

## Are there Analytical Adjectives in Russian? Evidence from a Corpus Study and Experimental Data<sup>1</sup>

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### 1. Introduction

In the scholarly literature there has been a considerable discussion on whether modern Russian is developing more analytical tendencies (Patton 1999, Benigni 2003, Bondarevskij 2010, Kapatsinski & Vakareliyska 2013, among others). Special attention has been drawn to new nominal compounds such as *VIP-zal* ‘VIP lounge’, *veb-stranica* ‘web page’, *internet-texnologija* ‘Internet technology’, *top-menedžer* ‘top manager’, *Gorbačev-fond* ‘The Gorbachev foundation’ (often called “nominal composites”), where the second component is a head noun and the first component is often referred to as “analytical adjective” (Panov 1971, 240–253; Benigni 2003, 339–340; Kim 2009, 47–54; Marinova 2010, 628–630; Bondarevskij 2009, 8–12; 2010, 137–141), or a unit “the status of which is hard to define” (see Gorbov 2010: 26). In this article we address three questions: 1) are these units adjectives or parts of nominal compounds; 2) which properties do they have, and 3) to what extent do they affect the system of the Russian language?

The previous scholarly literature on “analytical adjectives” has proposed various classifications of such new nominal compounds, mostly based on the origin of the first element (whether it is a loan word, an abbreviation, etc.) (Panov 1971; Benigni 2003; Kim 2009, 49–52; Marinova 2010, 629; Bondarevskij 2010, 137–141; Gorbov 2010, 26–27). All works in general agree that the subordinate element is pre-positional and its position is fixed.

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<sup>1</sup> The present article builds upon the conference presentation by Sokolova and Edberg (2015) and is a continuation of the study briefly described in Sokolova and Edberg (2016). However, unlike the previous article, the present work relates the problem of “analytical adjectives” to compounding presenting a substantial discussion of the issue in section 2, proposes a classification of three different patterns that have originally been described as “analytical adjectives,” and provides new experimental data that illustrate the productivity of compounding and its effect on the Russian grammatical system in general.



We show that the units normally attributed to the class of “analytical adjectives” differ not only in their origin but also in function and constructions that they go with. We have attested at least three different patterns as opposed to a unified description of “analytical adjectives” as all non-inflectional units that are related to a head noun (Panov 1960, 1971, 1999). On the one hand, certain frequent loan words like *internet*, *veb*, *top* are expanding their combinatorial properties and become productive pre-positional modifiers in nominal compounds. It is remarkable that if the modifier is a frequent loan word, the head noun can easily be a noun of the Russian origin (*Internet-drug* ‘Internet friend’). On the other hand, there are names like *Gorbačev-fond* ‘The Gorbachev foundation’, *Vivaldi-orkestr* ‘Vivaldi orchestra’,<sup>2</sup> *Nogti-Servis* ‘Nail Service’ (a manicure salon), *Sad Servis* ‘Garden Service’ (gardening supply center)<sup>3</sup> that represent nominal compounds, where the head noun tends to be a loan word while the modifier can easily be of the Russian origin (for further detail, see Kapatsinski & Vakareliyska 2013, 74–75). However, such compounds are usually restricted by the genre: they denote names of businesses or events. Both groups present [N[N]] compounds where the first component is the modifier and the second component is the head noun. We will leave the question of the correlation between loan and native elements in such [N[N]] compounds to further research and will focus on some peculiar properties of the modifier elements from this group that will be described in subsection 2.2 below.

The second pattern that is relevant for this article includes appositions such as abbreviations and names of musical and artistic styles (units like *VIP*, *texno* ‘techno’, *retro*). In this pattern the modifier is in post-position to the head noun, is spelled without hyphenation and is generally more independent than the modifiers of the [N[N]] compounds (as we show in section 4). However, loan elements that can function as appositions are also compatible with the [N[N]] pattern, thus showing both pre-positional and post-positional use to the head noun.

Finally, the presence of both patterns supports the expansion of another — compounds with contracted adjectives (also known in the literature as “stump compounds,” Molinsky 1973, 15; Comrie & Stone 1978; Spencer 1991, 346; Billings 1998; Benigni & Masini 2009, 173; Masini & Benigni 2012; or, in more general terms, as “lexical blends,” Bauer 1983; Plag 1999; Bauer & Huddleston 2002; Renner et al. 2012, 2). This pattern (*zapčasti* from *zap[asnyje]* ‘replacement’ *časti* ‘parts’, for further detail see subsection 2.1) was productive in Soviet discourse and seems to show some productivity in Modern Russian.<sup>4</sup>

In the present article we place major focus on the [N[N]] compounds and revise what has previously been said about “pre-positional analytical adjectives.” We show that some of these

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<sup>2</sup> Examples from Gorbov (2010, 34).

<sup>3</sup> Examples from Kapatsinski & Vakareliyska (2013, 72).

<sup>4</sup> According to a corpus study by Masini and Benigni (2012), “stump compounding” was the second frequent pattern among the shortening strategies of [Adj N] phrasal nouns after suffixation of adjectives (*èlektronnaja počta* ‘electronic mail ‘e-mail’ > *èlektron+ka*).

units can function as appositions and thus can be used both pre-positionally and post-positionally to the head noun. In this case the choice of the construction ([N[N]] or apposition) depends on various factors, such as the alphabet in which the unit is written (Cyrillic vs. Latin characters), and the semantics of the head noun<sup>5</sup>. We also contribute to the discussion of how often pre-positional analytical units are replaced by inflectional adjectives. In addition, the article provides experimental evidence for the expansion of compounds with contracted adjectives.

In section 2 we offer an overview of [N[N]] compounds previously described in terms of “analytical adjectives” by discussing which properties of the nominal compound elements and adjectives they have (subsection 2.2). We proceed with an overview of two properties of such units, namely their position to the head noun (subsection 2.3) and their ability to form inflectional adjectives (subsection 2.4). Section 3 presents the data used in this study. In section 4 we analyze the units forming new [N[N]] compounds by characterizing their position (subsection 4.1) and their ability to form inflectional adjectives (subsection 4.2). Section 5 presents experimental data that support the productivity of the contracted pattern like *turagentstvo* ‘tourist agency’ in modern Russian. The overall results are summarized in section 6.

## 2. An overview of Russian “analytical adjectives”

In the present section we provide a general overview of “analytical adjectives” by comparing them to elements of nominal compounds and regular adjectives. First, we go through the main types of Russian compounds (subsection 2.1) and discuss how similar their properties are to those of “analytical adjectives” (subsection 2.2). Then, we focus on the two properties of “analytical adjectives,” namely their position to the head noun and the ability to have inflectional forms, as they have been presented in the relevant scholarly literature (subsections 2.3 and 2.4).

### 2.1. Compounding in Russian

Compounding (without additional suffixation) is not characteristic of Russian word-formation<sup>6</sup> and is mostly limited to three patterns: a) coordinative compounds with an interfix where both components are equal (*glux+o+nemoj* ‘deaf-and-dumb’ from a combination of *gluxoj* ‘deaf’ and *nemoj* ‘dumb’); b) subordinate compounds where one of the components, usually the one in pre-modifier position, is a subordinate component and a loan word, also known in the literature as “neoclassical compounds” (Olsen 2015) (*aero+počta* ‘air

<sup>5</sup> We show that certain units can be pre-positional and post-positional depending on the semantics of the head noun (see subsection 4.1 for more detail).

<sup>6</sup> For instance, Clark (1993, 159) notes that children acquiring Germanic languages start using compounding already at the age of two in coining nouns, while in Russian, children make little or no use of compounding until after the age of six (Clark 1993, 168).

mail' from the borrowed component *aero-* and *počta* 'mail'); c) coordinative compounds that look like nouns with appositions (*divan-krovat* 'studio couch, sofa bed' from a combination of *divan* 'sofa' and *krovat* 'bed') (Švedova et al. 1980, Vinogradov 1990). In the last group, both components are fully-featured nouns, which decline:

(1) *S gostevym divanom-krovat'ju ... situacija inaja*

[With guest-ADJ-M-SG-INS sofa-N-M-SG-INS -bed-N-F-SG-INS situation-N-SG-NOM different-ADJ-F-SG-NOM]

'The situation is different with a guest sofa-bed'

(<http://www.woman.ru/home/Interior/article/46373/>)

In the compounds of the apposition type (group c), the first noun is usually a head noun. In example (1) the adjective 'guest' agrees in gender with the first noun ('sofa') which is masculine but not with the second noun ('bed') which is feminine.

In addition to the three major types of compounding mentioned above, grammars also single out mixed types between compounding and abbreviation (Švedova et al. 1980, 250–56), in scholarly literature also known as “stump compounds” (see references in section 1). Such compounds can be formed from the initial part of a modifier (or several modifiers) and a head noun (see examples 2 and 3 below from Švedova et al. 1980, 255):

(2) *zap+časti*

(from *zap[asnyje]* 'replacement' *časti* 'parts')

[replacing-CONTRACTED ADJ ROOT+parts]

'repair parts, spare parts, replacement parts'

(3) *gos+trud+sber+kassa*

(from *gos[udarstvennaja]* *trud[ovaja]* *sber[egatel'naja]* *kassa*)

[state-CONTRACTED ADJ ROOT+labor-CONTRACTED ADJ ROOT +savings-CONTRACTED ADJ ROOT+bank]

'state labor savings bank'

In this case the modifier can be contracted regardless of the morpheme boundary. The remainder of the contracted modifier can be an affixal element (example 4), a root element (example 5) or, most commonly, a part of a root (examples 2 and 3 above).

(4) *pod+lodka*

(from *pod[vodnaja]* *lodka*)

[under[water]-CONTRACTED ADJ=AFFIX 'UNDER'+boat]

'submarine'

(5) *sel'+sovet*

(from *sel*[*skij*] *sovet*)  
 [rural-CONTRACTED ADJ=N ROOT 'VILLAGE'+council]  
 'rural council'

The important common characteristic of such contractions is that they mostly represent the initial syllable of the modifier (with the following consonant if the first syllable is an open one, as in (2) and (3)). Stump compounds like (2) to (5) are listed under abbreviations in Russian grammars (Švedova et al. 1980, 255) except for cases when the contracted element is represented as a whole stem, not just the initial syllable of the modifier (see examples (6) and (7) below taken from Švedova et al. 1980, 256):

(6) *pioner+lager*<sup>7</sup>  
 (from *pioner*[*skij*] *lager*)  
 [pioneer-CONTRACTED ADJ=N STEM 'PIONEER'+camp]  
 'pioneer camp'

(7) *sten+gazeta*  
 (from *sten*[*naja*] *gazeta*)  
 [wall-CONTRACTED ADJ=N STEM 'WALL'+newspaper]  
 'wall newspaper, poster'

Cases like (6) and (7) are attributed to the transitional type between “composition” and abbreviation (Švedova et al. 1980, 256). Such examples, where the modifier represents the whole stem and has a corresponding relational adjective (*pioner*[*skij*] ‘pioneer, *sten*[*naja*] ‘wall’), are very similar to the new borrowed modifiers and are relevant for the processes discussed in section 5.

## 2.2. Analytical units: compounding elements or adjectives?

The new nominal compounds like *top-menedžer* ‘top manager’ (where both components are borrowed) or *top-igrok* ‘top player’ (where the head is a noun of the Russian origin) are similar to compounds of the type (c) (*divan-krovat* ‘sofa bed’) in orthography (that is, they are hyphenated). However, unlike compounds of the type (c), compounds like *top-menedžer* ‘top

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<sup>7</sup> This example is very similar to the one in (5), however, the contracted element in (6) looks like an independent noun. In (5) the contracted element contains the soft consonant /l'/ at the end which does not correspond to the initial form of the noun *selo* ‘village’ with the final hard /l/. According to Seliščev (1928), stump compounds of the early Soviet period (like *pionerdviženie* ‘pioneer movement’) may have been inspired by German compounds such as *Parteiarbeiter* ‘party worker’ (Seliščev 1928, 164–165). However, in general, examples where the first component represents a whole stem are atypical for the Soviet contracted pattern.

manager’ present a subordinate type, where the subordinate element does not decline. Compare sentences (8) with an inflectional adjective and (9) with the unit *top-* below:

(8) *Ja znakom s xorošim menedžerom*

[1-SG-NOM acquainted-ADJ-M-NOM-PRED with good-ADJ-M-SG-INS manager-N-M-SG-INS]

‘I am acquainted with a good manager’

(9) *Ja znakom s top-menedžerom*

[1-SG-NOM acquainted-ADJ-M-NOM-PRED with top--MOD manager-N-M-SG-INS]

‘I am acquainted with a top manager’

As can be seen from example (8), normally Russian adjectives agree with head nouns for gender, number, and case, which is not the case with the unit *top-* in example (9).

In the ordering of the components (subordinate + head), examples like *top-menedžer* ‘top manager’ are similar to the compounds in group (b) (*aeropočta* ‘air mail’) but are characterized by a number of syntactic properties that are less applicable to compounds (see discussion below).

The properties of different loan units constituting the [N[N]] pattern (*veb, internet, gril’, flëš, sledž, VIP*) are different since not all of them can be used as independent nouns. While Russian has borrowed *veb* and *Internet* as nouns, the nouns *sledž* and *flëš* corresponding to ‘sledge’ and ‘flash’ do not exist. Instead, the Russian noun *sani* ‘sledge’ is used and the stem *flëš-* takes the affix *-k-* in order to form a fully fledged Russian noun *flëška* with the meaning ‘flash memory card, flash drive’. The latter case can also be interpreted as “reduction by suffixation” (in terms of Masini and Benigni 2012) similar to reduction strategies of phrasal nouns (see 10 below):

(10) *èlektronnaja počta* electronic mail ‘e-mail’ > *èlektron+ka*

*karta flëš-pamjati* [card flash-memory-SG.GEN], or simply *flëš-pamjat’* ‘flash memory’ > *flëška*

This way the shortening strategy applied to the nominal compound *flëš-pamjat’* ‘flash memory’ reminds of the shortening strategy with suffixation, typical for adjectival phrasal nouns.

In this article we are not claiming that in the cases under consideration a conversion from noun to adjective has taken place. However, the list of such borrowed units is quite impressive, and while integrating into the system of Russian word-formation, they are acquiring certain properties that are not typical for nouns. Here we can refer to Bauer (2005) who emphasizes that word-classes, or *lexical categories*, are by no means clear-cut Aristotelian categories, but are rather characterized by features in the different dimensions of form, function, and meaning. Some of such borderline properties are mentioned below:

1) The first subordinate component (the “analytical adjective”) can be detached from the head noun<sup>8</sup>:

(11) *Bros'te vy, dorigie graždane, top- i ne očēn' menedžery... naduvat'sja glupoj gordostju...*

[Stop-V-PFV-IMP-2PL 2-PL-NOM, dear-ADJ-PL-NOM citizen-N-PL-NOM, top-? and not very manager-N-PL-NOM ... swell-INF-IPFV with stupid-ADJ-F-SG-INS pride-N-SG-INS]

'Dear citizens, managers at the top level and below, you should stop swelling with stupid pride'.

<http://www.pravmir.ru/top-menedzher-i-xristos-1/#ixzz3RRBsPFVL>

(12) ... *russkie veb- i pečatnye izdanija otmečali ee očēn' položitel'nymi otzyvami*

[Russian-ADJ-PL-NOM web-? and printed-ADJ-PL-NOM edition-N-PL-NOM mark-PST-IPFV-3PL 3-SG-F-ACC very positive-ADJ-PL-INS review-N-PL-INS]

'Russian web- and printed editions praised it with very positive reviews'

<http://bodyguardsonline.com/?anc=skachat-torrent-mertviy-kosmos-2>

(13) *Mnogie internet i pečatnye žurnaly avtomobil'noj tematiki v konce goda vseгда provodjat vsevozmožnye hit-parady...*

[Many-ADJ-PL-NOM internet-? and printed-ADJ-PL-NOM magazine-N-PL-NOM automobile-ADJ-SG-GEN theme-N-SG-GEN in end-N-SG-LOC year-N-SG-GEN always organize-PRS-IPFV-3PL various-ADJ-PL-ACC hit-parade-N-PL-ACC]

'Many Internet and paper magazines on automobiles always organize various top charts at the end of the year'

<http://highit.ru/videoregistrator/videoregistrator-goda/>

2) The first component in some new compounds (mostly compound *top-*) can have degrees of comparison (see example 14) and can be used with adverbs of degree (example 15):

(14) *No predprinimatel' imeet malyj šans stat' milliarderom, a daže samyj top-menedžer možet stat' liš' millionerom*

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<sup>8</sup> This property, however, is attested for subordinate compounding elements in general, for instance for neoclassical modifiers like *aëro* 'air'. Both *aëro* 'air' and *internet* 'Internet' can be detached from the head in contexts with coordination. A separate issue is whether this detachment mostly occurs in coordinated rows of compounding elements (*vanny s aëro- i gidromassažem*-N 'baths with air and hydro massage' <http://www.aquanet.ru/catalog/gidromassazhi/>) or in coordination of compounding elements and adjectives (*aëro- i nazemnaja s'žemka*-N 'air and ground survey' <http://www.gisa.ru/12894.html>). Whether new borrowed and neoclassical modifiers are different in this respect requires further investigation.

[But businessman<sub>-N-SG-NOM</sub> have-PRS-IPFV-3SG small-ADJ-M-SG-ACC chance<sub>-N-SG-ACC</sub> become-INF-PFV billionaire<sub>-N-SG-INS</sub> but even most-ADJ-M-SG-NOM top-? manager<sub>-N-SG-NOM</sub> can-PRS-IPFV-3SG become-INF-PFV only millionaire<sub>-N-SG-INS</sub>]

'But a businessman has some chance of becoming a billionaire whereas even the very top manager can become only a millionaire'

<http://www.computerra.ru/business/55842/55842/>

(15) *Ja vižu, čto ty očēn' top igrok. Tak zarabatyvaj.*

[1-SG-NOM see that 2-SG-NOM are very top-? player<sub>-N-M-SG-NOM</sub>. Then earn-V-IPFV-IMP-2SG]

'I see that you are a very top player. Then you should earn money.'

<http://dota2.ru/forum/threads/kakaja-klaviatura-luchshe-iz-mexanicheskix.676870/>

3) Furthermore, some units can stand in the predicative position, as shown in (16) and (17) below<sup>9</sup>:

(16) *Rosomaxa samyj super!!!*

[Wolverine<sub>-N-SG-NOM</sub> most-ADJ-M-SG-NOM super-?]

'Wolverine is the best!'

<http://top-reyting.ru/kino/luchshie-filmi-pro-supergeroev.html>

(17) *Vse znajut, čto ja samaja top*

[All-ADJ-PL-NOM know-V-PRS-IPFV-3PL that 1-SG-NOM most-ADJ-F-SG-NOM top-?]

'Everybody knows that I am the best!'

<http://ask.fm/daaaaaaaady/answers/134859910741>

In example (17), the adjective 'most' appears in the feminine form, which shows that it agrees

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<sup>9</sup> Borrowed modifiers that can appear in the predicative position are limited to those functioning as qualitative adjectives (like *top* and *super* discussed above). Modifiers that function as relational adjectives (such as *internet* 'Internet', *veb* 'web', and *biznes* 'business') are generally not allowed in the predicative position. However, in some cases it is hard to draw a line between qualitative and relational adjectives. Large-scale empirical investigations of the gradation in adjectives have shown that, on the one hand, even adjectives categorized as prototypical are not attested in graded forms with high frequency (Kovářiková 2010). On the other hand, the expected non-gradable adjectives can easily be found graded in naturally occurring data (Lehečková et al. 2019). Some new borrowed modifiers also represent such intermediate cases. For instance, the relational adjective *eko* 'eco' can be found both in a predicative position and with the superlative marker *samyj* 'most':

*Vopros pro bytovuju ximiju. Dejstvitel'no li takaja klassnaja produkcija Synergetic ili èto prosto reklama xorosaja? – Sinergetik po sostavam ne samaja èko.*

[Synergetic<sub>-N-SG-NOM</sub> by contents<sub>-N-PL-DAT</sub> not most-ADJ-F-SG-NOM eco-?]

'A question about household cleaning products. Is Synergetic really such a cool product or is it simply that the advertisement is good? – Synergetic is not the most **ecological** one in terms of ingredients.'

<https://mom.life/post/5b1df810cb2ebc793b17d8bc-vopros-pro-bytovuyu-himiyu-dejs>



not with the unit *top* (which could only be a masculine noun) but with the subject who is a woman. In such examples the elements *top* and *super* basically demonstrate conversion to adjectives (without overt morphological marking).

The noun *top* presupposes a scale, this way from expressions like *top-igrok* ‘top-player’ referring to a player of the high league (relational) we can shift to cases like (14), where *top* denotes a very good player (qualitative). The examples above comply well with the findings presented by Kiefer (2005) and Schöneberg (2005) who show that conversion can be explained in terms of metonymy. Hungarian conversions from noun to adjective (like *vitéz* ‘champion’ > *vitéz* ‘courageous’) are interpreted by the extraction of a salient property of the noun concept which is expressed as an adjective.

The properties described in examples (14–17) are fulfilled if the first element is a descriptive (qualitative) modifier. Since analytical units mostly correspond to relational rather than descriptive modifiers, these properties are less common.

The previous scholarly literature on “analytical adjectives” has mainly considered the origin of the first element (whether it is a loan word, an abbreviation, etc., Panov 1971, 240–253; Kim 2009, 51–52; see also references in section 1). The next subsection presents a brief outline of how the relevant scholarly literature treats the position of analytical units to the head nouns.

### 2.3. Position of “analytical adjectives”

The position of nominal analytical units has been considered by Panov (1971, 240–253) who attributed both pre-positional and post-positional units to the class of “analytical adjectives.” The term “analytical adjectives” was originally attributed to adjective phrases like *kurtka bež* ‘a beige-colored coat’, where the element denoting color is in the post-position to the head noun and represents a French borrowing (hence, the post-position of the adjective). The first element in this phrase bears all morphological properties of a noun (*s kurtkoj*-SG.INS *bež* ‘with a beige-colored coat’), while the second element is morphologically unmarked. The second post-positional group according to Panov is constituted by original Russian adjectives that represent grammaticalized prepositional phrases and can also be used as adverbs (*vsmjatku* ‘soft-boiled (egg)’, *vkrotuju* ‘hard-boiled (egg)’, *navykate* ‘bulgy (eyes)’). Thus, Panov’s post-positional units include borrowed adjectives that were used after the head noun in the source language and original Russian units that represent adverbs, hence the post-position.

The reason why the term “analytical adjective” has become so popular in Russian linguistics could be the fact that compounding without affixation has been atypical for Russian word-formation until recently (as discussed in subsection 2.1). This way, any borrowed element that was attached to the head noun pre-positionally or post-positionally was treated as an adjective and its position was explained by the position of this element in the source language: cf. Russian *brjuki xaki* ‘trousers khaki’ (a borrowing from Persian where adjectives are post-positional) vs. English *khaki trousers*.

After Panov, scholars (Benigni 2003, Bondarevskij 2010, Marinova 2010, Kapatsinski & Vakareliyska 2013, among others) have mainly analyzed pre-positional units of the [N[N]] compounds without considering the variation in their position. Gorbov (2010) points out that some analytical units allow post-positional use. Such units include loan words that are modifier components in names of styles (*texno-muzyka* and *muzyka texno* for ‘techno music’, see Gorbov 2010, 31) and loan words *onlajn* ‘online’ and *offlain* ‘offline’ (*onlajn-konferencija* and *konferencija onlajn* ‘online conference’, see Gorbov 2010, 33).

Note that names in general are well compatible with the apposition pattern. According to Bondarevskij (2010, 10–11), modern colloquial Russian has a tendency to choose cardinal numerals over ordinal ones, where the latter were previously preferred (for example the combination *Punkt 4* ‘Section/point 4’ is read as *punkt četyre* ‘section/point four’ instead of *četvertyj punkt* ‘the fourth point/section’). According to our quantitative study, the variation of position is typical for a larger number of “analytical units” (see section 4.1).

#### 2.4. “Analytical adjectives” vs. inflectional adjectives

The formation of inflectional adjectives from analytical units (*internetnaja stranica* instead of *internet-stranica* ‘Internet page’) is mostly approached in recent publications (see Gorbov 2010). Gorbov (2010, 30) specifies that inflectional adjectives can be formed from prepositional units borrowed from English, although “all nominal stems that correspond to the units from this group are characterized by quite low word-formation activity”: *\*artovyj direktor* vs. *art-direktor* ‘art director’, *\*biznesovyj plan* vs. *biznes-plan* ‘business plan’, *\*vebnyj sait* vs. *veb-sait* ‘website’. He lists the units *onlajn* ‘online’ and *offlain* ‘offline’ as the only exception: the inflectional adjectives *onlajnovyj* and *offlajnovyj* are more frequent than their analytical cognates (Gorbov 2010, 33).

According to the data collected for this article, the formation of inflectional adjectives is common for a larger number of analytical units than previously assumed. However, many of them can form inflectional adjectives using more than one derivational affix: *-sk-*, *-ov-*, *-ovsk-*, *-n-* (see subsection 4.2). Moreover, the experimental data show that native speakers can also form analytical adjectives from standard inflectional adjectives (older borrowings), for instance *internacional-semja* instead of *internacional'naja semja* ‘international family’ (see section 5).

### 3. Data used in this article

The present article addresses two properties of the new Russian analytical units that have not been given much consideration in the literature: position (pre-position or post-position of the subordinate element) and adaptation to the Russian system (i.e. how often native speakers use inflectional forms of “analytical adjectives” like *topovyj igrok* ‘top player’ (instead of *top-igrok*) that agree with the head noun in gender, number, and case).

The list of “analytical adjectives” has been compiled using previous lists (Edberg 2014, Panov 1971, Benigni 2003), dictionaries (Zaloznjak 1977, Ušakov 2011, Egorova 2012), as well as examples found on the Internet (electronic articles, blogs and forums). The distribution of the “analytical adjectives” and their adapted inflectional forms has been checked in the Russian National Corpus (henceforth RNC, <http://ruscorpora.ru>) and on the Internet with the Yandex search engine (from February 2013 to May 2014). For each analytical unit, we have checked how many nouns can form a composite (or compound) with this unit according to dictionaries, as well as how frequent each of such combinations is in the RNC. The challenges that one encounters while searching for “analytical adjectives” in the RNC are described in (Edberg 2014, 24–25).

In addition to the corpus analysis, we have carried out a linguistic experiment, which tested the position of some analytical elements with variation in the RNC and checked how well certain “analytical adjectives” are transformed into inflectional adjectives. For the experiment, we have chosen widely used analytical units (according to the RNC). The questionnaire consisted of three sections. The first section was devoted to the formation of inflectional adjectives from analytical units and thus explored how well analytical units can adjust to the Russian system of word-formation. In this section we have included 49 units like *internet*, *veb*, *test*, etc. One fifth of the questions contained control units, that is standard inflectional adjectives of foreign origin like *gumanitarnyj* ‘pertaining to the humanities’, *internacional’nyj* ‘international’, etc. For all the units from the first section we selected five patterns of word-formation: null (no suffix and no inflection, that is an analytical unit), and inflectional adjectives with four productive suffixes *-n-*, *-ov-*, *-sk-*, *-ovsk-* (see Townsend 1968, 216–232, on the productivity of these suffixes in formation of relational inflectional adjectives<sup>10</sup>). The types of units used in the first part of the experiment are presented in Table 1 below.

Pattern	Analytical unit and possible inflectional adjectives	Control adjective
null	<i>internet-</i>	<i>gumanitar-</i>
<i>-n-</i>	<i>internetnyj</i>	<i>gumanitarnyj</i>
<i>-ov-</i>	<i>internetovyj</i>	<i>gumanitarovyj</i>
<i>-sk-</i>	<i>internetskij</i>	<i>gumanitarskij</i>
<i>-ovsk-</i>	<i>internetovskij</i>	<i>gumanitarovskij</i>

Table 1. The type of units for the first section of the questionnaire.

The units formed in accordance with these patterns were represented in full sentences, which were offered to the respondents in random order. The participants of the experiment

<sup>10</sup> Here it should be mentioned that all four relational suffixes (*-n-*, *-ov-*, *-sk-*, *-ovsk-*) are treated as having a very similar function (Townsend 1968). From the perspective of Contemporary Standard Russian, it is not clear how these suffixes are distributed and which of them is most productive.

were asked to evaluate given contexts along a five-point Likert scale from 1 to 5 as shown in the table below:

Points	Russian text	English translation
1	Ploxo	Bad
2	Možno, no ja predpočel(čla) by drugoj variant	Possible, but I would choose a different variant
3	Normal'no	OK
4	Lučše	Even better
5	Samyj lučšyj variant — ja vseгда tak govorju	The best variant — I always say it this way

Table 2. The scores used in the questionnaire.

The second section of the experiment considered the position of analytical units with special focus on the units that showed variation in their position according to the RNC (for instance, *vip* ‘VIP’ and *fri* ‘fried’). This part of the questionnaire included 14 analytical units and five control adjectives (or distractors). For each analytical unit and control adjective, the participants were offered a sentence with a blank before and after each word, as shown below in (18):

(18) *vip*: \_\_\_\_\_ Ja \_\_\_\_\_ najdu \_\_\_\_\_ centr \_\_\_\_\_  
 [VIP: \_\_\_\_\_<sub>1-SG-NOM</sub> \_\_\_\_\_ find-<sub>FUT-PFV-1SG</sub> \_\_\_\_\_ center \_\_\_\_\_]  
 ‘I will find a VIP center’

The respondents were asked to insert a given unit (*vip* in the case of (18)) into the context. For instance, in example (18) they could place it before or after the noun ‘center’.

In the third section of the experiment (20 analytical units), the participants were asked to compose two sentences with each given unit. This section included 6 control adjectives like *legitimnyj* ‘legitimate’, *èkonomičeskij* ‘economic’.

We have collected responses from 40 participants who have various educational backgrounds and come from various Russian cities (Moscow (2), Ufa (3), Ekaterinburg (23), Petrozavodsk (1), Vologda (1), Apatity (10)). The participants roughly fall within two age groups: high school students at the age of 14–15 (10 participants) and students (18 students between 18–19 years old and 9 students between 20–22 years old), see Appendix 1 for further details. Due to the limitations of the sample, the results obtained from the questionnaire are presented only as potential cues for further research on the topic.

#### 4. [N[N]] Compounds: pre-positional analytical units of the foreign origin

In the present article we place major focus on the [N[N]] compounds and revise what has previously been said about “pre-positional analytical adjectives.” We show that these units are not always prepositional but rather their position depends on various factors, such as the alphabet in which the unit is written (Cyrillic vs. Latin characters), and the semantics of the

head noun. In subsection 4.1 we show that certain units can be pre-positional and post-positional depending on the semantics of the head noun. In subsection 4.2 we contribute to the discussion of how often pre-positional analytical units are replaced by inflectional adjectives.

#### 4.1. Variation in position

In the literature on Russian morphology it is often assumed that the position of “analytical adjectives” to the head noun is fixed (Kamynina 1999, 103). However, the data from the RNC show that certain analytical units can be used both pre-positionally and post-positionally. Examples of such units and their frequencies in the RNC are provided in Table 2 below.

“Analytical adjectives”	Post-position	Pre-position:
<i>Ljuks</i> ‘de luxe’	234	20
<i>modern</i>	180	7
<i>xaki</i> ‘khaki’	124	3
<i>VIP</i>	45	16
<i>gril’</i> ‘grill’	18	14
<i>onlajn</i> ‘online’	16	67
<i>mini</i>	12	438
<i>vip-</i> (in Cyrillic)	1	22

Table 2. Frequency distribution of some “analytical adjectives” that show variation in their position to the head noun in the RNC.

Not only units denoting styles (like *texno* ‘techno’ and *modern* ‘modern’, see subsection 2.2) can show variation in their position but also units that are parts of technical terms (like *fleš* ‘flash’ and *sledž* ‘sledge’) and analytical units that represent abbreviations in the source language (*vip*/*VIP* (in both Cyrillic and Latin characters), *USB*), as examples (19) and (20) below illustrate:

(19) *Perezagruzite kompjuter i podključite iPod k kompjuteru čerez port USB.*

[Reboot-V-PFV-IMP-2PL computer-N-SG-ACC and connect-V-PFV-IMP-2PL iPod to computer-N-SG-DAT via port-N-SG-ACC USB-?]

‘Reboot your computer and connect iPod to the computer via USB port’

(Ruslan Bokojev. Pleer, kotoryj možet vse // “Nauka i žizn’,” 2008; RNC)

(20) *Čtoby USB portov bylo ne men’še šesti*

[For USB-? port-N-PL-GEN be-PST-3SG-NEUT not less six-NUM-GEN]

‘So that there will be no less than six USB ports’

(Ženščina + mužčina: Psixologija ljubvi (forum) (2004); RNC)

As has been mentioned earlier, variation in position occurs when the loan units can appear not only as part of [N[N]] compounds but also as appositions. Appositions are more independent from the head noun than regular modifier components in the [N[N]] compound, which can be seen in examples (21–22) below:

(21) *Kakju kuricu ty xočeš? — Gril’.*

[What-ADJ-F-SG-ACC chicken-N-SG-ACC 2-SG-NOM want-V-IPFV-PRS-2SG — grill-?]

‘What kind of chicken do you want? — A **grilled** one.’

(22) *Kakie žurnaly ty xočeš? — \*Internet.*

[What-ADJ-PL-ACC journals-N-PL-ACC 2-SG-NOM want-V-IPFV-PRS-2SG — Internet-?]

‘What kind of journals do you want? — \***Internet** ones.’

This test has been proposed by Gorbov (2015) to determine the “autonomy” of the modifier elements (2015, 42–43).

Note that it is possible to detach first components of [N[N]] compounds like *Internet* from the head noun in cases of coordination (see example 13 repeated here):

(13) *Mnogie internet i pečatnye žurnaly avtomobil’noj tematiki v konce goda vseгда provodjat vsevozmožnye hit-parady...*

[Many-ADJ-PL-NOM internet-? and printed-ADJ-PL-NOM magazine-N-PL-NOM automobile-ADJ-SG-GEN theme-N-SG-GEN in end-N-SG-LOC year-N-SG-GEN always organize-PRS-IPFV-3PL various-ADJ-PL-ACC hit-parade-N-PL-ACC]

‘Many Internet and paper magazines on automobiles always organize various top charts at the end of the year’

<http://highit.ru/videoregistrator/videoregistrator-goda/>

However, it is not possible to use them as appositions without the head word (21).

As the examples show, the variation often is not random but determined by the properties of the analytical unit or the properties of the head noun. The first case can be illustrated by the “analytical adjective” *VIP*: when written in Latin characters it is mostly used post-positionally (45 to 16 examples in the RNC), while in Cyrillic characters it is mainly prepositional (22 to 1 occurrences, see Table 2). This distinction can be explained as an instance of a broader tendency: abbreviations functioning as analytical adjectives show variation in their position and tend to be used post-positionally. The russified version of *vip* in Cyrillic characters is less perceived as an abbreviation by the speakers.

The second case, namely that the properties of the head noun determine the position of the analytical unit, can be illustrated by the element *gril’* ‘grill’ which shows a constructional

split. With nouns denoting food it is used post-positionally (*kurica-gril* ‘grilled chicken’, *bljuda-gril* ‘grilled dishes’, *baklažany gril* ‘grilled aubergine’, *ryba-gril* ‘grilled fish’, *mango-gril* ‘grilled mango’) whereas with nouns denoting catering facilities and equipment it is prepositional: *gril*-*mašiny* ‘grilling machine, electric grill’, *gril*-*bar* ‘grill bar, grillroom’, *gril*-*peč* ‘grill stove’, *gril*-*kiosk* ‘grill booth’. Functionally, with nouns like *kurica* ‘chicken’, the element *gril* is a qualifier (‘grilled’) while with the second group of nouns it serves as a relational adjective (‘related to grilling’). The first pattern is similar to titles and names that are normally expressed via appositions, the second pattern being in line with the frequent interpretation of the modifier-head relations in nominal compounds, i.e. ‘FOR (grilling)’ (for more detail see Krott, Gagné, Nicoladis 2009).

The semantic and functional difference in this case can be partly explained by the source language. Originally the unit *gril* ‘grill’ was borrowed into Russian from French, where it is mostly post-positional: *poulet grillé* ‘grilled chicken’, *aubergines grillées* ‘grilled aubergines’, etc.<sup>11</sup> So we can say that the first semantic group (nouns denoting food) replicates the French pattern. The prepositional use of the same unit with the nouns from the second semantic group (catering facilities and equipment) could be a newer borrowing from English, or a result of a general tendency for prepositional use of analytical units (copying the English pattern). Note that dictionaries diverge on the source language for the units from the second group. For instance, (Baš 2009, 165) lists the compositional unit *gril*-*bar* ‘grill bar, grillroom’ as a French borrowing, whereas Kuznetsov (1998, 64) considers it to be a loan word from English.

This way we can assume that the two patterns, namely [N[N]] compounds and appositions, differ semantically. In the [N[N]] pattern the first element is relational: *gril*-*mašina* ‘grilling machine’ is an equipment that is used for grilling, that is, is related to grill. The apposition pattern marks names and titles, thus the expression *kurica-gril* ‘grilled chicken’ basically names what the dish is called: “grill.”<sup>12</sup>

These findings are also largely supported by the results of the questionnaire-based investigation. Such units as *retro*, *maksi* ‘maxi’, *mini*, *ljuks* ‘de luxe’, *VIP*, *onlajn* ‘online’, *sleđž* ‘sledge’ showed variation in their position. The unit *vip*/*VIP*, however, has been mostly used

<sup>11</sup> [http://www.cuisineaz.com/recettes/recherche\\_v2.aspx?recherche=poulet-grille](http://www.cuisineaz.com/recettes/recherche_v2.aspx?recherche=poulet-grille),

<http://www.cuisineaz.com/recettes/aubergines-grillees-56360.aspx>,

[http://www.cuisineaz.com/recettes/recherche\\_v2.aspx?recherche=poisson-grille](http://www.cuisineaz.com/recettes/recherche_v2.aspx?recherche=poisson-grille), <http://www.elle.fr/Elle-a-Table/Recettes-de-cuisine/Mangues-grillees-547634>

<sup>12</sup> The semantic split between the two constructions — an appositional and a relational one — requires further analysis. Is it a property of individual lexically-specific constructions or does it represent a more general tendency? In order to answer this question, in addition to the units discussed in this section, one has to look at the variation within appositions that can appear both pre- and post-positionally for historical reasons (*na Moskve-reke* and *na Moskva-reke* ‘on the Moscow river’, *na reke Moskve* ‘on the river Moscow’) and within names of businesses (Kapatsinski & Vakareliyska (2013) analyze only pre-positional cases like *Gorbačev-fond* ‘Gorbachev foundation’ and *Kočubej Palas* ‘Kočubej Palace’).

pre-positionally regardless of the alphabet.<sup>13</sup> These outcomes could have been influenced by the word order of the contexts in the experiment: the *vip* in Cyrillic characters preceded the *VIP* in Latin characters and, since both units have the same denotation, the respondents could treat them the same. The experiment also supported the semantic distribution of the prepositional and post-positional use of the unit *gril* ‘grill’, although this unit has been attested in post-position to nouns denoting places and facilities (*restoran* ‘restaurant’, *rešetka* ‘grill’, *duxovka* ‘oven’).

#### 4.2. How common are inflectional adjectives from analytical units?

According to the data collected for this case study, the formation of inflectional adjectives is possible for a larger number of analytical units than previously assumed (see subsection 2.4). In some cases we can find up to four patterns, with the suffixes *-n-*, *-ovsk-*, *-sk-*, *-ov-*: cf. *internetnyj*, *internetovskij*, *internetskij*, *internetovyj* (see Table 3). We have not attested examples like *\*vebnyj sait*<sup>14</sup> but this inflectional adjective has been used with other nouns: *interfeis* ‘interface’, *skript* ‘script’, *otdel* ‘department’, etc.

Loan word	RNC	Web data <sup>15</sup>	Inflectional variant	Dictionaries	RNC	Web data
<i>Internet</i>	174	4380 mil	<i>-n-</i> : <i>internetnyj</i>	0	19	63000
			<i>-ovsk-</i> : <i>internetovskij</i>	Egorova 2012	90	54000
			<i>-sk-</i> : <i>internetskij</i>	0	8	7000
			<i>-ov-</i> : <i>internetovyj</i>	0	0	630
<i>Veb</i>	17	106 mil	<i>-ovsk-</i> : <i>vebovskij</i>	0	0	1353
			<i>-n-</i> : <i>vebnyj</i>	0	0	1179
			<i>-ov-</i> : <i>vebovyj</i>	0	0	675
<i>Onlajn</i>	4	236 mil	<i>-ov-</i> : <i>onlajnovyj</i>	Klimov 2013	84	834000
			<i>-ovsk-</i> : <i>onlajnovskij</i>	0	0	4000
			<i>-n-</i> : <i>onlajnyj</i>	0	0	570

Table 3. The frequencies of analytical units and their inflectional variants in dictionaries, RNC, and Yandex.

Russian native speakers are unlikely to form inflectional adjectives from analytical elements if the compound is characterized by high frequency (for example, *veb-stranica* ‘web-page’). However, in less frequent combinations, Russian adaptations are possible: *vebovyj otдел* ‘web department’. This holds for the vast number of analytical elements. Moreover, there seems to be a tendency according to which inflectional variants formed by means of different

<sup>13</sup> There were only three exceptions: *VIP* was used post-positionally twice and *vip* (in Cyrillic characters) was used post-positionally once.

<sup>14</sup> Gorbov (2010) has emphasized that the usage of the inflectional adjective *vebnyj* ‘web’ is not attested.

<sup>15</sup> It is impossible to estimate how often the units *Internet*, *veb*, and *onlajn* are used as analytical adjectives and as nouns in online sources. We provide only general frequencies, which nevertheless indicate that the frequency of these units online is very high.



suffixes are used with different nouns. For instance, (-*n*-) *internetnaja programma* ‘Internet program’, (-*sk*-) *internetskij drug* ‘Internet friend’, (-*ovsk*-) *internetovskij sbornik* ‘Internet volume’. This tendency needs to be tested in a separate experiment. Despite the fact that the aforementioned suffixes are productive ways of forming relational adjectives in Russian (see Townsend 1968 for further details), they bear slightly different meanings. Kapatsinski & Vakareliyska (2013, 77) suggest that the formation of inflectional adjectives is blocked if it is possible via several means of word-formation (-*sk*-, -*ov*-, -*n*-). Our observations support this claim and suggest that, in cases where variation is possible, inflectional adjectives are not codified (hence, their absence in dictionaries). This makes analytical units more robust.

The experimental data is summarized in Figure 1 below.

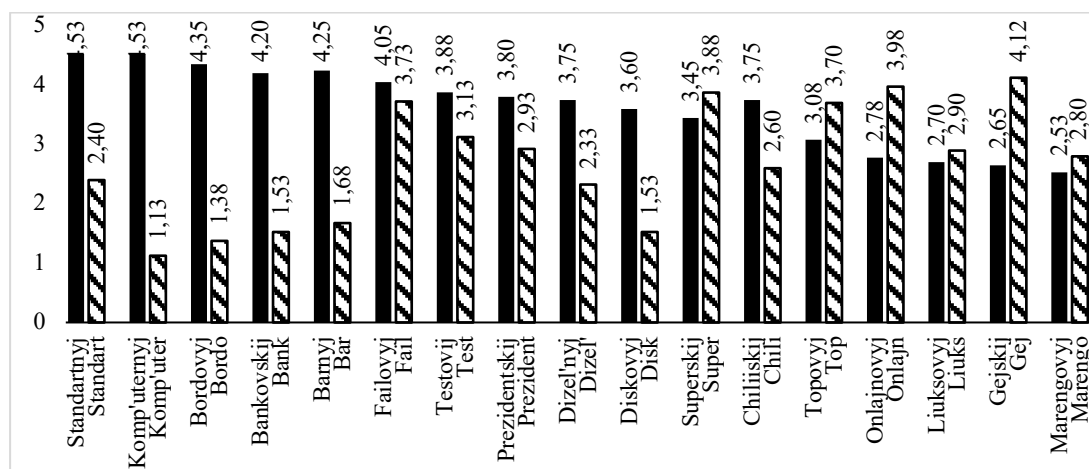


Figure 1. Inflectional adjectives (formed from analytical units) that received a mean score of 2.5, and their corresponding analytical units.

The black columns show the mean score for inflectional adjectives, the shaded columns – the mean score for corresponding analytical units. As can be seen from the diagram, the experiment reflects the integration of analytical units into inflectional adjectives. The responses also show that such inflectional adjectives are more frequent among younger participants. Students at the age of 14–15 years old (10 participants) considered 24 inflectional adjectives (out of 49 units) as acceptable or more than just acceptable (for instance, *onlajnovyj* ‘online’ (-*ov*-), *vebovskij* ‘web’ (-*ovsk*-), *internetovskij* ‘Internet’ (-*ovsk*-), *grilevyj* ‘grill’ (-*ov*-)). At the same time, students ranging from 18 to 24 years old (27 participants) marked only 14 inflectional adjectives as possible. These findings, however, are not surprising as younger speakers are almost always more accepting in their judgments than older speakers (see Kapatsinski, Olejarczuk & Redford, 2017).

##### 5. Contracted pattern (new stump compounds) in experimental data

In our linguistic experiment, some participants considered non-existent analytical units that we formed from existing inflectional adjectives to be acceptable or more than acceptable.

The units formed in accordance with the patterns described in section 3 (see Table 1 above) were represented in full sentences, which were offered to the respondents in random order.

The borrowed inflectional adjectives were used as control questions (or distractors), so we did not expect our participants to evaluate analytical variants formed from these adjectives higher than 1. However, all such unattested analytical units were marked as possible by at least one participant. Table 6 provides the number of participants for each score above 1. As can be seen, in general, different contexts were marked as possible by different participants. Figures 2 and 3 below make these results more visual by focusing on the behavior of individual participants (Figure 2) and individual analytical units (Figure 3).

Analytical form	Score			
	5	4	3	2
<b>Internacional</b>	Participant 12	Participant 2, 30, 28	Participant 10, 31	Participant 15, 24, 25, 36, 40
<b>Antiradar</b>	Participant 2, 28	Participant 14, 16, 20, 36	Participant 1, 2, 10, 12, 15, 17, 18, 19, 24, 25, 26, 27, 31	Participant 4, 5, 6, 7, 8, 9, 11, 13, 21, 30, 39, 40
<b>Valiut</b>		Participant 3, 31	Participant 2, 12, 19, 25	Participant 10, 15, 18, 34
<b>Akcioner</b>	Participant 2	Participant 16	Participant 12, 21, 24, 40	Participant 10, 14, 15, 25, 35
<b>Professional</b>		Participant 10, 31		Participant 18, 25, 32, 33
<b>Gumanitar</b>			Participant 31	Participant 10, 14, 30, 32, 40
<b>Filosof</b>			Participant 31	Participant 25, 12
<b>Massov</b>		Participant 31		

Table 6. An overview of which participants gave the non-existent analytical adjectives a score of 2 or higher.

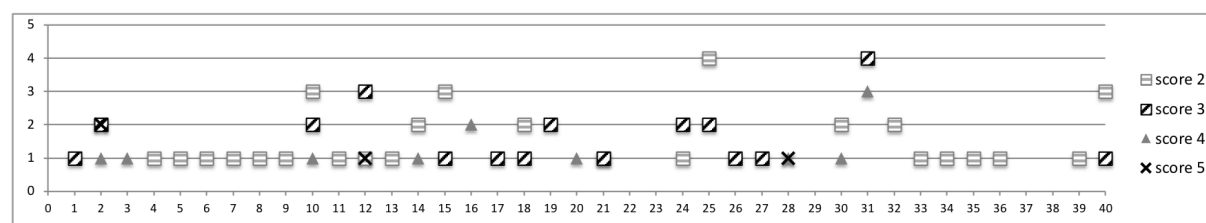


Figure 2. An overview of all participants that have given the non-existent analytical adjectives a score of 2 or higher.

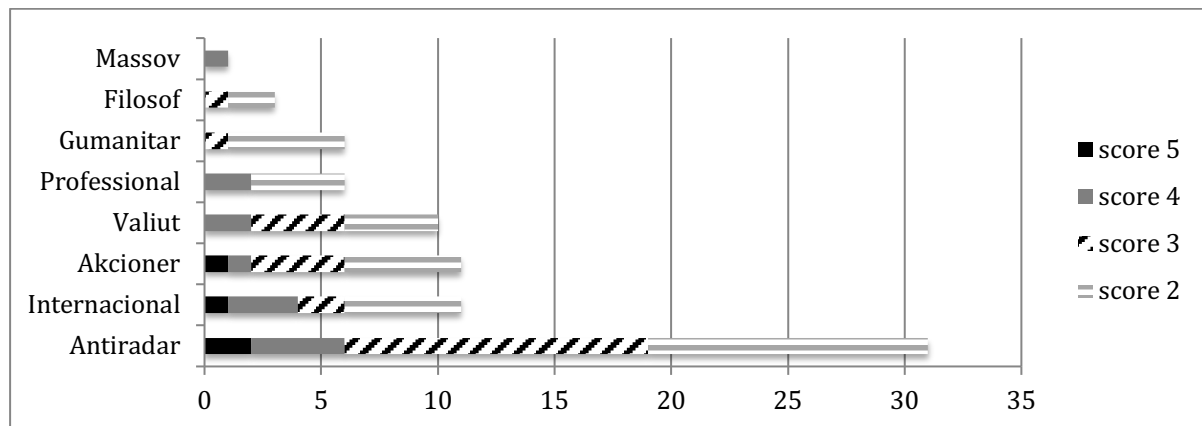


Figure 3. The average score for the given non-existent analytical adjectives and the scores above 1 with highest frequency.

On Figure 2 above, the horizontal axis presents the number of the participant/questionnaire (see Appendix 1), whereas the vertical axis shows the number of units that received a corresponding score between 2 and 5. The highest score (5) was given by participants 2, 12, 28, as can be seen from Figure 2. All three participants come from different cities (Ufa, Ekaterinburg and Moscow) but represent female respondents in the 18–22 age group. The contracted pattern has been preferred consistently by six participants (participants 10, 12, 15, 25, 31, 40)<sup>16</sup>, five of which are females. Ten (out of 11) male participants used scores 2 and 3 but no male participant gave a score above 3.

On Figure 3 above, the horizontal axis presents the number of participants that have given each unit the score of 2 and higher. As follows from Figure 3, the highest score was given to the units *antiradar* (from *antiradarnyj* ‘antiradar’), *internacional* (from *internacional’nyj* ‘international’), *akcioner* (from *akcionernyj* ‘stockholder-ADJ’). *Antiradar*, a contracted version of *antiradarnyj* ‘antiradar’, received a score of 5 from two participants and a score of 3 from 13 participants.

Most of the unexpected analytical units with a high score have corresponding masculine nouns: *antiradar*, *internacional*, *akcioner*, *professional*, thus fitting the frequent [N[N]] pattern (with a pre-positional borrowed nominal unit). The unit *valjut* is remarkable in this sense, being a clear example of contraction, since the corresponding noun is feminine and does not end in a consonant (*valjut-a* ‘currency’). Most of the control words are relational adjectives suffixed in *-n-* (which was contracted).

<sup>16</sup> Participant 10: 18, Female, High School, Ekaterinburg;  
 Participant 12: 18, Female, High School, Ekaterinburg;  
 Participant 15: 18, Female, Univeristy, Ekaterinburg;  
 Participant 25: 19, Female, University, Ekaterinburg;  
 Participant 31: 15, Female, High School, Apatity;  
 Participant 40: 32, Male, University, Petrozavodsk.

Thus, it might be the case that new stump compounds are more easily formed if the contracted element looks similar to an independent word. Given that this element is usually a contraction of an existing inflectional loan adjective, it becomes very similar to newly borrowed analytical adjectives like *internet*, *veb*, *top*, etc. Though further study is required, this phenomenon of choosing a non-existent analytical adjective indicates that the borrowing of words and sentence structures from more analytical languages, currently English, may be influencing Russian word-formation in general.

## 6. Conclusions

The data analyzed in this article suggest that what has previously been described in terms of “analytical adjectives” constitutes at least three different patterns: 1) [N[N]] compounds where either the first element (modifier like *internet*, *veb*, *top*, etc.) or the second element (head in names and titles like *Gorbačev-fond* ‘The Gorbachev foundation’) tends to be a loan word; 2) appositions like *VIP* that are post-positional but are compatible with the N[N]] pattern and thus can appear both pre-positionally and post-positionally to the head noun; 3) a contracted pattern (potential stump compounds). The contexts that were offered to the respondents contained control words that represented unattested analytical elements formed from existing Russian inflectional adjectives via contraction (for example, *internacional-semja* formed from the inflectional adjective *internacional’nyj* ‘international’ and the noun *semja* ‘family’). All eight such potential compounds were marked as possible by at least one participant. For the new “contracted” compounds it is important that the contracted element looks similar to an independent word, which makes such units similar to newly borrowed analytical adjectives like *internet*, *veb*, *top*, etc.

The analytical units differ not only in their origin, as pointed out in previous literature, but also in the constructions that they go with. According to our quantitative study, the variation of position is typical for a larger number of analytical units (in post-position we often find abbreviations: *zal VIP* ‘VIP hall’). Moreover, the pre-positional or post-positional use of analytical units may depend on the properties of the analytical unit itself (for instance, when written in Latin characters, the unit *VIP* is mostly post-positional, while in Cyrillic characters it is mainly prepositional) or the properties of the head noun (with nouns denoting food the unit *gril’* ‘grill’ is used post-positionally (*kurica-gril’* ‘grilled chicken’) whereas with nouns denoting catering facilities and equipment it is pre-positional: *gril’-bar* ‘grill bar’). Russian native speakers are unlikely to form inflectional adjectives from analytical elements if the compound is characterized by high token frequency (like *veb-stranica* ‘web-page’). However, in less frequent combinations, Russian adaptations are common: *vebovyj otdel* ‘web department’. Many of them can form inflectional adjectives using more than one derivational affix (-sk-, -ov-, -ovsk-, -n-) and there seems to be a tendency to use inflectional variants with different suffixes for different nouns: (-n-) *internetnaja programma* ‘Internet program’, (-sk-) *internetskij drug* ‘Internet friend’.

The presence of the three patterns mentioned above affects not only the system of Russian word-formation but also the Russian grammatical system in general, since it evokes intermediate cases between adjectives and compounding elements. On the one hand, it seems that analytical units can be more easily detached from the head noun than compounding elements as shown in section 2 (cf. *mnogie internet i pečatnye žurnaly* ‘many Internet and paper magazines’) and can in some cases be placed in post-position to the head noun (*zal VIP* ‘VIP hall’). On the other hand, the majority of established analytical units that can be treated as compounding elements can be turned into inflectional adjectives, and vice versa, inflectional adjectives can be turned into analytical units in potential stump compounds<sup>17</sup>. This way, de jure, every adjective of a foreign origin can be preserved in the system in both analytical and synthetic forms, de facto, a lot depends on the context.

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<sup>17</sup> A separate experiment is needed in order to test whether new potential compounds are associated with certain degrees of contraction (for instance, which compound would be a more natural choice for native speakers: *valrynok*, *valjutrynok* or *valuta-rynok* ‘currency market’), and whether the degree of contraction (or the use of a non-contracted [N[N]] compound) depends on the context.

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## Appendix 1 The List of Participants

Participant 1	Age	Sex	Education	Sector of Employment	Residence
Participant 2	22	F	Specialized secondary education, English teacher	Accountant	Ufa
Participant 3	22	F	Higher Education	Standardization And Certification Engineer, currently unemployed	Ufa
Participant 4	20	F	Student	Physics (Oil and gas industry), catering business	Ufa
Participant 5	22	F	Student	Germanic philology	Ekaterinburg
Participant 6	20	F	Student	Translation	Ekaterinburg
Participant 7	21	F	Student	English studies	Ekaterinburg
Participant 8	35	F	Higher Education, lecturer	English studies	Ljubercy, Moscow region
Participant 9	19	M	Student	Linguistics	Ekaterinburg
Participant 10	19	F	Student	Linguistics	Ekaterinburg
Participant 11	18	F	Student	-	Ekaterinburg
Participant 12	18	F	Student	Education	Ekaterinburg
Participant 13	18	F	Student	Education	Ekaterinburg
Participant 14	19	F	Student	Linguistics	Ekaterinburg
Participant 15	19	F	Student	Linguistics	Ekaterinburg
Participant 16	18	F	Student	Public Relations	Ekaterinburg
Participant 17	19	F	Student	Linguistics	Ekaterinburg
Participant 18	18	M	Student	Linguistics	Ekaterinburg
Participant 19	19	M	Student	Linguistics	Ekaterinburg
Participant 20	18	F	Student	Linguistics	Ekaterinburg
Participant 21	18	F	Student	-	Ekaterinburg
Participant 22	19	F	Student	Linguistics	Ekaterinburg
Participant 23	19	F	Student	Translation	Ekaterinburg
Participant 24	24	M	Higher Education	Philology	Ekaterinburg
Participant 25	19	F	Student	Education	Ekaterinburg
Participant 26	19	F	Student	Linguistics	Ekaterinburg
Participant 27	24	M	Higher Education	Philology	Ekaterinburg
Participant 28	18	M	Student	Humanities	Ekaterinburg
Participant 29	20	F	Student	Linguistics	Moscow
Participant 30	63	F	Higher Education, Lecturer	Music studies	Vologda
Participant 31	15	F	High School		Apatity
Participant 32	15	F	High School		Apatity
Participant 33	14	M	High School		Apatity
Participant 34	14	M	High School		Apatity
Participant 35	14	M	High School		Apatity
Participant 36	15	M	High School		Apatity
Participant 37	15	F	High School		Apatity
Participant 38	14	F	High School		Apatity
Participant 39	15	F	High School		Apatity
Participant 40	15	F	High School		Apatity
Participant 1	32	M	Higher Education	Civil Defense	Petrozavodsk

**Appendix 2**  
**Contexts with non-existent analytical units formed from existing**  
**inflectional adjectives of a foreign origin**

Analytical form	Original inflectional adjective	Context from the questionnaire
<b>internacional</b>	internacional'[-n-yj] > internacional-ø 'international'	Čto takoe <b>internacional-semja</b> ? 'What is an <b>international family</b> ?'
<b>antiradar</b>	antiradar[-n-yj] > antiradar-ø 'antiradar'	Ja kupila videoregistrator s <b>antiradar-funkcij</b> . 'I bought a dashcam with an <b>antiradar function</b> .'
<b>valiut</b>	valjut[-n-yj] > valjut-a '(foreign)currency'	Čto takoe <b>valjut-rynok</b> ? 'What is a <b>currency market</b> ?'
<b>akcioner</b>	akcioner[-n-yj] > akcioner-ø 'stockholder'	Andre Citroen sozdal <b>akcioner-obščestvo</b> Citroen. 'André Citroën created a <b>stock corporation</b> Citroën.'
<b>professional</b>	professional'[-n-yj] > professional-ø 'professional'	On <b>professional-igrok</b> v poker. 'He is a <b>professional</b> poker <b>player</b> .'
<b>gumanitar</b>	gumanitar[-n-yj] > akcioner-ø 'stockholder'	Nado okazyvat' <b>gumanitar-pomošč</b> postradavšym 'It is necessary to lend <b>humanitarian aid</b> to victims'
<b>filosof</b>	filosof[-sk-ij] > akcioner-ø 'stockholder'	On čitaet <b>filosof-žurnal</b> . 'He reads a <b>philosophical journal</b> .'
<b>Massov</b>	mass-ov[-y-j] > mass-ø 'stockholder'	V centre Moskvy byl proveden <b>massov-miting</b> . 'In downtown Moscow there was organized a <b>massive (political)meeting/protest</b> .'