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## MORPHOLOGY AND SYNTAX: DELIMITING STUMP COMPOUNDS IN RUSSIAN

Determining the degree to which syntax is involved in morphological compounds—the central issue of the Mytilene conference's session on compounding—is elucidated by so-called stump compounds in Russian. This paper uses two particularly interesting case studies to illustrate stump compounds' hybrid properties.<sup>1</sup>

This paper consists of four parts: First I discuss the properties distinguishing stump compounds. Then I present two case studies which show that some stump compounds involve internal case-assignment: In the first case study the stump assigns quirky case to the following part of the compound. The second study shows that a stump compound and its non-stump counterpart correspond to differing syntactic case-assignment. In the final section I suggest, using colloquial data, that syntactic relations within stump compounds are unstable and this situation is rectified in one of two ways: Either the stump starts to act as a full-fledged word or the syntactic relation disappears.

### 1. Background, definitions, diagnostics

I begin by distinguishing between two types of truncative morphology in Russian.<sup>2</sup> Following Ward (1965:156-63), I refer to the examples in (1) as STUMP COMPOUNDS, in which the first of two stems is shortened (usually) to its first syllable.<sup>3</sup>

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<sup>1</sup> Most of this paper originally appeared in Billings (1995) and was presented in lectures at Leipzig and Princeton, and as a talk at the first Mediterranean Conference of Morphology. I express my appreciation to the audiences at all of these venues, especially to G. Adassovsky, L. Babby, T. Beyer, D. Carius, B. Cetnarowska, R. Cleminson, G. Corbett, A.-M. Di Sciullo, L. Downing, S. Franks, S. Harves, A. Israeli, G. Jarema, U. Junghanns, E. Komar, R. Leed, A. Ralli, K. Robblee, G. Rowicka, M. Schoorlemmer, A. Spencer, A. Thornton, M. Vigarito, M. Yadroff, G. Zybatow and the Slavic and East European Languages e-mail list (seelangs@cunyvm.cuny.edu). Any shortcomings in this paper are solely my own responsibility.

<sup>2</sup> As Andrew Spencer has pointed out to me, stump compounds (and perhaps even clips) might better be referred to not as WORD-FORMATION, but as WORD-CREATION. This is because such forms are generally coined not spontaneously, but by bards, advertising executives, authors and the like. I admit that while their coinage might be restricted in this way, stump compounds' properties are quite rigid prosodically. That is to say, there is a real grammar constraining their production.

<sup>3</sup> The following special notations are used in this paper. Abbreviations: ACC(usative), ADJ(ective), ADPAUC(al), DAT(ive), F(eminine), GEN(itive), INFIN(itive), INST(rumental), LOC(ative), M(asculine), N(oun), NOM(inative), NT: neuter, NUM(eral), SG: singular, P(preposition), PL(ural). Stress notation: Main word stress is shown in ALL-CAPS; secondary stress, in SMALL CAPS; other syllables, in plain text. Truncated (either stumped or clipped) words are underlined. Unless otherwise marked, the form is in the NOM and SG. Finally, a bullet (•) indicates the boundary within complex word-formations.

## (1) Stump compounds

- |    |  |                          |  |
|----|--|--------------------------|--|
| a. | gorodSKOJ soVET  | <u>GOR</u> •soVET        | [GOR.sa.V <sup>j</sup> ET]                   |
|    | city <sub>(ADJ)M</sub> council <sub>(N.M)</sub>          | 'city council'           |  |
| b. | informaciONnoe bjuRO                                     | <u>inFORM</u> •bjuRO     | [in.FORM.b <sup>j</sup> u.RO]                |
|    | information <sub>(ADJ)NT</sub> bureau <sub>(N.NT)</sub>  | 'information agency'     |  |
| c. | kommunisTIčeskaja PARTija                                | <u>KOM</u> •PARTija      | [KOM.PAR.t <sup>i</sup> jə]                  |
|    | communist <sub>(ADJ)F</sub> party <sub>(N.F)</sub>       | 'communist party'        |  |
| d. | komanDIR polKA   | <u>KOM</u> •polKA        | [KOM.paI.KA]                                 |
|    | commander <sub>(N.M)</sub> regiment <sub>(N.M)GEN</sub>  | 'regimental commander'   |  |
| e. | koMANDnyj soSTAV   | <u>KOM</u> •soSTAV       | [KOM.sa.STAF]                                |
|    | command <sub>(ADJ)M</sub> composition <sub>(N.M)</sub>   | 'command personnel'      |  |
| f. | poloVina GOda  | <u>POL</u> •GOda         | [POL.GO.də]                                  |
|    | half <sub>(N.F)</sub> year <sub>(N.M)GEN</sub>           | 'half (a) year'          |  |
| g. | profsoJUZnoe soBRAnie                                    | <u>PROF</u> •soBRAnie    | [PROF.sa.BRA.n <sup>i</sup> jə]              |
|    | trade-union <sub>(ADJ)NT</sub> meeting <sub>(N.NT)</sub> | 'trade-union meeting'    |  |
| h. | xoZJAJstvennyj rasČET                                    | <u>XOZ</u> •rasČET       | [XOS.raš <sup>j</sup> .Š <sup>i</sup> OT]    |
|    | household <sub>(ADJ)M</sub> calculation <sub>(N.M)</sub> | 'self-supporting basis'  |  |
| i. | upraVLJAjuščij deLAmi                                    | <u>UPRAV</u> •deLAmi     | [u.PRAF.di <sup>e</sup> .LA.m <sup>i</sup> ] |
|    | manager <sub>M</sub> affairs <sub>(N.NT)INST.PL</sub>    | 'on-site manager'        |  |
| j. | zaVEDujuščij laboraTORiej                                | <u>ZAV</u> •laboraTORiej | [ZAF.lə.bə.ra.TO.r <sup>i</sup> jij]         |
|    | director <sub>M</sub> laboratory <sub>(N.F)INST</sub>    | 'laboratory director'    |  |

Stress notation follows Borunova *et al.* (1989). Cf. Hamilton (1980) and the references therein regarding the the phonetics of Russian.

The forms in (2), which I will simply call CLIPS, are another type of abbreviation.

## (2) Clips

- |    |   |                               |                                       |
|----|---|-------------------------------|---------------------------------------|
| a. | parTIJnyj organiZAtor   | <u>part</u> • <u>ORG</u>      | [paI.TORK]                            |
|    | party <sub>(ADJ)M</sub> organizer <sub>(N.M)</sub>                | '(political-)party organizer' |                                       |
| b. | polnoMOČnyj predstaVitel'   | <u>pol</u> • <u>PRED</u>      | [paI.PR <sup>i</sup> ET]              |
|    | plenipotentiary <sub>(ADJ)M</sub> representative <sub>(N.M)</sub> | 'ambassador plenipotentiary'  |                                       |
| c. | profsoJUZnyj organiZAtor  | <u>prof</u> • <u>ORG</u>      | [pra.FORK]                            |
|    | trade-union <sub>(ADJ)M</sub> organizer <sub>(N.M)</sub>          | 'trade-union organizer'       |                                       |
| d. | proizvoDitel' raBOT   | <u>pro</u> • <u>RAB</u>       | [pra.RAP]                             |
|    | producer <sub>(N.M)</sub> operations <sub>(N.F)GEN.PL</sub>       | 'construction superintendent' |                                       |
| e. | SEL'skij korresponDENT  | <u>SEL</u> • <u>KOR</u>       | [s <sup>i</sup> EL <sup>i</sup> .KOR] |
|    | rural <sub>(ADJ)M</sub> correspondent <sub>(N.M)</sub>            | 'rural correspondent'         |                                       |
| f. | ŠKOL'nyj raBOTnik   | <u>ŠK</u> • <u>RAB</u>        | [ŠKRAP]                               |
|    | school <sub>(ADJ)M</sub> staffer <sub>(N.M)</sub>                 | 'schoolteacher'               |                                       |
| g. | sociAL'naja straXOVka   | <u>SOC</u> • <u>STRAX</u>     | [SOTS.STRAX]                          |
|    | social <sub>(ADJ)F</sub> insurance <sub>(N.F)</sub>               | 'social insurance'            |                                       |
| h. | upraVLJAjuščij DOmom  | <u>uprav</u> • <u>DOM</u>     | [u.pra.v.DOM]                         |
|    | manager <sub>M</sub> house <sub>(N.NT)INST.PL</sub>               | 'manager of a block of flats' |                                       |
| i. | xoZJAJstvennyj magaZIN  | <u>XOZ</u> • <u>MAG</u>       | [XOS.MAK]                             |
|    | household <sub>(ADJ)M</sub> store <sub>(N.M)</sub>                | 'household(-goods) store'     |                                       |

The descriptive properties in (3a-d) distinguish stump compounds (1) from clips (2)—as well as from non-truncating compounds:

(3) Properties of stump compounds

- The final stem is **not** truncated; any non-final stem is truncated to a “stump”.
- Stumps are invariably consonant-final; if this is an obstruent, then it is devoiced.
- Stumps are monosyllabic if consonant-initial and disyllabic if vowel-initial.
- Stumps bear secondary stress (shown in SMALL CAPS in this paper).

As the following discussion shows, these properties all point to a minimal-PrWd template for stumps, whereas no such template applies consistently to clips.

First, note that the wording in (3a) allows for stump compounds with more than one non-final stump, so long as the last stem appears in full. The example in (4) consists of three stems: two stumps (*sov\** and *inform\**) followed by the full word (*bjuro*). Neither *sov\** nor *inform\** can be free-standing words in Russian (with these meanings).

- |     |  |                          |
|-----|--|--------------------------|
| (4) | soVETskoe informaciONnoe bjuRO                                   | <u>SOV</u> •inFORM•bjuRO |
|     | [soviet information] <sub>(ADJ)NT</sub> bureau <sub>(N.NT)</sub> | [SOF.in.FORM.b'u.RO]     |

I return shortly to the disyllabicity of *inform\** in (1b) and (4).

The observation in the first clause of (3b), that stumps are consonant-final, distinguishes stump compounds from other kinds of compounds, which take a linking vowel between the stems. An example of such a non-stump compound is *sever•o•vostok* ‘northeast’. The criterion in (3b) also distinguishes between stump compounds and clips; cf. (2d) *pro•rab*, in which the initial stem is truncated to vowel-final *pro*. As the second part of (3b) states, any stump-final obstruent must be [-voice]. Russian has PrWd-final devoicing; other languages, such as German, have syllable-final devoicing. This is additional evidence that stumps are PrWds.

The syllabic criterion in (3c), which is invariably true of stumps, does not always hold for clips. One example, *šk•rab* (2f), has the first stem truncating to non-syllabic *šk*. Furthermore, stumps not only must be syllabic, they conform to a specific number of syllables—monosyllabic if consonant-initial and disyllabic if vowel-initial.<sup>4</sup> As (1b) *inform•bjuro* and (1i) *uprav•delami* show, there can occasionally be disyllabic stumps. This is because of an apparent correlation between disyllabicity and initial onsetlessness. Similar templatic phenomena, where certain morphological operations

<sup>4</sup> I am grateful to Anna Thornton for pointing out this correlation to me. In an earlier version of this paper I incorrectly characterized the following truncated form as a stump compound: *in•otdel* (shortened from *inostrannyj otdel*) ‘foreign(-affairs) section’. I have not been able to find this particular truncated form in any dictionary. A similar word is listed in Borunova *et al.* (1989) without secondary stress on the initial, truncated stem: *In•turist*, truncated—according to Kramer (1965: 145)—from *Vsesojuznoe akcionernoe obščestvo po inostrannomu turizmu v SSSR* ‘All-USSR Joint-Stock Company for Foreign Tourism’. I am unable to conclude whether these forms bear secondary stress on *in*. (As the discussion below in this paper shows, distinguishing between unstressed and secondary-stressed syllables headed by high vowels is very difficult.) I preliminarily conclude, based on the judgments in Borunova *et al.* (1989) regarding *In•turist*, that neither *in•otdel* nor *In•turist* is a stump compound. What then are these two forms? All clips that I’m aware of truncate the final stem. In any event, this issue is orthogonal to this paper’s main issue: whether there can be syntactic relations within morphological structures.

such as PrWd-reduplication require an onset, are discussed in Downing (1998). While there is disagreement in the prosodic-morphology literature about why an onsetless initial syllable is deficient, there is a consensus (based on numerous language families) that certain special morphological phenomena require an onset in the resulting form.

Finally, according to (3d), each stump has a secondary-stressed syllable; the final untruncated stem bears the compound's main stress. This is a property shared with other compounds; cf. *severo•vostok* 'northeast' [sʲɛ.vʲi.rə.vɑ.STOK]. With regard to the clips listed above, only (2e, g, i) have secondary stress on the non-final member. Generally speaking, secondary stress is limited to compounds in Russian, but there are exceptions. One such example is the non-compound borrowing in (5a):

- (5) Non-compound words and secondary stress
- |    |               |                       |                 |
|----|---------------|-----------------------|-----------------|
| a. | KONgeniAL'nyj | [KON.gʲi.nʲi.ALʲ.nyj] | 'congenial'     |
| b. | konfronTAcija | [kən.frən.TA.tsy.jə]  | 'confrontation' |

Perhaps the most reliable test for whether a syllable bears stress—either secondary or primary—is the roundness of underlying /o/. As (5a) and several of the examples in (1) show, secondary stress on /o/ maintains lip-rounding. The example in (5b)—also a borrowing beginning in the same /kon-/ prefix—does not have secondary stress.<sup>5</sup>

The exact reduction of unstressed /o/ takes two forms after a non-palatalized consonant: In the syllable immediately preceding the main stress /o/ reduces to [ʌ], and elsewhere /o/ reduces to [ə]. See the first two syllables of (5b). What is important for these purposes is that unstressed /o/ loses lip-rounding. Thus, while secondary stress is *required* of stumps, with clips and other non-compounds secondary stress is *possible*.

I should add that some older stump compounds have become re-analyzed as simplex stems. Examples of this are shown in (6a-b):

- (6) Stump compounds which have lost the internal morphological boundary
- |    |                                |                       |               |               |
|----|--------------------------------|-----------------------|---------------|---------------|
| a. | professioNAL'nyj               | soJUZ                 | profsoJUZ     | [prɔf.sɑ.JUS] |
|    | professional <sub>(ADJM)</sub> | union <sub>(NM)</sub> | 'trade union' |               |
| b. | podVODnaja                     | LODKa                 | podLODKa      | [pɑd.LOT.kə]  |
|    | under-water <sub>(ADJF)</sub>  | boat <sub>(NF)</sub>  | 'submarine'   |               |

Note the reduction of the former stumps' /o/ vowels in (6a-b) to [ə] and [ʌ], and the non-devoicing of the stump-final obstruent [d] in (6b). The lexical representations of (6a-b) should therefore not include a morpheme boundary. Note as well that the adjective formed from this erstwhile stump compound in (6a), /profsojuzn-/, can be further truncated into a stump, as in (1g) *prof•sobranie*, which doesn't mean 'professional meeting', but rather 'trade-union meeting'. The stump *prof•* can mean both 'trade-union', as in (1g), or 'professional', as in (11) below. Data like (6a-b) are

<sup>5</sup> Bożena Cetnarowska has suggested to me that the contrast between (5a-b) might have to do with the number of syllables between /kon-/ and the main stress. In Polish primary stress is on the penult; secondary stress appears on any odd-numbered syllable from the beginning of the word as long as one unstressed syllable intervenes (e.g., *RE.vo.LU.cjo.NI.sta* 'revolutionary-NOM' and *RE.vo.LU.cjo.ni.STA.MI* 'revolutionaries-INST'; not \**RE.vo.LU.cjo.ŃL.STA.mi*); see Rubach and Booij (1985) for details. In Russian the distribution of secondary stress within non-compounds appears to be restricted to prefixes separated from the main stress by at least two syllables.

not a problem for the proposed analysis, because compounds are often re-analyzed over time as simplex stems. One contributing factor in the re-analysis of (6b) might be that *pod*, the erstwhile stump, is itself the proclitic prefix (which means ‘under’); I mention below that proclitic prepositions don’t take secondary stress.

The properties listed in (3b-d)—final devoicing, onsetfulness, and secondary stress—show conclusively that stumps are PrWds.<sup>6</sup> Clips do not consistently adhere to all of these. I will not consider non-stump compounds or clips further in this paper. In order to clinch the argument that stump compounds are real compounds, however, it remains to be shown that stumps are neither proclitics/prefixes nor full syntactic words.

That stumps are not prefixes or proclitics is very clear. Monosyllabic prefixes and proclitics often consist of a single, vowel-final syllable, which isn’t possible for stumps. Furthermore, most (but not all) prefixes fail to exhibit secondary stress.

It is not as easy, however, to show that stumps are not fully accented syntactic words. Reformatskij (1967) considers all of the forms I’ve called compounds here—stumps and otherwise—to be mere syntactic phrases. This view is supported by the fact that secondary stress sounds very similar to the less prominent word in a syntactic phrase. English distinguishes compounds from syntactic phrases by means of the so-called Compound Stress Rule, as the data in (7) show; only the loudest stress is shown:

(7) Compounds versus syntactic phrases in English

- a. *BLACK*•*bird* (= a species of bird)    b. *black* *BIRD* (= a bird which is black)

This contrast is not available in Russian, since compounds, as in (8a), and syntactic phrases, such as the adnominal-genitive structure in (8b), each assign greater stress to the latter element. There is a slight difference in minimal pairs such as (8a-b):

(8) Compounds versus syntactic phrases in Russian

- |    |                        |                          |                                 |
|----|------------------------|--------------------------|---------------------------------|
| a. | <i>POL</i> •           | KOMnaty                  | ‘(the/a) half room’             |
|    | half <sub>(NUM)</sub>  | room <sub>(N.F)GEN</sub> |                                 |
| b. | <i>POL</i>             | KOMnaty                  | ‘(the/a) floor of (the/a) room’ |
|    | floor <sub>(N.M)</sub> | room <sub>(N.F)GEN</sub> |                                 |

In both of (8a-b) the strongest stress is on *komnaty*, with a less prominent stress on *pol* ‘half’ or *pol* ‘floor’. The **difference** in prominence between the stresses in the two examples, however, is not the same. The difference in amplitudes and durations of the stressed syllables is closer in (8b) than in (8a). This suggests that (8b) has two main stresses (with different phrasal prominence), while (8a) there is secondary and main stress. Alas, I have not conducted instrumental studies to confirm this impression.

Reformatskij (1967) gives particularly enticing evidence that stump compounds are syntactic words; sentential Wackernagel’s Law clitics (shown in italics) can separate a stump from the following stem, as in (9):

<sup>6</sup> Observe also that the final consonant of a stump does not become syllabified as the onset of a following vowel-initial stem: *zav•otdelom* [ZAF.ad<sup>1</sup>.D<sup>1</sup>E.ləm] ‘department director’ (*otdelom* ‘department<sub>INST</sub>’). See also the onsetless second stump in (4): [sɕF.in.FORM.b<sup>u</sup>.RO]. Cf. the forms in (2a, c) where vowel-initial *org* does trigger coda-capture: [pɑr.TORK] and [pɾɑ.FORK].

- (9) a v SEL'• to soVET i ne uSPEL zajTI  
 but to village CL council<sub>(N,M)ACC</sub> even not managed<sub>(V)M.PAST</sub> stop.by<sub>(V)INFIN</sub>  
 'but at the village council (he/you<sub>M,SG/I</sub>) didn't even manage to stop by'

Note that the clitic not only breaks up the stump compound, it also interrupts a prepositional phrase. I show in Billings (1996:76) that a sentential clitic can even appear between a preposition and pronoun in sandhi environments, as shown in (10):

- (10) { JA ne ZNAju, { otnoSitel'no li neGO oNI govoRJAT. } }  
 regarding Y/N him<sub>GEN</sub> they speak<sub>3,PL</sub>  
 'I don't know if it's regarding him (that) they're talking.' (clausal stress on *nego*)

In (10) the orthotonic preposition *otnositel'no* triggers a special, nasal-initial form of the personal pronoun *nego*. Nonetheless, a sentential clitic can intervene. My answer to sentential clitics is prosodic inversion; the clitic appears after the first prosodic-word stress. Stumps are prosodic words. If a PrWd ends within a morphologically (and prosodically) compound word, prosodic inversion places a clitic inside that compound.

Alekseev (1968:119) adds that non-clitic parentheticals can likewise interrupt stump compounds, as shown (11):

- (11) meNJA [...] VYgnali za PROF•, TAK nazyVAemuju, nepriGODnost'  
 me<sub>ACC</sub> expelled<sub>3,PL</sub> for professional so-called<sub>F,ACC</sub> uselessness<sub>(F)ACC</sub>  
 'I was expelled for so-called professional uselessness'

Parentheticals, in my view, constitute a valid argument for the syntactic-phrase-hood of stump compounds. I return to this issue below.

One piece of evidence in support of my morphological analysis is that stumps are bound to the following full stem. That is, the following stem can't be elided or moved syntactically. I show examples in support of this argument below.

## 2. First case study: De-participial stumps assigning quirky case

Having shown that stump compounds are indeed morphological structures, I turn to the first of two case studies which show that there is a syntactic relation within a morphological compound. Note the case-marking in the forms repeated in (12a-b):

- (12) Stump assigning quirky (instrumental) case to the following stem  
 a. zaVEdujuščij laboraTOrijej ZAV•laboraTOrijej [ZAF.lə.bə.rɑ.TO.r'i.jij]  
 director<sub>M</sub> laboratory<sub>(N,F)INST</sub> 'laboratory director'  
 b. upraVLJAjuščij deLAmi uPRAY•deLAmi [u.PRAF.d'i<sup>e</sup>.LA.m'i]  
 manager<sub>M</sub> affairs<sub>(N,NT)INST</sub> 'on-site manager'

The stumps in (12a-b) are truncated from stems that were present-active participles which were in turn derived from verbs, /zavedova-/ 'direct' and /upravljaj-/ 'manage', which both assign quirky instrumental case to their objects. Throughout these morphological derivations, the assignment of instrumental case has been maintained, even by the stumps. All available prosodic tests confirm that these stumps have secondary stress: Because the stump's vowel is /a/ in both, the /o/-roundness test is not available. Because the stump precedes the main stress by at least a syllable, however, a

less perspicuous but nonetheless just as conclusive a test is available:<sup>7</sup> Unstressed /a/ (after a non-palatalized consonant) reduces to [ʌ] in the syllable immediately preceding the stress and to [ə] elsewhere. In (12a-b) the stumps' secondary-stressed vowel surfaces as [a], not as [ʌ] or [ə]. These stumps likewise undergo devoicing of /v/ to [f].<sup>8</sup>

This section has shown that stump compounds can involve very specific kinds of syntactic relation (quirky case assigned by the stump to the following stem). Unfortunately, there is little evidence that *zav•* and *uprav•* aren't simple syntactic words. The one proof of their stump-hood is that they are bound to the following stem.

### 3. Second case study: *pol•* 'half'

The next case study shows this bound-ness more clearly: The element *pol•* 'half', introduced in (1f) and exemplified again in (8a), is unique among numerals in that it must immediately precede the element which it quantifies. That is, the noun quantified by *pol•* must be phonetically overt and must not be moved. In this section I begin by showing that *pol•* is syntactically a numeral. Many of these tests come from Babby (1987) and Mel'čuk (1983; 1985). Then I use my own tests to show that *pol•* is a bound morpheme, which supports my contention that *pol•* is a stump.

Russian has, in the last several hundred years, developed a syntactically distinct category of numerals, of which *pol•* is a member. The most conclusive test for numeral-hood is the case assigned by so-called paucal numerals (those less than 5 in cardinality). This includes the fraction numerals *pol•* 'half' and *četvert'* 'quarter', shown in (13b-c):

#### (13) Assignment of distinctive "adpaucal" GEN case by paucal numerals

a. TRI	časA	[ TRI č'i.SA ]	
three <sub>(NUM)</sub>	hour <sub>(N.M)ADPAUC</sub>		'three hours'
b. POL•	časA	[ POL.č'i.SA ]	
half <sub>(NUM)</sub>	hour <sub>(N.M)ADPAUC</sub>		'(a) half hour'
c. ČETvert'	časA	[ Č'ET.v'irt' č'i.SA ]	
quarter <sub>(NUM)</sub>	hour <sub>(N.M)ADPAUC</sub>		'(a) quarter hour'

Like the other paucal numerals in (13), *pol•* assigns the special adpaucal GEN form to the quantified noun. Only numerals assign this special form. Usually this form is referred to as the GEN.SG, because most nouns don't show a distinction between the adpaucal and GEN.SG forms. The noun in (13) and a handful more MASC nouns do, however, show a distinction: The GEN.SG form has initial stress, as ČAsa in (14a-c) shows, compared to the end-stressed časA in (13a-c).

<sup>7</sup> Some characterizations of the reduction of unstressed /a/ and /o/ differ from my description here: In first-pretonic position (after a non-palatalized consonant) /a/ and /o/ neutralize to [a] instead of [ʌ] (and reduce to [ə] elsewhere); see Hamilton (1980) and the sources cited therein. With such a simplified system my vowel-reduction arguments no longer hold in section 2. Either characterization would function, however, for my arguments about the reduction of /o/ above in section 1, where the only relevant criterion is whether /o/ maintains lip-rounding.

<sup>8</sup> These two tests—secondary stress and final devoicing—are illustrated opportunely by comparing the stump compound in (1i) *uprav•delami* [u.PRAF.di<sup>e</sup>.LA.m'i] 'on-site manager' with the clip in (2h) *uprav•dom* [u.PRAF.DOM] 'manager of a block of flats'. While it remains a mystery why these two forms have resulted in divergent morphological structures, the prosodic effects follow quite straightforwardly from the distinction between stump compound and clip.

(14) Assignment of normal GEN.SG case in adnominal-GEN environments

- |    |                             |                          |   |                              |
|----|-----------------------------|--------------------------|---|------------------------------|
| a. | naČAlo                      | ČAša                     | [ na.Č <sup>j</sup> A.lə Č <sup>j</sup> A.sə ]                            |                              |
|    | beginning <sub>(N.NT)</sub> | hour <sub>(N.M)GEN</sub> |   | 'beginning of {the/an} hour' |
| b. | poloVIna                    | ČAša                     | [ pə.la.v <sup>j</sup> I.nə Č <sup>j</sup> A.sə ]                         |                              |
|    | half <sub>(N.F)</sub>       | hour <sub>(N.M)GEN</sub> |   | 'half of {the/an} hour'      |
| c. | ČETvert'                    | ČAša                     | [ Č <sup>j</sup> ET.v <sup>j</sup> irt <sup>j</sup> Č <sup>j</sup> A.sə ] |                              |
|    | quarter <sub>(N.F)</sub>    | hour <sub>(N.M)GEN</sub> |   | 'quarter of {the/an} hour'   |

Replacing the end-stressed form *čaSA* with stem-stressed *ČAša* in (13a-b), or replacing *ČAša* with *čaSA* in (14a-b) results in ungrammaticality. Other assigners of GEN case, such as verbs and prepositions, invariably trigger the stem-stressed GEN.SG form.

Note that (13c) and (14c) have identical first words: *četvert'*. I argue in Billings (1995) that *četvert'* 'quarter' is both a numeral and a noun (homophonous words). This is supported by the test in (15) and (16), where the ADPAUC-triggering numeral takes PL agreement, in (15), while the noun that triggers GEN.SG morphology on the following noun triggers SG agreement on the determiner, in (16):

(15) Plural agreement (on demonstrative) if there is a numeral

- |    |                         |                          |                             |                     |
|----|-------------------------|--------------------------|-----------------------------|---------------------|
| a. | TE                      | TRI                      | čaSA                        | 'those three hours' |
|    | those <sub>NOM.PL</sub> | three <sub>(NUM)</sub>   | hour <sub>(N.M)ADPAUC</sub> |                     |
| b. | TE                      | POL•                     | čaSA                        | 'that half hour'    |
|    | those <sub>NOM.PL</sub> | half <sub>(NUM)</sub>    | hour <sub>(N.M)ADPAUC</sub> |                     |
| c. | TE                      | ČETvert'                 | čaSA                        | 'that quarter hour' |
|    | those <sub>NOM.PL</sub> | quarter <sub>(NUM)</sub> | hour <sub>(N.M)ADPAUC</sub> |                     |

(16) Singular agreement (on demonstrative) if there is a noun

- |    |                    |                             |                          |                                   |
|----|--------------------|-----------------------------|--------------------------|-----------------------------------|
| a. | TO                 | naČAlo                      | ČAša                     | 'that beginning of {the/an} hour' |
|    | that <sub>NT</sub> | beginning <sub>(N.NT)</sub> | hour <sub>(N.M)GEN</sub> |                                   |
| b. | TA                 | poloVIna                    | ČAša                     | 'that half of {the/an} hour'      |
|    | that <sub>F</sub>  | half <sub>(N.F)</sub>       | hour <sub>(N.M)GEN</sub> |                                   |
| c. | TA                 | ČETvert'                    | ČAša                     | 'that quarter of {the/an} hour'   |
|    | that <sub>F</sub>  | quarter <sub>(N.F)</sub>    | hour <sub>(N.M)GEN</sub> |                                   |

The agreement combinations in (15) and (16) are the only ones possible. If the nominal expressions in (15) and (16) are the sentential subject, then they trigger PL or SG agreement on the verb, respectively. Thus, while homophonous noun and numeral versions of *četvert'* 'quarter' co-exist in the lexicon (each with its own syntactic properties), the forms meaning 'half', *pol•* and *polovina*, are not homophonous. Nor do they share the same morphological properties: *pol•* is a stump; *polovina*, a word.

One final syntactic test for numeral-hood is shown in (17) and (18).<sup>9</sup> In time expressions (meaning 'at ... o'clock') the preposition *v* 'in' triggers the ACC case in the

<sup>9</sup> Above I argue for the co-existence of noun and numeral forms of *četvert'* 'quarter'. I have no explanation for why *četvert'* cannot take the LOC case as in (18); only the ACC-assigning construction is available: *v ČETvert' PJAtoĝo* (in<sub>P</sub>) quarter<sub>(NUM)ACC</sub> fifth<sub>(ADJ)M.GEN</sub> 'at quarter past four'. Apparently only its numeral form is allowed in time expressions. Still, when an unquantified nominal expression is the object of this preposition, a clear LOC case is attested.



numeral (which then triggers the GEN case in the following nominal expression), as in (17); but *v* triggers the LOC case in a non-numerical nominal expression, as (18) shows.

(17) The preposition *v* with numerically quantified time expressions

- |    |          |  |                             |                     |
|----|----------|--|-----------------------------|---------------------|
| a. | <i>v</i> | TRI  | čáSA                        | 'at three o'clock'  |
|    |          | <i>in</i> <sub>(P)</sub> three <sub>(NUM)ACC</sub> | hour <sub>(N.M)ADPAUC</sub> |                     |
| b. | <i>v</i> | POL•   | PJAtoĝo                     | 'at half past four' |
|    |          | <i>in</i> <sub>(P)</sub> half <sub>(NUM)ACC</sub>  | fifth <sub>(ADJ)M.GEN</sub> |                     |

(18) The preposition *v* with non-quantified time expressions

- |    |          |   |                             |                                |
|----|----------|---|-----------------------------|--------------------------------|
| a. | <i>v</i> | naČAle  | PJAtoĝo                     | 'at just after four (o'clock)' |
|    |          | <i>in</i> <sub>(P)</sub> beginning <sub>(N.NT)LOC</sub> | fifth <sub>(ADJ)M.GEN</sub> |                                |
| b. | <i>v</i> | poloVine  | PJAtoĝo                     | 'at half past four (o'clock)'  |
|    |          | <i>in</i> <sub>(P)</sub> half <sub>(N.F)LOC</sub>       | fifth <sub>(ADJ)M.GEN</sub> |                                |

Once more, (17b) and (18b) show that *pol•* is a numeral and *polovina* is a noun.

Before continuing my analysis of the two words that mean 'half', I should show two tests which prove that *pol•* is indeed a bound morpheme. The contrast in (19) shows that all non-bound numerals can take an elided noun after them:

(19) Ellipsis of the quantified noun

- |    |                               |                                    |
|----|-------------------------------|------------------------------------|
| a. | podoŽDĚM ešČĚ TRI (čáSA)      | 'Let's wait another three hours.'  |
| b. | podoŽDĚM ešČĚ POL•*(čáSA)     | 'Let's wait another half hour.'    |
| c. | podoŽDĚM ešČĚ ČĚTvert' (čáSA) | 'Let's wait another quarter hour.' |

Although it is not always felicitous to elide the noun after the numeral, it is possible in (19a) or (19c). With *pol•* in (19b) the following noun is obligatory.

The other indicator that *pol•* is morphologically bound is the approximative-inversion construction, discussed in Billings (1995) and exemplified in (20). Whereas most numerals and the following quantified noun can be juxtaposed to express approximate cardinality, this is not possible with *pol•*.

(20) Approximative inversion with most (non-bound) numerals

- |    |               |                |               |                                |
|----|---------------|----------------|---------------|--------------------------------|
| a. | TRI čáSA      | 'three hours'  | čáSA TRI      | 'approximately three hours'    |
| b. | POL•čáSA      | 'half hour'    | *čáSA POL•    | 'approximately a half hour'    |
| c. | ČĚTvert' čáSA | 'quarter hour' | čáSA ČĚTvert' | 'approximately a quarter hour' |

The contrasts between (19b-c) and (20b-c) are especially convincing because the numerals are both fractions. Syntactically *pol•* and *četvert'* are numerals, yet these two possess quite divergent morphological properties.

Having proven that *pol•* is syntactically a quantifier, it remains to be proven that *pol•* is not some prefix or proclitic. The vowel-reduction test discussed above in section 1 clarifies this issue: *pol•* always maintains lip-rounding in its vowel /o/: [POL.č<sup>h</sup>i.SA]; this eliminates any analysis of it as prefix or proclitic.

Returning to *pol•* and *polovina*, I propose that these two forms are, morphologically, a stump and full form, despite the fact that *pol•* is a numeral and *polovina* is a noun. This analysis is not, however, accurate etymologically; *polovina* is the form historically derived from the Common Slavic root \**pōl* (cf. Czech *půl*, < /pōl/ 'half'), of which

Russian *pol•* is also a reflex. Stump compounds other than *pol•* (and clips) are discussed extensively in the sociolinguistic literature, because their emergence largely coincided with the 1917 revolution (and many of the coinages have to do with that political system). According to Maksimov (1973), the diachronic introduction of *pol•* in constructions like (17b), as opposed to (18b), began in the 1800s and really became widespread during this century. The re-analysis of *pol•* as the stump corresponding to *polovina* is something akin to back-formation. Still, the proper synchronic analysis for these two forms' morphology is that of a stump and its corresponding full-form.

How then is it possible that a stump and full form differ as to their syntactic category? (I am grateful to Dirk Carius for posing this seeming inconsistency to me so clearly.) This is not really a problem for two reasons: If morphology and syntax are truly autonomous, then two lexical items that are somehow linked morphologically need not possess identical syntactic subcategorization. Additionally, after a stump compound is derived, it can evolve its own lexical properties. Panov (1968:117) shows that in rare cases stump compounds have developed meanings unrecoverable from their untruncated parts. He gives (1h), where the two full words *xozjajstvennyj rasčët* mean something like 'household accounting', while the stump compound *xoz•rasčët* means 'self-supporting basis'. This, too, seems to be what's going on with *pol•* and *polovina*.

#### 4. On the stability of syntactic relations within stump compounds

This final section re-assesses whether syntax is possible within a word. The assumption made by many linguists is that this isn't possible. Worth (1959) concludes that *pol•* can't be a bound morpheme because of its ability to assign case. Reformatskij (1967) mentions that stump compounds like (12) are "syntactically 'uncomfortable' ". Note also that the majority of stumps are truncated adjectives followed by full forms of nouns; cf. (1a-c, e, g-h), (4), (9) and (11). There is no morphological evidence of syntax within such forms. The two case studies represent a small minority of all stumps.

More colloquial versions of the data in the two case studies suggests, however, that syntax within words is somewhat unstable: I mention above that stumps cannot be separated from the following full forms. Comrie, Stone and Polinsky (1996:141) report that in colloquial speech just a few stumps, including *zav•* 'director' in (12a), can be pronounced by themselves. I've further confirmed that both stumps in (12) can be case-marked when standing alone (e.g., *zavu* 'director<sub>DAT</sub>'). This colloquial development suggests, then, that the stumps in (12) are merely becoming full-fledged words, with primary stress. I have detected no difference in meaning, aside from register differences, between *zav•*, free-standing *zav*, and their corresponding untruncated form.

Moving to *pol•*, there is a faint indicator that a different repair strategy is being employed to eliminate syntax within this type of compound. The examples in (21) show colloquial and slang forms of one example:

(21) Loss of case-assignment in one form with *pol•*

- |    |          |                       |                             |   |                              |
|----|----------|-----------------------|-----------------------------|---|------------------------------|
| a. | polbanki | POL•                  | BANKi                       | [POL.BAN.k <sup>h</sup> i]                                  | 'half-liter bottle of vodka' |
|    |          | half <sub>(NUM)</sub> | jar <sub>(N.F)</sub> ADPAUC |   |                              |
| b. | polbanka | pol                   | BANKa                       | [pa.l.BAN.kə]   | 'half-liter bottle of vodka' |
|    |          |                       |                             | [Zalucky (1991:563); stress and phonetic notation elicited] |                              |

In (21a) the word after *pol•* is in the ADPAUC (homophonous with the GEN.SG in this stem). In (32b), however, the following word appears to end in a caseless stem. This is similar to adjectives in a German nominal expression following a definite article, where the adjectives just have a [ə] inflection. The extremely substandard form in (21b) is not even known to all my informants; the one informant who does accept (21b) pronounces *pol* without lip-rounding. This suggests that this form involves neither morphological nor syntactic structure. If this is any indication of things to come, the case-assignment within stump compounds with *pol•* may be on the wane.<sup>10</sup>

Therefore, the colloquial indicators in section 4 indicate, by no means conclusively, that syntactic relations within compounds are not stable.

To conclude this paper, I have shown how stump compounds in Russian pose a challenge to the autonomy hypothesis. Two types of stumps assign very specific cases to the word form to which they are bound morphologically. Still, the rarity of such forms, and possible indicators that this interference of syntax into the internal affairs of words is being avoided, suggest that the autonomy of syntax from morphology is alive and, if not well, at the very least showing signs of recovery.

- Alekseev, D. I. (1968) [§§61-64 (pp. 91-93) of] *Slovoobrazovanie sovremennogo russkogo literaturnogo jazyka*. [= *Russkij jazyk i sovetskoe obščestvo. Sociolinguističeskoe issledovanie*, 2.] M. V. Panov (ed.). Moskva: Nauka.
- Alekseev, D. I. / I. G. Gozman / G. B. Saxarov (1983) *Slovar' sokraščenij russkogo jazyka*. D. I. Alekseev (ed.). 3rd, expanded ed. Moskva: Russkij jazyk.
- Babby, Leonard H. (1987) "Case, prequantifiers, and discontinuous agreement in Russian." *Natural language and linguistic theory* 5:1, 91-138.
- Billings, Loren A. (1995) *Approximation in Russian and the single-word constraint*. Princeton University Ph.D. dissertation.
- Billings, Loren A. (1996) "Sandhi phenomena and language change." In *Interfaces in phonology*. U. Kleinhenz (ed.) [= *Studia Grammatica*, 41.] Berlin: Akademie Verlag, 60-82
- Borunova, Svetlana L. / Vera L. Voroncova / Natal'ja A. Es'kova (1989) *Orfoèpičeskij slovar' russkogo jazyka. Proiznošenie, udarenie, grammatičeskie formy. Okolo 65 000 slov*. R. I. Avanesov (ed.). 5th (corrected and expanded) ed. Moskva: Russkij jazyk.
- Comrie, Bernard / Gerald Stone / Maria Polinsky (1996) *The Russian language in the twentieth century*. 2nd, revised and expanded edition [of Comrie, B. / G. Stone (1978) *The Russian language since the Revolution*.] Oxford: Clarendon Press.

<sup>10</sup> Forms like (21b) share a striking similarity with colloquial stump compounds. Mel'čuk (1983) reports that constructions involving *pol•* 'half', when externally assigned oblique cases (GEN, DAT, INST and LOC), display such case endings instead of the ADPAUC ending triggered by *pol•*. Indeed, I have determined that a GEN-assigning preposition will cause the noun quantified by *pol•* to take the non-ADPAUC GEN form: *bez pol•Časa* 'without half an hour<sub>GEN</sub>' (not \**bez pol•čaSA*). Leonard Babby informs me that similar case marking is observed with de-adnominal stump compounds like *zam•direktora* 'deputy director<sub>GEN</sub>' in colloquial speech when the entire compound is assigned a non-GEN oblique case, as in *k zam•direktoru* 'to (the) deputy director<sub>DAT</sub>'.

- Downing, Laura J. (1998) "On the prosodic misalignment of onsetless syllables." To appear in *Natural language and linguistic theory* 16:1.
- Graudina, L. K. (1968) [§§61-62 (pp. 91-94) of] "Morfologija." [Chapter 1 (pp. 9-232) of] *Morfologija i sintaksis sovremennogo russkogo literaturnogo jazyka*. [= *Russkij jazyk i sovetskoe obščestvo. Sociologo-lingvističeskoe issledovanie*, 3.] M. V. Panov (ed.). Moskva: Nauka.
- Hamilton, William S. (1980) *Introduction to Russian phonology and word structure*. Columbus, Ohio: Slavica.
- Ickovič, V. A. (1971) "Sovremennye abbreviatory." *Russkaja reč'* (no.) 2. 74-79.
- Jakobson, Roman O. (1921) "Vliv revoluce na ruský jazyk. Poznámky ke [Mazon (1920)]." *Nové Atheneum* (roč.) 2 [Praha: Tiskem Edvarda Leschingra v Praze], 3-32. [MIT Archives (Jakobson Papers): MC 72 Box 7 Folder 21 (offprint)]
- Karcevskij, S. Ž. (1923) *Jazyk, vojna i revolucija*. Berlin": Russkoe universal'noe izdatel'stvo.
- Kramer, Alex A. (1965) *Abbreviations in Soviet publications*. Trenton, New Jersey: Scientific Russian Publishing Service.
- Maksimov, V. I (1973) "Polovina pervogo, polpervogo?" *Russkaja reč'* (no.) 6, 51-53.
- Mazon, André (1920) *Lexique de la guerre et de la révolution en Russie (1914-1918)*. (= Bibliothèque de l'Institut français de Petrograd (tome) 6.) Paris: Librarie ancienne honoré Champion.
- Mel'čuk, Igor [sic.] A. (1983) "The numeral *pol'* 'half' in modern Russian: An autonomous word or a bound morpheme." *Journal of linguistic research* 2:1, 49-62.
- Mel'čuk, Igor' A. (1985) *Poverxnostnyj sintaksis russkix čislovyx vyraženi* [The surface syntax of Russian numeral expressions]. (= *Wiener slawistischer Almanach Sonderband 11.*) Wien: Institut für Slawistik der Universität Wien.
- Panov, M. V. (1968) [§§82-83 (pp. 116-120) of] "Morfologija." [Chapter 1 (pp. 9-232) of] *Morfologija i sintaksis sovremennogo russkogo literaturnogo jazyka*. [= *Russkij jazyk i sovetskoe obščestvo. Sociologo-lingvističeskoe issledovanie*, 3.] M. V. Panov (ed.). Moskva: Nauka.
- Reformatskij, Aleksandr A. (1967) ["Složeniya." §50 (pp. 289-293) of his] *Vvedenie v jazykoznanie*. 2nd ed. Moskva: Prosveščenie.
- Rubach, Jerzy and Geert Booij (1985) "A grid theory of stress in Polish." *Lingua* 66, 281-319.
- Seliščev, A. M. (1928) *Jazyk revoljucionnoj époxi. Iz nabljudenij nad russkim jazykom poslednix let (1917-1926)*. 2nd ed. Moskva: Rabotnik prosveščeniya.
- Ward, Dennis (1965) *The Russian language today. System and anomaly*. London: Hutchinson University Library.
- Worth, Dean S. (1959) "Grammatical and lexical quantification in the syntax of the Russian numeral." *International journal of Slavic linguistics and poetics* 1-2. 117-132. [Reprinted in his *On the structure and history of Russian*. (1977) München: O. Sagner. 43-58.]
- Zalucky, Henry K. (1991) *Compressed Russian. Russian-English dictionary of acronyms, semiacronyms and other abbreviations used in contemporary standard Russian*. Amsterdam etc.: Elsevier.