Searching for competing patterns in morphological derivation: The case of adjective borrowing

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Since the early days of Indo-European language studies, the occurrence has been noticed of rival forms of adjectives which have the same base or root and differ from one another only by their derivational affix. However, competing variants of borrowed adjectives in language typology have received scant attention. This research presents a preliminary cross-linguistic study on the search for competing patterns which are characteristic of loan adjective formations in the Baltic, Slavic, and Germanic languages. In order to find out if the adjective doublets in reality are synonymous, dictionary data have been compared with collocational adjective-noun corpus data of four languages.

"You shall know a word by the company it keeps!"
(Firth 1957: 11)

1. Subject, aim, data

This research focuses on loan adjective formations and adjective borrowings in the Baltic, Slavic, and Germanic languages. Certain pairs of adjectives were chosen for two reasons: first, they have attracted by far the greatest attention among lexicographers, publishers, grammarians, language teachers and linguists; second, their conclusions on the chosen adjective pairs are rarely based on corpora data. It is also significant to note that 5942 collocations[1] have been selected from the corpora of four languages. Numbers in Figure 1 denote how many collocations have been selected from the following sources:

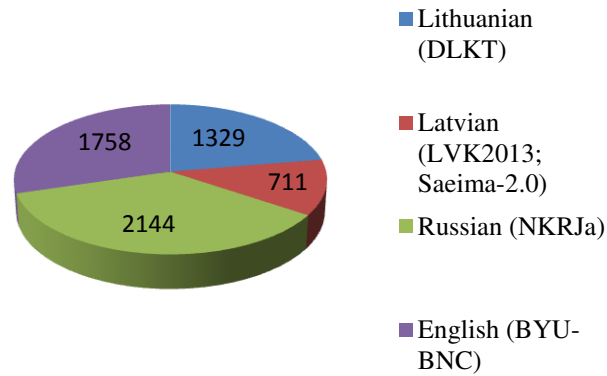[1] Repeated collocations are not included in the number.

Figure 1 Numbers of selected collocations from the corpora of four languages

This paper aims at finding out the possible competing patterns which are characteristic of loan adjective derivation and adjective borrowing in general in Lithuanian, Latvian, Russian, and English. Presenting a preliminary open exploration, the paper relies both on the main dictionaries of the investigated languages (they are enumerated in the list of references) as well as on the materials taken from the following corpora[2], namely the Corpus of Contemporary Lithuanian (DLKT), the Balanced Corpus of Modern Latvian (LVK2013), the Corpus of the stenographs of sessions of the 5th-9th Latvian Parliament (Saeima-2.0), the Russian National Corpus (NKRJa), and the British National Corpus (BYU-BNC).

The article is structured as follows. Section 2 summarises previous studies on the competing variants of borrowed adjectives and briefly introduces terminology employed in the paper. Section 3 is concerned with the analysis of competing patterns of borrowed adjectives in Lithuanian, Latvian, Russian, and English; it is divided into subsections that focus mostly on the collocational behaviour of the rival words in the corpora. Section 4 puts forward the interpretation of the results before the final conclusions of the study are presented.

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[2] It is worth noting that all the corpora are annotated, with the exception of DLKT and Saeima-2.0. These corpora comprise different number of words. DLKT (2011) encompasses about 140 million words, therefore, it is by far the largest corpus of the Lithuanian language. A substantial part of this corpus comprises the General Press, namely texts both from regional and national newspapers, the Popular Press as well as the Special Press, i.e. specialised newspapers and magazines. The remainder of it is composed of fiction, memoirs, scientific and popular literature, and various official texts. The corpus Saeima-2.0 encompasses more then 22 million words. As regards the LVK2013 (2007-2013), it is the smallest one among the above-mentioned corpora with roughly 4.5 million words. It has been compiled from printed and electronic materials created after 1990. The most significant part of the corpus is comprised of the mass media, while the rest of it incorporates fiction, scientific and other texts, normative acts, etc. NKRJa (2006-2008) is made up of over 300 million words. It contains not only authentic prose, illustrating standard Russian, but also translated works, poetry and texts, representing the non-standard forms of contemporary Russian, namely spoken (recordings of oral speech, spontaneous and public) and dialectal. Finally, the BYU-BNC (1980s–1993) is a 100-million-word corpus composed of written and spoken language. The written part embraces extracts from regional and national newspapers, specialist periodicals and journals, academic books and popular fiction, published and unpublished letters, as well as memoranda, school and university essays. The spoken part encompasses orthographic transcriptions of unscripted informal conversations and spoken language collected in various contexts (e.g. business or government meetings).

2. Introduction

2.1. Previous investigations into competing variants of borrowed adjectives

The competing variants of borrowed adjectives in Lithuanian and Latvian have been mentioned in passing. The instances of synonymy between adjectival suffixes in contemporary Lithuanian have been analysed by Vaskelienė and Kučinskienė (2012) on the basis of data taken from DŽ[e3] as well as being briefly discussed by Kniūkšta (1976). In Latvian, the competing variants of adjectival suffixes are briefly reviewed in the latest academy grammar (Nītiņa, Grigorjevs 2013: 264–267). In Russian and English, more has been done in this field in comparison to Lithuanian and Latvian. In Russian, the competition between paronyms, i.e. words that are alike in form, but different in meaning and usage, has been analysed. As a result, more than four Russian dictionaries of paronyms have been compiled (cf. Kolesnikov 1971, Vishnjakova 1984, Bel'chikov, Panjucheva 1994, Kolesnikov 1995). The authors of these dictionaries focused on the phenomenon of paronymy. Even though they attempted to illustrate the difference between confusingly similar words in Russian, questions concerning the criteria of distinguishing such pairs of words still arise. In English, Hawkes (1976), Marsden (1985), Ross (1998), Gries (2001, 2003), and Kaunisto (1999, 2001, 2007) examined the rivalry between adjectives ending in *-ic/-ical*. The latter author (2008) also investigated adjective pairs in *-ive/-ory*.

It seems that, besides the rivalry of adjectives with different suffixes, very little attention has been paid to the existence of other competing patterns of borrowed adjectives.

2.2. Terminology

Before proceeding, a brief introduction to the terminology used in the paper is provided here.

Simplex borrowings are perceived as morphologically unanalysable words that consist of one free stem morpheme which is not further divisible into meaningful component pieces, e.g.:

(1)   Lith *trivial-ùs*, *-ì*, Latv *triviāl-s*, *-a* 'trivial' (indirectly from Lat *trivialis*)
         Lith *privat-ùs*, *-ì*, Latv *privāt-s*, *-a* 'private' (indirectly from Lat *privatus*)
         Eng *tranquil* (from Latin *tranquillus*), *simple* (from French *simple* ← Lat *simplus*[3])

The loan-formations, mostly neoclassical ones, that are found in English, German, French, Spanish, Italian and other languages are called *correlative borrowings* (cf. Urbutis 2009: 293; cf. Marchand's [1969: 218f.] *correlative derivation*). They form the largest part of the so-called internationalisms of the Lithuanian language (cf. Keinys 2005, Drotvinas 2002, Gaivenis 2002). Correlative borrowings are related to borrowings containing the same root. The language user feels the relation between them, similarly as one feels the relation between the derived and the base word. More specifically, correlative borrowings are both formally and semantically motivated, e.g.:

(2)   Lith *form-al-ùs*, *-ì* 'formal' (cf. *fòrm-a* 'form') ← indirectly from Lat *formalis*

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[3] Etymologies of words are checked, as a rule, in an online etymology dictionary *http://www.etymonline.com/* (Last accessed Apr. 2016).

Latv *form-āl-s*, *-a* 'formal' (cf. *form-a* 'form') ← indirectly from Lat *formalis*
Eng *form-al* (cf. *form*) ← Old French *formal* and Lat *formalis*

Hybrid derivatives are words formed from a stem belonging to the donor language by applying to it a suffix or prefix belonging to the recipient language (3) and vice versa (4) (cf. Fowler 2009: 241); the second pattern is, as a rule, particularly rare. Even though the borrowed stems or affixes are integrated into the recipient language, the language user still feels that the word consists of partly borrowed and partly native material, e.g.:

(3)   borrowed stem + indigenous suffix (a) or prefix (b)
        a) Lith *tèm-in-is*, *-ė*[4] 'thematic(al)' ← *tem-à* 'theme' (indirectly from Lat *thema* ← Greek *thema*)
        Latv *temat-isk-s*, *-a* 'thematic(al)' ← *temat-s* 'theme' (indirectly from Lat *thema*, gen. *thematis* ← Greek *thēma*, gen. *thēmatos*)
        Eng *grace-ful* ← *grace* (from Old French *grace* ← Lat *gratia*)
        Rus *цикл-ичн-ый*, *-ая*, *-ое* 'cyclic' ← *цикл* 'cycle' (from Late Lat *cyclus* ← Greek *kyklos*)

        b) Lith *ne-legal-ùs*, *-ì* 'illegal' ← *legal-ùs*, *-ì* 'legal' (indirectly from Lat *legalis*)
        Latv *ne-legāl-s*, *-a* 'illegal' ← *legāl-s*, *-a* 'legal' (indirectly from Lat *legalis*)
        Eng *un-natural* ← *natural* (from Old French *naturel* ← Lat *naturalis*)
        Rus *не-легальный*, *-ая*, *-ое* 'illegal' ← *легальный*, *-ая*, *-ое* 'legal' (from Lat *legalis*)

(4)   indigenous stem + borrowed suffix (a) or prefix (b)
        a) Lith dial. *smėl-iãv-as*, *-à* 'sandy' (the suffix is of Slavic origin) ← *smėl-is* 'sand'
        Latv dial. *balt-eņkij-s*, *-a*[5] 'as white as snow' (the suffix is of Russian origin) *balt-s*, *-a* 'white'
        Eng *talk-ative* (the suffix is of Latin origin) ← *talk*, *lov(e)-able* (the suffix is of French origin) ← *love*
        Rus colloq. *чит-абельн-ый*, *-ая*, *-ое*[6] 'readable' (the suffix *-абель-* is of French origin ← Lat *-abilis*) ← *читать* 'to read'

        b) Lith *anti-karìn-is*, *-ė* 'antiwar' ← *karìn-is*, *-ė* 'military'
        Eng *anti-war* ← *war*
        Rus *анти-военн-ый*, *-ая*, *-ое* 'anti-war' ← *военн-ый*, *-ая*, *-ое* 'war [adj.]' (the prefix *anti-* is of Greek origin)

As far as suffixes are concerned, they can be simplex and complex. *Simplex suffixes* are usually monosyllabic (e.g. Lith *-in-(is*, *-ė)*, Eng *-ic*), whereas *complex suffixes* (e.g. Lith *-yv-in-(is*, *-ė)*, Rus *-иче-ск-(ий*, *-ая*, *-ое)*, Eng *-ic-al* are made of combinations of simplex ones.
        Finally, the term *collocation* was coined by Firth to refer to the common co-occurrence of two or more words (cf. Crystal 2008, 86–87).

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[4] Lithuanian, Latvian, and Russian suffixes are given together with the endings of the nominative case of adjectives.
[5] Personal information of Dr. Anna Stafecka from University of Latvia.
[6] Personal information of Dr. Anna Daugavet from Sankt Petersburg State University.

3. Competing patterns of borrowed adjectives in Lithuanian, Latvian, Russian, and English

In the analysed languages, three rival patterns of borrowed adjectives could be distinguished on the basis of competition between:

1. derivatives with different suffixes
2. simplex or correlative and suffixed adjectives
3. derivatives with simplex and complex suffixes

3.1. Competition between derivatives with different suffixes: the first pattern

This pattern is typical of Lithuanian, Latvian, Russian, and English. Consider the three productive Lithuanian suffixes which belong to derivational categories of relational (*-inis*, *-ė*) and qualitative (*-ingas*, *-a* and *-iškas*, *-a*) adjectives and are used in Lithuanian hybrid derivatives (cf. Keinys 1999: 75f., Stundžia 2016: 3097f.). In this case one adjective root can take three different suffixes which implicate different derivational meanings of the derived words. However, cases of synonymy among suffixes belonging both to the same and different derivational categories still occur. In Lithuanian, Latvian, Russian, and English dictionaries, competition between the two suffixed adjectival derivatives can be observed, cf. e.g.:

(5) Lith *-išk-as*, *-a*/*-ing-as*, *-a* (a); *-in-is*, *-ė*/*-išk-as*, *-a* (b)
(a) *rìtm-išk-as / ritm-ìng-as* (kvėpavimas, širdies plakimas) 'rhythmic(al) breathing, heartbeat'
(b) *rìtm-in-ė / rìtm-išk-a* (linija, figūra) 'rhythmic(al) line, form' (LKŽ[e2])

(6) Latv *-isk-s*, *-a*/*-īg-s*, *-a*
(a) *person-isk-ā / person-īg-ā* (lieta, piezīme) 'the personal effect, remark'
(b) *cilvēc-isk-s / cilvēc-īg-s* 'human; humane' (LLVV)

(7) Rus *-н-ый*, *-ая*, *-ое* /*-ов-ый*, *-ая*, *-ое* (a); *-н-ый*, *-ая*, *-ое* / *-(е)ск-ий*, *-ая*, *-ое* (b)
(a) *антрацит-н-ый*, *-ая*, *-ое* / *антрацит-ов-ый*, *-ая*, *-ое* 'anthracitic'
(b) *цинич-н-ый*, *-ая*, *-ое* / *цинич-еск-ий*, *-ая*, *-ое* 'cynical' (TSRJa)

(8) Eng *-ive*/*-ory*
declarat-ive / *declarat-ory* (CED)

According to LKŽ[e2] and DŽ[e3], *rìtm-išk-as*, *-a* and *ritm-ìng-as*, *-a* are defined as 1) 'having regularly repeating patterns' and 2) 'regular, harmonious recurrence of elements'. The semantics of the first pair of adjectives in (5a) is the same. However, *ritm-ìng-as*, *-a* has a third additional meaning 'continuous, uninterrupted'. In DŽ[e3], *rìtm-in-is*, *-ė* (5b) has only one meaning 'consecutive, periodic repetition (movement, sound, accord)', whereas in LKŽ[e2] it contains two: 1) 'having rhythm' and 2) 'sth. that is made according to some rhythm, sound'. The first meaning of the said adjective is almost the same as in the case of *rìtm-išk-as*, *-a* and

ritm-ìng-as, *-a*. The rival pair in (5b) also has identical meanings, thus, it is not easy to tell the difference between the two derivatives with different suffixes.

In LLVV, it is indicated that *person-īg-s*, *-a* and *person-isk-s*, *-a* could be synonymous in their three meanings: 1) 'belonging to a person'; 2) 'related to a person individually'; 3) 'having relation with a concrete person'. *Cilvēc-isk-s* and *cilvēc-īg-s* can also be used synonymously with the meanings 'human' and 'humane'. However, only the combinations of the adjectives *person-īg-s*, *-a* and *person-isk-s*, *-a* with nouns, showing the synonymy, are given in this dictionary (cf. 6a).

In the Russian online dictionary[7], the adjective pair in (7a) is considered to be synonymous. Yet, in the dictionary of paronyms, *антрацит-н-ый*, *-ая*, *-ое* and *антрацит-ов-ый*, *-ая*, *-ое* bear different meanings (Vishnjakova 1984: 27). The former means 'characteristic of anthracite', the latter 'containing or using anthracite'. According to TSRJa, *цинич-еск-ий*, *-ая*, *-ое* and *цинич-н-ый*, *-ая*, *-ое* (7b) are synonymous in their meanings. In the dictionary of paronyms (Vishnjakova 1984: 177), the former adjective has two meanings. As regards the first meaning, it refers to cynicism, namely the philosophical teaching of cynical people, whereas the second meaning 'showing cynicism' is obsolete. The latter adjective is defined as 'shameless, unethical, showing nihilistic attitude to human culture and generally accepted moral rules'.

In the CED, the first pair of words (8a) is synonymous only in the first meaning, namely 'making or having the nature of a declaration'. *Declarat-ory* has one more meaning common in the language of law, cf. '(of a statute) stating the existing law on a particular subject; explanatory', '(of a decree or judgment) stating the rights of the parties without specifying the action to be taken'.

In order to find out how the competing pairs of adjectives are synonymous, we have conducted a fairly rough quantitative analysis of their collocational behaviour in the corpora of four languages. We have chosen the most typical examples of simple or correlative adjectives, as well as the most productive suffixes of derivatives.

3.1.1. Corpus of Contemporary Lithuanian Language

In Lithuanian, an exceptionally productive suffix *-in-is*, *-ė* is used to make relational adjectives (cf. DLKG 2005: 210, LG[2] 1997: 82, Keinys 1999: 75) with the meaning 'made from' or 'pertaining to' the base noun; this is why words with this affix are increasingly common in Lithuanian terminology. Productive suffixes *-ing-as*, *-a* and *-išk-as*, *-a* are used in the formation of qualitative adjectives. Adjectives formed with these two suffixes are generally derived from nouns. It is significant to point out that the former suffix denotes the possession of qualities usually in abundance, e.g.: *gal-ìng-as*, *-a* 'powerful' ← *gal-ià* 'power', *išmint-ìng-as*, *-a* 'wise' ← *išmint-ìs* 'wisdom', whereas the latter suffix denotes similarity of a thing signified by the base noun. However, similarity can be external (a) or internal (b), e.g.: (a) *griõzd-išk-as stãlas* 'cumbersome table' ← *griõzd-as* 'lumber', *šmékl-išk-as vaĩzdas* 'ghostlike view' ← *šmékl-a* 'ghost', (b) *draŭg-išk-as žmogùs* 'friendly man' ← *draŭg-as*, *-ė* 'friend', *vaĩk-išk-as elgesỹs* 'childlike behaviour' ← *vaĩk-as* 'child' (cf. Keinys 1999: 75f.). However, nominal collocations[8] with these suffixed derivatives show that adjectives with different suffixes can be used synonymously with deverbal action and

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[7] *http://dic.academic.ru/dic.nsf/ogegova/6262* (Last accessed Jan. 2015).
[8] For more on the conception of collocation and phraseology, see Marcinkevičienė (2010).

resultative nouns (a) and also with simplex indigenous and borrowed inanimate nouns (b), cf. e.g.:

(9)   *rìtm-in-is*, *-ė* (189 collocations[9] in total) / *rìtm-išk-as*, *-a* (133 collocations in total) 'rhythmic(al)' (30 coinciding collocations)
        a) *alsãvimas* 'heavy breathing', *judėjimas* 'movement', *judesỹs* 'motion', *kartójimas* 'repetition,' *piešinỹs* 'picture', *žaidìmas* 'play', *veiklà* 'activity', etc.
        b) *dainà* 'song', *fòrmos* 'forms', *gar̃sas* 'sound', *gèstai* 'gestures', *mùzika* 'music', *periòdas* 'period', *pùlsas* 'pulse', etc.

(10)   *rìtm-in-is*, *-ė* / *ritm-ìng-as*, *-a* (118 collocations in total) 'rhythmic(al)' (24 coinciding collocations)
        a) *deriniaĩ* 'combinations', *judėjimas* 'movement', *pasikartójimas* 'repetition', *veiklà* 'activity', *šaũksmas* 'call', etc.
        b) *dainà* 'song', *gar̃sas* 'sound', *lìnija* 'line', *mùzika* 'music', *páuzė* 'pause', *periòdas* 'period', *sistemá* 'system', *struktūrà* 'structure', etc.

(11)   *ritm-ìng-as*, *-a* / *rìtm-išk-as*, *-a* 'rhythmic(al)' (30 coinciding collocations)
        a) *alsãvimas* 'heavy breathing', *dũžiai* 'strokes', *gaudesỹs* 'rumble', *judesỹs* 'motion', *judėjimas* 'movement', *kalbėjimas* 'talk', *pasikartójimas* 'repetition', *svyrãvimas* 'swing', *tiekìmas* 'supply', *veiklà* 'activity', etc.
        b) *dainà* 'song', *gar̃sas* 'sound', *lìnija* 'line', *melòdija* 'melody', *mùzika* 'music', *žõdis* 'word', etc.

(12)   *rìtm-in-is*, *-ė* / *ritm-ìng-as*, *-a* / *rìtm-išk-as*, *-a* 'rhythmic(al)' (13 coinciding collocations)
        a) *alsãvimas* 'heavy breathing', *judėjimas* 'movement', *judesỹs* 'motion', *(pasi)kartójimas* 'repetition', *veiklà* 'activity', etc.
        b) *dainà* 'song', *gar̃sas* 'sound', *lìnija* 'line', *mùzika* 'music', *periòdas* 'period', etc.

The above-mentioned examples in (9-12) clearly illustrate that the two or even three rival adjectives can go together with the same action, resultative or simplex nouns. Adjectives also enter into different collocations both with action or resultative nouns (a) and with simplex and correlative nouns (b), cf. e.g.:

(13)   *rìtm-in-is*, *-ė* (718[10]) 'rhythmic(al)'
        a) *apskaičiãvimas* 'calculation', *atkartójimas* 'repetition', *atradìmas* 'discovery', *póžiūris* 'attitude', etc.
        b) *áidas* 'echo', *cìklas* 'cycle', *disonánsas* 'dissonance', *džiãzas* 'jazz', *enèrgija* 'energy', *fòrmulė* 'formula', *gimnãstika* 'gymnastics', *signãlas* 'signal', *žénklas* 'sign', etc.

(14)   *ritm-ìng-as*, *-a* (246) 'rhythmic(al)'

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[9] Only adjective-noun collocations have been extracted from DLKT.
[10] The numbers indicated in brackets show the token frequency, i.e. the number of times a word form occurs in a corpus.

a) *áimana* 'moan', *bendradarbiãvimas* 'collaboration', *dárbas* 'work', *ìštrauka* 'extract', *gyvẽnimas* 'life', *finansãvimas* 'sponsorship', *griaustìnis* 'thunder', *kalbė́sena* 'speech', *knarkìmas* 'snore', *laĩkas* 'time', *žaĩsmas* 'play', etc.
b) *dvasiá* 'spirit', *eĩlės* 'verse', etc.

(15)   *rìtm-išk-as, -a* (215) 'rhythmic(al)'
a) *atgimìmas* 'rebirth', *išsidė́stymas* 'arrangement', (*klìmato) kaità* 'climate change', *veřksmas* 'cry', *šurmulỹs* 'uproar', etc.
b) *konvùlsijos* 'convulsions', *máršas* 'march', *siužètas* 'plot', *spektãklis* 'performance', *rãtas* 'cycle', *tachikárdija* 'tachycardia', etc.

Examples (9-11) illustrate that adjectives (*rìtm-in-is, -ė*, *ritm-ìng-as, -a* and *rìtm-išk-as, -a*) belonging to distinct categories can co-occur with the same simplex indigenous and borrowed inanimate nouns, as well as with derivatives denoting action and result. Meanwhile, examples in (13-15) show the co-occurrence of adjectives with different nouns. In this case one can notice a slight difference in the collocational behaviour of the analysed adjectives, i.e. *rìtm-in-is, -ė* shows preference to collocations with simplex nouns, while *ritm-ìng-as, -a* to action or resultative nouns, and *rìtm-išk-as, -a* seems to be the most flexible in terms of collocational behaviour[11].

3.1.2. Corpus of Modern Latvian
In Latvian, two productive derivational suffixes, i.e. *-isk-s, -a* and *-īg-s, -a*, corresponding to three above-mentioned Lithuanian suffixes, enter into genuine competition with each other. Hybrid adjectives derived by means of these suffixes can be used synonymously, mostly both with action or resultative nouns (a) and simplex or correlative borrowed nouns (b) and sometimes with quality nouns as well (c), cf. e.g.:

(16)   *person-isk-s, -a* (444 collocations with 119 different nouns) / *person-īg-s, -a* (237 collocations with 120 different nouns) 'personal' (336 coinciding collocations include 37 different nouns)
a) *apvainojums* 'insult', *attieksme* 'attitude', *dzīve* 'life', *ierašanās* 'coming', *lietošana* 'use', *pieredze* 'experience', etc.
b) *dati* 'data', *dokuments* 'documents', *higiēna* 'hygiene', *identitāte* 'identity', *interese* 'interest', *manta* 'property', *menedžeris* 'manager', *records* 'record', etc.
c) *drošība* 'safety', *īpašība* 'quality', *labums* 'good', etc.

In LVK2013, the token frequency of *person-isk-s, -a* is higher (444) in comparison to *person-īg-s* (237). These two adjectives more often collocate with different nouns, particularly with simplex or correlative borrowed ones (a) and also with derivatives denoting action or result (b), cf. e.g.:

(17)   *person-isk-s, -a*

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[11] Adjectives ending in *-inis, -ė* are considered to be particularly productive in Lithuanian (cf. DLKG 2005: 210, LG[2] 1997: 82). It is not surprising, therefore, that in DLKT the hybrid derivative *rìtm-in-is, -ė* has the largest number of tokens in comparison to *rìtm-išk-as, -a* and *ritm-ìng-as, -a*.

a) *arhīvs* 'archive', *drama* 'drama', *forma* 'form', *iniciatīva* 'initiative', *karjera* 'career', *kontakts* 'contact', *konteineris* 'container', *režisors* 'director', *vēsture* 'history', etc.
b) *darbs* 'work', *piemērs* 'example', *piedalīšanās* 'participation', *stāstījums* 'story', *uzskats* 'opinion', etc.

(18)   *person-īg-s, -a*
a) *bizness* 'business', *budžets* 'budget', *faktors* 'factor', *filma* 'film', *kapitāls* 'capital', *mozaīka* 'mosaic', *šoferis* 'driver', *treneris* 'trainer', etc.
b) *iezīme* 'feature', *jautājums* 'question', *nākotne* 'future', *pētijums* 'research', *skatījums* 'view', etc.

3.1.3. Russian National Corpus

In the corpus, the adjectives *цинич-н-ый*, *-ая*, *-ое* and *цинич-еск-ий*, *-ая*, *-ое* 'cynical' have about 100 common collocations:

(19)   *цинич-н-ый*, *-ая*, *-ое* (522 collocations in total) / *цинич-еск-ий*, *-ая*, *-ое* (242 collocations in total) *взгляд* 'glance', *логика* 'logic', *мысль* 'thought', *наглость* 'impudence', *нигилизм* 'nihilism', *ответ* 'answer', *откровенность* 'frankness', *песня* 'song', *теория* 'theory', *улыбка* 'smile', *фраза* 'phrase', *шутка* 'joke', etc.

A dictionary of paronyms (Vishnjakova 1984: 177) notices that the two adjectives are synonymous because they both mean 'showing impudence', e.g. *цинич-еск-ое* (*циничное*) *изложение* 'cynical statement' and *цинич-еск-ая* (*циничная*) *улыбка* 'cynical smile'. In the corpus *цинич-н-ый*, *-ая*, *-ое* has indeed a larger number of collocations in comparison to *цинич-еск-ий*, *-ая*, *-ое*. The reasons could be that the latter adjective is obsolete (cf. Vishnjakova ibid.) and the speakers tend to use a shorter form due to language economy, cf. e.g.:

(20)   *цинич-н-ый*, *-ая*, *-ое* (1731)[12] *борьба* 'fight', *вдова* 'widow', *государство* 'state', *девушка* 'girl', *животное* 'animal', *жизнь* 'life', *журналист* 'journalist', *медицина* 'medicine', *молодежь* 'youth', *наблюдатель* 'observer', *погода* 'weather', *политика* 'politics', *сатира* 'satire', *судьба* 'fate', *тётка* 'aunt', *человечество* 'humanity', etc.

(21)   *цинич-еск-ий*, *-ая*, *-ое* (521) *аргументация* 'argumentation', *идея* 'idea', *любитель* 'lover', *ненависть* 'hatred', *псевдоним* 'pseudonym', *презрение* 'contempt', *скупость* 'stinginess', *термин* 'term', *удивление* 'astonishment', *философ* 'philosopher', *философия* 'philosophy', *эксперимент* 'experiment', *юмор* 'humour', etc.

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[12] Adverb-verb collocations as well as derived nouns are included in this number, which shows the token frequency of a word. However, they are not investigated in this paper. The search in the NKRJa was done in the following way. The stems *циничн** and *циническ** were written in the search tool. Both derived nouns (e.g. *циничность* 'cynicism') and adverb-verb (e.g. *цинично отвечает* 'answers in a cynical way') collocations were extracted from the corpus.

3.1.4. British National Corpus
3.1.4.1. On the rivalry between -ive and -ory
Kaunisto (2008: 74) correctly notices that in present-day English words ending in *-ive* or *-ory*[13] are not very widespread; yet, competition between the two word formational patterns might be observed.

The first pair of words analysed here is *declarat-ive* (35) and *declarat-ory* (16). As the numbers indicate, the token frequency of these two words in the corpus is relatively low. At first sight, the two words look synonymous due to similar adjective-noun collocations which can be determined, cf. e.g.:

(22)   *declarat-ive* (14 collocations in total) */ declarat-ory* (12 collocations in total) *doctrine*, *form, statements* (3 coinciding collocations)

Garner (2003) also observes that these adjectives have synonymous meanings, namely 'serving to declare'. However, *declarat-ory* has produced a number of fixed expressions in legal English (cf. *declaratory act, declaratory action, declaratory decree, declaratory judgement, declaratory statute, declaratory theory*[14]), meanwhile *declarat-ive* is frequently used in grammar (*declarative statement, sentence, sentence types, verb forms*) (cf. Kaunisto 2008: 82). As Garner (2003) points out, the word *declamat-ory* is sometimes confused with *declarat-ory*. The former has the meaning 'empty and bombastic'.

In the BYU-BNC, the token frequency of *investigat-ive* (286) is much higher in comparison to *investigat-ory* (42). Both adjectives bear the same meaning, namely they relate to investigating something, cf. e.g.:

(23)   *investigat-ive* (109 collocations in total) / *investigat-ory* (29 collocations in total) *abilities, agency, body, journalist, procedure, process, research, role, stage, style, task, visit, work*, etc. (16 coinciding collocations)

However, these adjectives also collocate with different nouns:

(24)   *investigat-ive branch, newspaper, outsiders, knowledge, practice, session, stories, strategy, studies, techniques, units, workloads*, etc.

(25)   *investigat-ory authorities, component, fees, frolics, function, orders, policy, response, stance, tools*, etc.

Both words modify official entities such as *agency / authorities / body / powers* (cf. Kaunisto 2008: 84). Garner (2003: 465) proposes the idea that there is no point in having two synonymous words. "We might be well advised to throw out *investigatory* and stick with *investigative*, or to develop some DIFFERENTIATION". However, in the BYU-BNC, adjectives ending in *-ory* have produced a number of fixed expressions, especially in relation to journalism (e.g. *investigatory journalism, journalistic skills, trade journalists, journalist, newspaper, reporting, reporter, tabloid, television programme, writer*) and medicine

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[13] Nouns ending in *-ive* and *-ory* are not investigated in this paper.
[14]   Examples taken from on-line Legal dictionaries: *http://legal-dictionary.thefreedictionary.com/*, *http://thelawdictionary.org/*, *http://dictionary.law.com/* (Last accessed Jan. 2016).

(*investigatory colonoscopy*, *mastectomy*). According to Garner (2003: 465), *investigat-ory* occurs almost as commonly as *investigat-ive* in American law-enforcement contexts (for more on the most frequently occurring *-ive/-ory* adjective pairs in BYU-BNC and COCA, see Kaunisto 2008: 80–85).

The last pair of words is *stimulat-ive* and *stimulat-ory*. In the CED, both adjectives are given as synonyms, whereas the OALD does not contain the mentioned forms. The latter dictionary, gives only *stimulat-ing* which is used in the meaning 'inspiring' and 'making you feel more active and healthy'. According to the CED, *stimulat-ive* and *stimulat-ory* derive from the verb *stimulate* which has 3 meanings: 1) 'to fill (a person) with ideas or enthusiasm'; 2) 'to excite (a nerve, organ, etc.) with a stimulus'; 3) 'to encourage (something) to start or progress further'. However, neither adjective is mentioned as synonymous with the word *stimulat-ing*. Cf. adjective collocates in the BYU-BNC:

(26)   *stimulat-ive* (5^{15}) / *stimulat-ory* (48) / *stimulat-ing* (756^{16}) *effect* (1 common collocation)

(27)   *stimulat-ory* (16 collocations in total) / *stimulat-ing* (168 collocations in total) *activity*, *component*, *effect*, *interactions*, *properties* (5 coinciding collocations)

In the corpus, the token frequency of *stimulat-ive* is very low. However, it has been noticed that in specialised dictionaries this word is the preferred form in the language of finance:

(28)   *stimulat-ive fiscal policy*, *grants*, *middle-income tax cut*, *deficit*, *action*, *monetary / financial policy*, *financial conditions*[17]

In fact, in the future, this term might prevail only in the domain of finance. *Stimulat-ory* in comparison to *stimulat-ive* has a larger number of instances in the BYU-BNC. It seems that the former is more favoured when referring to medicine or biology:

(29)   *stimulat-ory action*, *autocrine cycle*, *conditions*, *impulses*, *laxatives*, *organs*, *receptors*, *response*, *signals*

As a result, the differentiation between *stimulat-ive* and *stimulat-ory* lies in their established uses and not in meaning.

Finally, but no less significantly, the adjective *stimulat-ing* might be characterized by the highest frequency of occurrence. This adjective is used in various contexts:

(30)   *stimulat-ing analysis*, *approach*, *atmosphere*, *debate*, *job*, *classes*, *music*, *overview*, *pattern*, *lecture*, *seminar*, *textbook*, *time*, *tour*, *tutorials*, *workshop*, etc.

3.2. Competition between simplex or correlative and suffixed adjectives: the second pattern

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[15] The numbers in brackets show the token frequency of a word.

[16] Verb-noun collocations (e.g. *stimulating imagination / the economy / the youngsters*) are included in this number, however, they are not analysed.

[17] The last four words starting with *deficit* are taken from financial glossaries as well as the *Oxford Dictionary of Law* (Last accessed Jan. 2016).

The second pattern is observed only in two analysed languages, i.e. Lithuanian and Latvian. It is significant to point out that it seems to be very rare in Latvian and not found in Russian, while the situation in English can only be ascertained through further research[18], cf. e.g.:

(31)   Lith (a) *lokal-ùs, -ì / lokãl-in-is, -ė* 'local'
            (b) *preliminar-ùs, -ì / preliminãr-in-is, -ė* 'tentative' (DŽ[e3], LKŽ[e2])

(32)   Latv (a) *morāls, -a / morāl-isk-s, -a* 'moral'
            (b) *militārs, -a / militār-isk-s, -a* 'military' (LLVV)

As far as Lithuanian dictionaries are concerned, in DŽ[e3], adjectives *lokal-ùs, -ì* and *lokãl-in-is, -ė* (31a) are given as total synonyms, namely both words are described as 'connected with a particular place, boundaries; local'. In LKŽ[e2], the adjective *lokal-ùs, -ì* is not included, however, *lokãl-in-is, -ė* is defined as 'connected with a particular place'. In DŽ[e3], *preliminar-ùs, -ì* means 'tentative', and *preliminãr-in-is* is defined using definite form of the same adjective, namely '*preliminarusis*'. In spite of that the meanings are identical. In LKŽ[e2], both adjectives in (31b) are given as synonyms too.

As regards Latvian (32), LLVV describes *morāls, -a* as an adjective having three meanings: 1) 'connected with morality'; 2) 'corresponding to norms of morality'; 3) 'connected with the spiritual life of a human being'. As the adjective *morāl-isk-s, -a* is concerned, it is viewed as being synonymous with the simplex one in meanings 1 and 2. The simplex *militārs, -a* and the suffixed derivative *militār-isk-s, -a* 'military' are given as total synonyms in LLVV. In both cases the dictionary shows a clear preference for the simplex form.

3.2.1. Corpus of Modern Lithuanian

In Lithuanian, simplex adjectives compete with hybrid suffixed adjectives ending in *-in-is, -ė*[19]. Nominal collocations include both simplex nouns (a) and derivatives denoting action, quality and place (b), cf. e.g.:

(33)   *lokal-ùs, -ì* (238 collocations in total) / *lokãl-in-is, -ė* (288 collocations in total) 'local' (77 coinciding collocations)
            a) *kultūrà* 'culture', *projèktas* 'project', *procèsas* 'process', *problemà* 'problem', *spalvà* 'colour', *tiñklas* 'network', etc.

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[18] As regards English, at first, initially our aim was to distinguish the second rival pattern here. Two adjectives were selected from the BYU-BNC, namely *formal* and *formal-istic*. We found only 6 coinciding collocations with both adjectives. However, in order to state that they are synonymous, wider contexts need to be investigated (cf. more examples *dual / dual-istic, global / global-istic*).

[19] This suffix is so productive that it can be attached to all parts of speech, namely nouns (*berž-ìn-is, -ė* 'birchen' ← *bérž-as* 'birch'), adjectives (*bendr-ìn-is, -ė* 'common' ← *beñdr-as, -à* 'general, common'), numerals (*pirm-ìn-is, -ė* 'primary' ← *pìrm-as, -à* 'first'), verbs (*pirkt-ìn-is, -ė* 'shop-bought' ← *piřkt-as, - à* 'bought'), adverbs (*apliñk-in-is, -ė* 'surrounding' ← *apliñk* 'around'), and prepositional constructions (*po-kar-ìn-is, -ė* 'postwar'← *põ* 'after' + *kãr-as* 'war'). This suffix can also be added to compounds (*ilga-mẽt-in-is, -ė* vs. *ilga-mẽt-is, -ė* 'long-lived ← *ìlg-as, -à* 'long' + *mẽt-ai* 'year'). It seems that in DŽ[e] there are no compounds having the suffix *-inis, -ė* with the exception of words like *dvylik-ìn-is, -ė* 'twelve years old', *aštuoniolik-ìn-is, -ė* 'eighteen years old', *devyniolik-ìn-is, -ė* 'nineteen years old'. In LKŽ[e], compounds with the suffix *-inis, -ė* are also very rare and might come from Old Lithuanian texts.

b) *bendradarbiãvimas* 'collaboration', *dievýbė* 'deity', *erdvẽ* 'space', *koncentrãcija* 'concentration', *padidéjimas* 'increase', *prótrūkis* 'outburst', etc.

The meanings of both adjectives in DŽ[e] and TŽŽ[e] are considered to be synonymous. Both adjectives refer to 'a local or certain place'. Despite the same meaning, the adjectives in DLKT frequently collocate both with simplex or correlative nouns (a) and derivatives mostly denoting action (b), cf. e.g.:

(34) *lokal-ùs, -ì* 'local' (568[20])
      a) *blokadà* 'blockade', *defèktas* 'defect', *dèmonas* 'demon', *dokumeñtai* 'documents', *eròzija* 'erosion', *imunitètas* 'immunity', *katalògas* 'catalogue', *kontròlė* 'control', etc.
      b) *gyvẽnimas* 'life', *aktỹvinimas* 'activation', *ataugìmas* 'regrowth', *išsiláisvinimas* 'liberation', *atšalìmas* 'global cooling' *(žẽmės) drebéjimas* 'earthquake', *išplitìmas* 'outspread', *kraujãvimas* 'bleeding', *pakitìmas* 'change', *sukilìmas* 'revolt' etc.

(35) *lokãl-in-is, -ė* 'local' (716)
      a) *aspèktas* 'aspect', *disciplinà* 'discipline', *literatūrà* 'literature', *tradìcijos* 'traditions', *karaĩ* 'wars', *rinkà* 'market', etc.
      b) *aprãšymas* 'description', *gedìmas* 'breakdown', *judéjimas* 'movement', *kaità* 'change', *nukrypìmas* 'deviation', *pakilìmas* 'rise', etc.

Even though collocations are different, it seems that at least in some cases *lokal-ùs, -ì* could also occur with the nouns *lokãl-in-is, -ė* collocates with.

The second competing pattern is highly characteristic of Lithuanian as comparatively a large number of such rival pairs exists, cf. more examples, e.g.:

(36) *global-ùs, -ì / globãl-in-is, -ė* and *glob-ãl-išk-as, -a* 'global'
      dual-ùs, -ì / duãl-in-is, -ė 'dual'
      fatal-ùs, -ì / fatãl-in-is, -ė and *fatãl-išk-as, -a* 'fatal'[21]

The above-mentioned examples might be used with the same meaning, e.g. *globalùs / globãlinis / globãliškas mãstymas* 'global thinking'. The token frequency of *globalùs, -ì* is 1237, *globãlinis, -ė* − 1687 and *globãliškas, -a* − only 18. Other competing adjective forms can also be used synonymously, however, the token frequency of some in the DLKT differs considerably from that of *globalùs, -ì* and its derivatives. The word *dualùs, -ì* occurs 82 times, *duãlinis, -ė* 36; *fatalùs, -ì* 18, *fatãlinis, -ė* 21, *fatãliškas, -a* 467[22]. These adjective pairs have no discernible differences in meaning.

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[20] The numbers in brackets denote the token frequency of a word.

[21] In DŽ[e], the two adjectives are synonymous.

[22] Shorter and longer forms of compounds can also compete with each other, cf. e.g.: *daugiamilijõn-is, -ė* vs. *daugiamilijõn-in-is, -ė* 'multimillion'. It is possible that the former compound can later change the longer one *daugiamilijõn-in-is, -ė*, which is now favoured by the Lithuanian dictionaries (DŽ[e], LKŽ[e]). Such a change is possible due to similar hybrid adjectives such as *viena-ciliñdr-is, -ė* 'one-cylinder' (DŽ[e], LKŽ[e]), instead of *viena-ciliñdr-in-is, -ė*, and *smulkia-struktū̃r-is, -ė* 'exhibiting complex/elaborate structure' (LKŽ[e]), instead of *smulkia-struktū̃r-in-is, -ė*, which already exist in the aforesaid dictionaries. The Lithuanian language standardisers, as a rule, prefer shorter forms of borrowed adjectives (cf. Paulauskienė 2000: 118ff; for more see 3.3.1).

3.2.2. Corpus of Modern Latvian
As far as LVK2013 is concerned, simplex or correlative adjectives dominate or even are the only ones representing the said competing pattern, e.g.:

(37)   *morāls*, *-a* (140 collocations) / *morāl-isk-s*, *-a* (1 collocation) 'moral' *apsvērums* 'consideration' (only 1 coinciding collocation)

(38)   *militārs*, *-a* (331 collocation) / *militār-isk-s*, *-a* (no collocations at all) 'military'

As regards *morāl-isk-s*, *-a*, LLVV gives collocations with action or resultative nouns *morāl-isk-s viedoklis* 'moral view', *pagrimums* 'moral decline', and more collocations of the same type can be found in Saeima-2.0, e.g. *morāliskā attīrīšanās* 'moral purification', *morāliskā atmošanās* 'moral awakening', *morālisko apstākli* [acc. sg.] 'moral circumstance', *morālisko apspriešanu* [acc. sg.] 'moral discussion', etc[23]. In the case of *militār-isk-s*, *-a* only LLVV gives one collocation *ar militārisku sveicienu* 'with military greeting'.

     In rare cases LVK2013 has collocations exclusively with the suffixed adjective, e.g. *ident-isks*, *-a* 'identic(al)' (44 collocations), whereas a simplex adjective bearing the same root and, as a rule, the same meaning, can be found in LLVV (*ident-s*, *-a*: *identas parādības* [nom.pl.] 'identic(al) phenomena') and Saeima-2.0, e.g. *identi jēdzieni* [nom.pl.] 'identic(al) ideas')[24]. The preliminary analysis of the provided facts shows the ongoing processes of competition between simplex borrowed and suffixed hybrid adjectives in Latvian. It seems that simplex forms are used more frequently than suffixed ones, which in many cases may be a manifestation of the latest tendency in the development of spoken Latvian.

3.3. Competition between derivatives with simplex and complex suffixes: the third pattern

The third pattern is common in Lithuanian, Russian, and English, however, no occurrences have been found in Latvian, cf. e.g.:

(39)   Lith *-in-is*, *-ė*/*-atin-is*, *-ė* (a); *-in-is*, *-ė*/*-yvin-is*, *-ė* (b)
       (a) *tèm-in-is*, *-ė* / *tem-ãtin-is*, *-ė* 'thematic(al)'
       (b) *dedùkc-in-is*, *-ė* (DŽ[e3]) / *dedukt-ỹvinis*, *-ė* (LKŽ[e2]) 'deductional'

(40)   Rus *-ск-ий*, *-ая*, *-ое*/*-ическ-ий*, *-ая*, *-ое* (a); *-н-ый*, *-ая*, *-ое*/*-абельн-ый*, *-ая*, *-ое* (b)
       (a) *герой-ск-ий*, *-ая*, *-ое* / *геро-ическ-ий*, *-ая*, *-ое* 'heroic'
       (b) *комфорт-н-ый*, *-ая*, *-ое* / *комфорт-абельн-ый*, *-ая*, *-ое* 'comfortable' (TSRJa)

(41)   Eng *-ic/-icalc*
       (a) *pedagog-ic / pedagog-ical* (OALD)
       (b) *metaphor-ic / metaphor-ical* (CALD)

In LKŽ[e3], the first pair of adjectives (39a) is described differently. *Tèm-in-is*, *-ė* has two meanings: 1) 'connected with a theme or themes, dedicated to some theme' and 2) 'consisting

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[23] Collocations with simplex nouns are also possible, cf. *morāliska problēma* 'moral problem'.
[24] A preliminary list of possible Latvian examples of the second pattern has been kindly presented by Prof. Dr. Andra Kalnača from University of Latvia.

of themes'. The second meaning is more common in linguistics, e.g. when talking about dictionaries. *Tem-ãtin-is*, *-ė* also carries two meanings: 1) 'including the entirety of themes, related with the topic' and 2) 'a vowel that ends a stem'. The second meaning is more specific, i.e. as a term, it is used mainly in the linguistic field. The adjectives in (39b) are also given as synonyms by different dictionaries of Lithuanian (TŽŽ[e], DŽ[e3]).

The two adjectives in (40a) seem semantically similar. As regards the latter one, it has got three meanings: 1) 'characteristic of a hero, brave'; 2) 'requiring a lot of effort'; 3) 'narrating deeds of heroes'[25]. According to the dictionary[26], the first meaning of *герой-ск-ий*, *-ая*, *-ое* and *геро-ическ-ий*, *-ая*, *-ое* is identical. Thus, it follows that the two lexical items are total synonyms as they are mutually interchangeable with one meaning. According to Russian dictionaries[27], *комфорт-н-ый*, *-ая*, *-ое* / *комфорт-абельн-ый*, *-ая*, *-ое* are not synonymous. The former is used with abstract nouns, whereas the latter one is used with concrete nouns. It has to be noted that in the NKRJa, the third competing pattern is the dominant one.

In the OALD, both *pedagog-ic* and *pedagog-ical* (41a) are included under the same entry. In the CALD, *metaphor-ic* and *metaphor-ical* (41b) are recorded within the same entry too.

In Lithuanian, the formants *-at-*, *-yv-* are taken from donor languages as elements of correlative borrowings, cf. e.g.:

(42) Lith *tem-ãtik-a* 'thematics', *dedukt-yv-ùs*, *-ì* 'deductive'
      Cf. Rus *тем-атик-а*, *дедукт-ивн-ый*, *-ая*, *-ое*
      Cf. Eng *them-atic* (← Greek *themat-ik-os*), *deduct-ive* (← Lat *deduct-iv-us*)

Similarly, in Russian, the formants *-ич-* (*-ик-*) and *-абель-* are taken from donor languages, cf. e.g.:

(43) Cf. Fr *héro-ique* ← Lat *hero-ic-us*
      Cf. Fr *confort-able* ← Late Lat *confort-abil-is*

3.3.1. Corpus of Modern Lithuanian
The examples below illustrate how in Lithuanian the adjective root can take a simplex and complex suffixes in collocations, both with simplex or correlative (a) and derived (b) nouns, cf. e.g.:

(44) *tèm-in-is*, *-ė* (96 collocations in total) / *tem-ãt-in-is*, *-ė* (267 collocations in total) 'themat(ic)' (37 coinciding collocations)
      a) *anãlizė* 'analysis', *aspèktas* 'aspect', *ekspozìcija* 'exposition', *grùpė* 'group', *kompozìcija* 'composition', *mẽdžiaga* 'material', *tiñklas* 'network', *struktūrà* 'structure', *tradìcija* 'tradition', etc.
      b) *įvairóvė* 'variety', *bendrùmas* 'affinity', *ieškójimas* 'search', *pateikìmas* 'representation', *patìkrinimas* 'examination', *rinkinỹs* 'collection', *rodỹklė* 'index', *skìrstymas* 'distribution', etc.

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[25] *http://dic.academic.ru/dic.nsf/ushakov/778834* (Last accessed Jan. 2015).
[26] *http://slovar.cc/rus/efremova-tolk/275056.html* (Last accessed Jan. 2015).
[27] *http://paronymonline.ru/%D0%9A/649* (Last accessed Jan. 2016).
 https://my-publication.ru/ru/community/comment/?idmain=8&idpost=269 (Last accessed Jan. 2016).

However, the two adjectives can also collocate both with simplex or correlative (a) and derived (b) nouns:

(45)   *tèm-in-is*, *-ė* (1084[28]) 'themat(ic)'
a) *ãtlasas* 'atlas', *bibliotekà* 'library', *cìklas* 'cycle', *definìcija* 'definition', *dainà* 'song', *dienà* 'day', *ekskùrsija* 'excursion', *integrãcija* 'integration', etc.
b) *apibeñdrinimas* 'generalisation', *atradìmai* 'discoveries', *erdvẽ* 'space', *finansãvimas* 'sponsorship', *išvyka* 'trip', *kaklãraištis* 'tie', *panašùmas* 'similarity', *paskaità* 'lecture', *priešinỹs* 'drawing', etc.

(46)   *tem-ãt-in-is*, *-ė* (188) 'themat(ic)'
a) *analògija* 'analogy', *barjèras* 'barrier', *charakterìstika* 'characteristic', *citatà* 'quotation', *fòrma* 'form', *knygà* 'book', *objèktai* 'objects', *slúoksnis* 'layer', *skãlė* 'scale', *tabù* 'taboo', *žurnãlas* 'magazine', etc.
b) *apribójimas* 'restriction', *cikliškùmas* 'rhythmic(al)', *jungìmas* 'connection', *plėtójimas* 'development', *sudėtìs* 'composition', *vertẽ* 'value', etc.

Even though collocations are different, in many cases *tem-ãt-in-is*, *-ė* could also occur with the nouns that *tèm-in-is*, *-ė* collocates with.

In Lithuanian, it is common and promoted by linguists that adjectives with foreign suffixes or stem-final syllables such as *-al-*, *-ar-*, *-at-*, *-et-*, *-ij-*, *-ik-*, *-yv-*, *-or-* and others should not be used before the suffix *-inis*, *-ė* (cf. Paulauskienė 2000: 118f.). These elements are found in other languages such as Russian, English, and in some cases also Latvian, e.g.:

(47)   *regiòn-in-is*, *-ė,* cf. Eng *region-al*, Rus *регион-альн-ый*, *-ая*, *-ое*, Latv *region-āl-s*, *-a* (cf. Late Latin *region-al-is*)
problèm-in-is, *-ė*, cf. Eng *problem-atic*, Rus *проблемат-ичн-ый*, *-ая*, *-ое*, but – Latv *problem-isks*, *-a* (cf. Late Latin *problemat-ic-us*, cf. Greek *problēm-a*, gen. *problēmat-os*)
teòr-in-is, *-ė*, cf. Eng *theor-etic*, Rus *теорет-ическ-ий*, *-ая*, *-ое*, Latv *teor-ētisk-s*, *-a* (cf. Late Latin *theoret-ic-us*)
statìst-in-is, *-ė*, cf. Eng *statistic-al*, Rus *статист-ическ-ий*, *-ая*, *-ое*, but – Latv *statist-isk-s*, *-a* (cf. Modern Latin *statist-ic-um*)
iliùz-in-is, *-ė*, cf. Eng *illus-ory*, Rus *иллюз-орный*, *-ая*, *-ое*, Latv *iluzor-s*, *-a*/ *iluzor-isk-s*, *-a* (cf. Late Latin *illus-or-ius*)

Many derivatives containing the above-mentioned foreign elements are considered to be incorrect in standard Lithuanian, e.g. *region-ãl-in-is*, *-ė*, *problem-ãt-in-is*, *-ė*, *problem-ãt-išk-as*, *-a*, *teor-èt-in-is*, *-ė*, *statist-ik-ìn-is*, *-ė*. However, in some suffixed derivatives the foreign elements *-ij-*, *-ik-* and others are vitally important, and they cannot be omitted due to the ambiguity of the adjective, cf. e.g.:

(48)   *kolonij-ìn-is*, *-ė* 'colonial' ← *kolònij-a* 'colony' vs. *kolòn-in-is*, *-ė* 'columnar' ← *kolon-à* 'column'

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(49)   *linij-ìn-is*, *-ė* 'linear' ← *lìnij-a* 'line' vs. *lin-ìn-is*, *-ė* 'made of flax' ← *lìn-as* 'flax'

The first pair (48) of adjectives relates to the meaning of 'a country under control of another country' and 'architectural style', meanwhile the second pair (49) of adjectives acquires the meaning of 'linear' and 'made of flax' (DŽ[e3])[29]. As far as the element *-ik-* is concerned, it cannot be omitted in the derived word *fizik-ìn-is* 'related to physics' because the adjective *fiz-in-is* 'physical' also exists. The former has the base word *fìzik-a* 'physics', whereas the latter consists of a bound stem, indigenous suffix and an inflection. Furthermore, the meaning of both adjectives is also different: *fizikìnis* pertains to 'the science of physics' and *fizinis* pertains to 'the body or nature' (DŽ[e3]).

3.3.2. Russian National Corpus
The third competing pattern of adjectives is a productive phenomenon of Russian word-formation. It has been noticed in the corpus that *герой-ск-ий*, *-ая*, *-ое* and *геро-ическ-ий*, *-ая*, *-ое* collocate with concrete, animate nouns (quite often indicating groups of people) such as *армия* 'army', *боец* 'fighter', *дивизия* 'division', *жена* 'wife', *защитник* 'defender', *мама* 'mother', *отец* 'father', *отряд* 'troop', *племя* 'tribe', *фаланга* 'phalanx', *человек* 'person'. However, collocations with abstract, inanimate nouns dominate entirely, cf. the examples below:

(50)   *герой-ск-ий*, *-ая*, *-ое* (219 collocations in total) / *геро-ическ-ий*, *-ая*, *-ое* (763 collocations in total) *акт* 'act', *армия* 'army', *борьба* 'battle', *готовность* 'readiness', *доля* 'fate', *жизнь* 'life', *контратака* 'counterattack', *неустрашимость* 'fearlessness', *поведение* 'behaviour', *роль* 'role', *смерть* 'death', *традиция* 'tradition', etc. (112 coinciding collocations)

The large number of common adjective-noun collocations in NKRJa revealed that the two adjectives are synonymous not only in their first, but also in their second and third meaning[30], i.e. *герой-ск-ий*, *-ая*, *-ое* displays a growing tendency to combine with nouns that should collocate with *геро-ическ-ий*, *-ая*, *-ое*, cf. e.g., *геройский*, *-ая*, *-ое время* 'time', *поход* 'march', *портрет* 'portrait', *сердце* 'heart', *судьба* 'fate', *усилие* 'effort', etc.
    In NKRJa, these two adjectives also collocate with different nouns, cf. e.g.:

(51)   *герой-ск-ий*, *-ая*, *-ое* (4079)[31] *воздух* 'air', *внимание* 'attention', *звезда* 'star', *ответ* 'answer', *кровь* 'blood', *медаль* 'medal', *практика* 'practice', *присутствие* 'presence', *равнодушие* 'indifference', *ранение* 'injury', *ребята* 'boys', *самозащита* 'self-defence', *спасение* 'rescue', *сын* 'son', *чтение* 'reading', etc.

(52)   *геро-ическ-ий*, *-ая*, *-ое* (1020) *бабушка* 'grandmother', *биография* 'biography', *враг* 'enemy', *друг* 'friend', *гангстер* 'gangster', *комедия* 'comedy', *лирика* 'lyrics',

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[29] *http://dz.lki.lt/* (Last accessed Jan. 2016).
[30] The three meanings of *героический*, *-ая*, *-ое* are listed above.
[31] Adverb-verb collocations are included in this number that shows the token frequency of a word. However, they are not investigated in this paper. The search in the NKRJa was done in the following way: the stems *геройск** and *героическ** were written in the search tool. Both adjective-noun and adverb-verb (e.g. *геройски погиб* 'died in a heroic way') collocations were extracted from the corpus.

молодость 'youth', *песня* 'song', *репортер* 'reporter', *статья* 'article', *стихи* 'rhymes', *эпопея* 'epopee', etc.

Next pair of rival adjectives is *комфорт-н-ый*, *-ая*, *-ое* and *комфорт-абельн-ый*, *-ая*, *-ое*, cf. e.g.:

(53) *комфорт-н-ый*, *-ая*, *-ое* (180 collocations in total) / *комфорт-абельн-ый*, *-ая*, *-ое* (218 collocations in total) 'comfortable' *дом* 'house', *город* 'city', *гостиница* 'hotel', *жизнь* 'life', *кресло* 'armchair', *кухня* 'kitchen', *отель* 'hotel', *салон* 'saloon', *софа* 'sofa', *спальня* 'bedroom', *стиль* 'style', etc. (40 collocations)

It should be noted, however, that the said adjectives frequently collocate with different nouns, cf. e.g.:

(54) *комфорт-н-ый*, *-ая*, *-ое* 'comfortable' (1330)[32] *климат* 'climate', *контраст* 'contrast' *контекст* 'context', *микроклимат* 'microclimate', *оружие* 'gun', *регион* 'region', *сон* 'dream', *схема* 'scheme', *страна* 'country', *территория* 'territory', *зона* 'zone', *велосипед* 'bike', etc.

(55) *комфорт-абельн-ый*, *-ая*, *-ое* 'comfortable' (836) *автобус* 'bus', *автомобиль* 'car', *домик* 'little house', *госпиталь* 'hospital', *изба* 'house', *корабль* 'ship', *круиз* 'cruise', *несвобода* 'unfreedom', *пляж* 'beach', *разговор* 'conversation', *чемодан* 'suitcase', etc.

According to a dictionary of paronyms[33], *комфорт-н-ый*, *-ая*, *-ое* is used with abstract nouns, whereas *комфорт-абельн-ый*, *-ая*, *-ое* is used with concrete ones. However, the NKRJa illustrates that these adjectives can be used both with abstract and concrete nouns. Despite *комфорт-абельн-ый*, *-ая*, *-ое* collocating with several abstract nouns, in most cases it is used with concrete ones, whereas *комфорт-н-ый*, *-ая*, *-ое* tends to collocate with nouns with a concrete meaning. Such an explanation is somewhat unhelpful since it does not allow for a principled differentiation between the two adjectival forms.

3.3.3. British National Corpus
As far as adjectives ending in *-ic* and *-ical* are concerned (e.g. *comic / comical, economic / economical, politic / political, pedagogic / pedagogical*), traditionally it is believed that adjectives with the suffix *-ical* derive from adjectives with the suffix *-ic*. Marchand (1969: 242) also puts forward a similar idea that "formations in **-ical**[34] are secondary derivatives, i.e. they are derived from adjectives in **-ic** by means of **-al**". He attempts to explain the difference between *-ic* and *-ical* forms by stating that the meaning of *-ic* adjectives is more directly connected to the idea expressed by the root than the meaning of *-ical* adjectives. A similar explanation was offered by Hawkes (1976: 95): "the adjective in *-ic*, derived from the root substantive, has a semantically more direct connection with that root idea; the adjective

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[32] Adverb-verb collocations (e.g. *комфортно* жилось 'it was comfortable to live'; *было комфортабельно* 'it was comfortable') are included in this number that shows token frequency of a word. However, they are not analysed in this paper.
[33] *http://paronymonline.ru/* (Last accessed Jan. 2016).
[34] Boldface is used in the original by the author.

in *-ical*, a derivative of itself from an adjective form, has a looser connection with the root idea and often takes on a correspondingly looser meaning". Ross (1998: 42) is of the same opinion that adjectives ending in *-ic* are more specific, meanwhile adjectives ending in *-ical* are more general.

3.3.3.1. On the rivalry between -ic and -ical
The adjectives *pedagog-ic* and *pedagog-ical* are often treated as synonyms. According to the OALD, both adjectives mean 'concerning teaching methods'. *Pedagog-ical* does not have a separate entry in the dictionary and is mentioned under the entry *pedagog-ic*. 21 coinciding collocations prove that the rivalry between the adjectives still has not resulted in a clear preference for either of the forms, cf. e.g.:

(56) *pedagog-ic* (79 collocations in total) / *pedagog-ical* (58 collocations in total) *activity, aim, applications, approaches, concern, foundations, function(s), implications, method, principles, responsibilities, skills, style, theory, tradition, value*, etc.

It needs to be noted, however, that in the BYU-BNC the words *pedagog-ic* and *pedagog-ical* occur with roughly equal frequencies, with no apparent pattern governing the choice between the two. The former occurs 133 times, while the latter 124 times. The very fact that the adjectives are used in the field of education probably also explains why variation between the two forms still exists. However, there are more cases when competing adjectives collocate with different nouns, cf. e.g.:

(57) *pedagog-ic accountability, advantage, autonomy, cause, chances, concept, dependency, fashion, material, research, technique, thinking, tone, trade, validity, version*, etc.

(58) *pedagog-ical aspirations, assumption, benefit, intentions, linguistics, needs, orientation, perspectives, potential, preference, relationship, tasks, term, tool, work*, etc.

Even though collocations are different it seems that *pedagog-ic* could also occur with the nouns *pedagog-ical* collocates with. For instance, *pedagogic preference, technique, thinking* collocate well too.

One more pair of competing adjectives is *bibliograph-ic* and *bibliography-ical*. In the BYU-BNC, the rivalry between these two adjectives has resulted in a clear preference for the form in *-ic*, cf. *bibliograph-ic* (203[35]) vs. *bibliograph-ical* (130). Even though the latter has a lower frequency of occurrence, it should be borne in mind that both adjectives still have not undergone differentiation, cf. e.g.:

(59) *bibliograph-ic* (64 collocations in total) / *bibliographic-ical* (62 collocations in total) *aids, checking, collection, control, description, details, essay, knowledge, reference, resource(s), search, sources, surveys, tools*, etc. (20 coinciding collocations)

However, both adjectives are rather frequently used with different nouns:

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[35] The numbers indicated in brackets show the token frequency of a word.

(60)   *bibliograph-ic applications*, *display*, *education*, *entity*, *material*, *method*, *notes*, *packages*, *schemes*, *services*, *subjects*, *system*, etc.

(61)   *bibliographic-ical addendum*, *aspects*, *books*, *tools*, *competence*, *complications*, *consultants*, *detective*, *division*, *machines*, *search*, *support*, *terminology*, etc.

Looking at the collocates of both adjectives, it seems that they are synonymous with the meanings 'connected with a list of books about a particular subject or by a particular author, or to the list of books that have been used by somebody writing an article, etc.' and 'connected with the study of the history of books and their production' (OALD). Pairs of competing words differ from one another only by their derivational affix.

Metaphor-ic and *metaphor-ical* in comparison to *bibliograph-ic / bibliography-ical* have also entered into genuine lexical competition with each other. According to the CALD, the adjective *metaphoric-al* is used in two meanings: 'metaphorical language containing metaphors' and 'not having real existence but representing some truth about a situation or other subject'. Neither this dictionary, nor the OALD highlights the major differences between these adjectives. As regards the forms *metaphor-ic* and *metaphor-ical* in the BYU-BNC, it seems that both words can be used in a broadly similar fashion. The different frequency of occurrence of the two adjectives (token frequency of *metaphoric* 72 and *metaphorical* 191) in the BYU-BNC does not suggest any drastic signs of differentiation between the two forms, cf. e.g.:

(62)   *metaphor-ic* (45 collocations in total) / *metaphor-ical* (113 collocations in total) *expression(s)*, *function*, *juxtaposition*, *language*, *mapping*, *models*, *nature*, *relationship*, *sense*, *strategy*, *terms*, etc. (13 coinciding collocations)

However, competing adjectives can often go together with different nouns, cf. e.g.:

(63)   *metaphor-ic aspects*, *combination*, *components*, *construction*, *domains*, *focus*, *form*, *innovation*, *interaction*, *proliferation*, *relation*, *relevance*, *reversability*, *technique*, *tool*, *verb*, etc.

(64)   *metaphor-ical act*, *allusion*, *borderlines*, *character*, *experience*, *phrase*, *possibilities*, *potential*, *power*, *transition*, *tree*, *value*, *variety*, *walls*, *ways*, *weight*, *word*, etc.

It is worth mentioning that both adjectives are used in a number of fixed expressions especially common in cognitive linguistics: *metaphoric(al) language / mapping*; *metaphoric aspects*; *metaphorical utterance*, etc. It seems that Lakoff and Johnson, as well as many of their followers, expressed preference for the form *metaphorical*. Their seminal book *Metaphors We Live By* (2003) includes 295 instances of *metaphorical* and only 12 instances of *metaphoric*.

4. Discussion of the results

There are several things to note about the results of the study. Investigating the occurrence of competing variants of adjectives in the dictionaries as well as in the corpora, we have noticed three types of rival patterns of borrowed and hybrid adjectives in Lithuanian, Latvian, Russian, and English.

All three rival patterns of borrowed and hybrid adjectives are typical of Lithuanian. As the collocations mostly with simplex inanimate and action or resultative nouns show, Lith *rìtm-in-is*, *-ė* / *ritm-ìng-as*, *-a* / *rìtm-išk-as*, *-a* (cf. ex. 9-12) can be used synonymously in spite of the fact that the suffix *-inis*, *-ė* belongs to a relational category of adjectives and *-ingas*, *-a*, *-iškas*, *-a* belong to a qualitative category of adjectives. Such a case illustrates that sometimes the boundaries between the suffixes belonging to distinct categories of adjectives are not clear-cut. As the competing adjective variants belonging to the second and third rival pattern are concerned, there is a clear tendency to choose shorter forms of adjectives or adjectives with simplex suffixes, especially in standard Lithuanian. It is likely that both language economy and language policy could be the reasons why shorter forms of the adjectives are preferred.

The first and second rival pattern of adjectives are typical of Latvian, while the third pattern involving the competition of adjectives with simplex and complex suffixes is excluded here. As in Lithuanian, collocations include mostly simplex and action or resultative nouns. The second rival pattern involving the competition between simplex or correlative and suffixed adjectives is rare in Latvian. That is why the said language seems to be least sensitive to the rivalry of borrowed and hybrid adjectives. It could be an argument for the assumption that the integration of borrowed adjectives is more straightforward in Latvian than in the other investigated languages.

The first and third rival patterns of borrowed and hybrid adjectives are intrinsic to English and Russian. The second rival pattern could be singled out in the latter language[36] if the stem were of native origin. As the present study focuses on borrowed and hybrid adjectives, the second pattern involving competition between simplex or correlative and suffixed adjectives is excluded. When an adjective is borrowed in Russian, both a suffix and an inflection are added directly, meanwhile in Lithuanian and Latvian, it is possible to add only an inflection or both a derivational suffix and an inflection.

It seems that Russian dictionaries of paronyms succeeded quite well in highlighting the differences between the two competing variants of adjectives with simplex and complex suffixes. Even though the dictionaries of paronyms usually emphasize the distinct meaning of words, NKRJa shows that the competing variants of adjectives are synonymous to some degree and can differ from one another only by their derivational suffix (cf. *цинич-еск-ий*, *-ая*, *-ое* and *цинич-н-ый*, *-ая*, *-ое*; *герой-ск-ий*, *-ая*, *-ое* and *героич-ес-кий*, *-ая*, *-ое*; *комфор-т-ный*, *-ая*, *-ое* and *комфорт-абельн-ый*, *-ая*, *-ое*).

As far as English is concerned, it has to be noted, however, that the analysed adjectives in *-ive* and *-ory* seem to be stylistically marked in comparison to the adjectives in *-ic* and *-ical* which seem to be stylistically neutral and have a wide range of use (cf. *pedagog-ic* / *pedagog-ical*, *bibliograph-ic* / *bibliograph-ical*, *metaphor-ic* / *metaphor-ical*). According to corpus data, adjectives containing the suffixes *-ive* and *-ory* are stylistically foregrounded and are used in different registers, such as linguistics (*declarat-ive*), law (*declarat-ory*), journalism (*investigat-ive*) finance (*stimulat-ive*), medicine or biology (*stimulat-ory*).

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[36] As regards English, see Footnote 18.

Even though 5942 adjective-noun collocations have been analysed, it is still not easy to offer a principled differentiation between some competing variants of adjectives, especially when they are not used in a particular register.

5. Conclusions

1. Three rival patterns of borrowed and hybrid adjectives are typical of Baltic, Slavic, and Germanic languages, i.e.:
    1. competition between derivatives with different suffixes;
    2. competition between simplex or correlative and suffixed adjectives;
    3. competition between derivatives with simplex and complex suffixes.
2. The first rival pattern is the most productive and characteristic of Lithuanian, Latvian, Russian and English, whereas the second one is typical of Lithuanian and Latvian. The third pattern is intrinsic to Lithuanian, Russian, and English. Regarding the productivity of the second and third patterns, it varies with different languages.
3. There is some discrepancy between information given in dictionaries and the one gathered from corpora. The former (particularly dictionaries of Russian), as a rule, indicate paronymic relations between different adjectives having the same borrowed root, whereas the latter show partial synonymy. The exception to this case seems to be the Dictionary of Standard Latvian (LLVV) which is sensitive to synonymous usage of borrowed and hybrid adjectives. In some cases, the synonymous relations between borrowed or hybrid adjectives given in LLVV are not supported by the data from the Balanced Corpus of Modern Latvian (LVK2013), but can be found in the corpus Saeima-2.0 which seems to illustrate the latest tendencies in the usage of contemporary Latvian.
4. The discrepancy of information given in various sources could be an argument for the ongoing rivalry between different types of borrowed and hybrid adjectives in the Baltic, Slavic, and Germanic languages. This shows the development of the processes concerning the integration of borrowed vocabulary into the morphological and semantic systems of researched languages. The integration of borrowed adjectives seems to be more straightforward in Latvian than in other investigated languages. In the case of some languages, particularly Lithuanian, language policy can also be involved in these processes.
5. Further investigations into the rivalry of borrowed and hybrid adjectives should strive to concentrate on detailed corpus-based semantic and statistical analysis of adjective-noun collocations.

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Abbreviations
Colloq – colloquial
Dial – dialect(al)
Eng – English
Fr – French
Lat – Latin
Latv – Latvian
Lith – Lithuanian
Rus – Russian

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