'fire' (dial.), and *kvás* 'beverage'. Both speakers rejected some words on the grounds that the N(A)pl -á would clash with a homonym, thus **rojá* 'swarms' was predicted to clash with *rajá* 'paradise' (Gsg), **borá* 'coniferous forests' was predicted to clash with *borá* 'NE wind on the Black Sea', **valá* 'shafts' was predicted to clash with *volá* 'ox' (Gsg), and **pará* 'steams' was predicted to clash with *porá* 'time'. The remainder of the comments made by the native consultants are remarkably parallel in their classification to those suggested by Ivanova (though neither of the consultants was familiar with this article). **Xorá* 'choirs' sounded archaic to one speaker, and to the other speaker **mirá* 'peaces, worlds' sounded poetic, like something that the Russian symbolists might use. The reaction to **prizá* 'prizes' as something that a villager would say suggests that this use sounds folkloric. Both **plugá* 'ploughs' and **razá* 'times' were judged colloquial. There are thirteen responses that seem to be connected to professional jargon, and some of these contain the further judgment that segments of the population that are either very familiar with the given word or are very unfamiliar with it are likely to use N(A)pl -á forms. It was suggested that farmers and construction workers would view *grunt* 'soil' as a technical term, licensing their use of **gruntá*; in a similar way, cheese workers were thought likely to use **syrá* 'cheeses'. On the opposite end of familiarity was the comment made by Speaker 2 that young urbanites (who would be thoroughly unfamiliar with farming implements) might use **plugá* 'ploughs' on the assumption that this form is used by farmers. Responses to **štábá* 'headquarters' drew on assumptions about groups that were both very familiar and very unfamiliar with this word, since Speaker 1 suggested that soldiers might say this, whereas Speaker 2 volunteered the information that this was likely to be heard from peasants who had never been to war.

One further test, not indicated in Table 3, was carried out on the set of nouns for which N(A)pl -á is not sanctioned in the literary language. From each of the first ten stem shapes, the noun that appeared most likely to yield N(A)pl -á forms was chosen, based upon Ivanova's citations and the judgments of the two speakers. All of these nouns were then checked against the largest online searchable database of texts available to this author (the texts for the entire year 1998 for about two dozen major Russian newspapers, available

at <http://news.eastview.com>). The results of this search (which involved checking through thousands of "hits," all of which turned out to be Gsg, not N(A)pl forms) were unfortunately negative. However, there were two kinds of negative results, and there is something to be learned from them. Four of the nouns in the original sample turned up no hits whatsoever in this enormous database: *zobá* 'bird's crop' (Gsg/*N(A)pl), *plugá* 'plough' (Gsg/*N(A)pl), *skladá* 'storehouse' (Gsg/*N(A)pl), and *škivá* 'pulley' (Gsg/*N(A)pl). It is somewhat remarkable that 40% of the nouns that appeared most likely to use N(A)pl -á are also so rare that they did not even appear in the database. For each negative result of this type, another noun was chosen and run through the database. *Strugá* 'plane, boat' (Gsg/*N(A)pl), the second choice for the CRVnon-midC stem shape, turned up only thirteen hits (all of which were Gsg forms). The remaining words turned up 160 or more hits (though all were Gsg forms): *xorá* 'choir' (Gsg/*N(A)pl), *portá* 'port' (Gsg/*N(A)pl), *rodá* 'clan' (Gsg/*N(A)pl), *vozá* 'cart' (Gsg/*N(A)pl), *žirá* 'fat' (Gsg/*N(A)pl), *spirtá* 'alcohol' (Gsg/*N(A)pl), *rjadá* 'row' (Gsg/*N(A)pl), and *basá* 'bass' (Gsg/*N(A)pl). We should also note that six of the total of fourteen likely candidates for N(A)pl were foreign words. The results of this test suggest that N(A)pl -á is associated with words that are foreign and/or relatively rare in printed prose.

This is not intended as a statistically significant study (and it is probably not really worth doing such a study given the small sample of nouns involved),¹¹ but rather as an attempt to show the hierarchical structure within the category of monosyllabic nouns that actually or potentially realize N(A)pl -á. Indeed, the structure observed here parallels and thereby confirms the structure suggested by Worth (1983) for longer stems. Table 4 on the following page juxtaposes information recorded in Tables 2 and 3, and also presents a map of these hierarchies.

¹¹ The problem of sample size is endemic to *türt/trüt* stems; witness the failure of Slavists to discover any coherent rules governing the outcomes of these sequences in the West and South Slavic languages.

Table 4: Map of Hierarchies

| | |
|-------------------|-----------------------|
| 1) CVmidR 45% | 6) CVnon-midR 30% |
| 2) CVmidRC 66% | 7) CVnon-midRC 66% |
| 3) CRVmidC 83% | 8) CRVnon-midC 60% |
| 4) RVmidC 33% | 9) RVnon-midC 55% |
| 5) CVmidC 33% | 10) CVnon-midC 37% |

The percentages listed in Table 4 compress all results from Ivanova and from the two speakers; they are the percentage of non-negative responses for all nouns of the given stem shape (they are of course not very significant, but they do follow the general cline of preferences). 2) CVmidRC and 3) CRVmidC (i.e. the *türt/trüt* reflexes and their look-alikes) emerge as the prototype for the category of monosyllabic stems that use N(A)pl -á. These two stem types show a nexus of factors, such as high percentages of officially sanctioned N(A)pl -á forms and high likelihood of N(A)pl -á use with other words. The shaded boxes identify those stem types for which there are nouns that have N(A)pl -á forms officially recognized in the literary language. Shaded boxes with borders (both thick and thin) identify stem shapes for which 50% or more of the prosodically available nouns have N(A)pl -á forms officially recognized in the literary language. The table is arranged to show minimal deviations from the prototype in terms of stem shape. The left column represents stems with mid vowels, whereas the right column represents the same stems with non-mid vowels. 1) CVmidR and 4) RVmidC deviate from the prototype in that a consonant has been removed from one or the other end of the stem. 5) CVmidC is yet a further deviation, for it lacks the liquid that is characteristic of stems that use N(A)pl -á. Ultimately this table could be conceived of as a ring (in which the top and bottom rows would be contiguous), for 1) CVmidR and 5) CVmidC likewise differ minimally in that the liquid is replaced by a consonant or vice-versa. The table shows that the patterning of words that do have an officially sanctioned N(A)pl -á is

not random. Though only six of the possible stem shapes have such words, these stem shapes cohere as a group; rather than being randomly scattered across the table, all are linked to the prototype via minimal differences. Two hierarchies of stem shape can be identified. The presence of a liquid, particularly when it precedes the vowel increases the likelihood of N(A)pl -á, and there is a clear preference for stem shapes with mid vowels.

The question of why some monosyllabic stems attract the N(A)pl -á whereas others do not is certainly very minor, but it demonstrates the way in which linguistic information is organized. There is clearly a pattern overarching the distribution of N(A)pl -á in both monosyllabic and multisyllabic stems, and this pattern integrates information from a great variety of sources, such as segmental shape, prosodic characteristics, as well as judgments about the meaning of nouns and how various segments of the population of speakers are likely to interact with them. Even when the behavior of linguistic categories cannot be described as being rule-governed, this does not in any way imply that it is random or erratic. Such behavior is orderly and well-motivated, and also interesting to investigate, even if it does not yield any absolute predictions.

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