Loan Words and Declension Classes in Czech

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1.   Introduction

Czech, a West Slavic language with a rich system of noun inflection, provides two general ways of treating borrowed nouns. They either get assigned to a morphological class thus joining an inflectional paradigm or remain indeclinable, lacking the inflectional paradigm altogether. In this paper, we will look at the regularities of the assignment of borrowings to inflectional classes in Czech. In particular, some borrowed nouns are supplied with the *-a* ending, even in cases when these borrowings do not violate native phonotactics. Word-final *-a* is a marker of feminine gender in Czech, however, while inanimate borrowings with non-etymological final *-a* are treated as belonging to feminine gender, animate borrowings which acquire this ending are assigned to a small class of *a*-final masculines.

2.   Indeclinables

The most discussed example of borrowings in Slavic comes from Russian. (1) shows that whenever borrowed nouns remain uninflected in Russian, they are indeclinable which amounts to saying that they do not have any separate case forms, surfacing as in (1) in the six cases of Russian in both singular and plural. Aronoff (1994: 126) proposes that "borrowings that do not fit the phonological pattern of any noun class are likely to be indeclinable" (see also Corbett 1991). Note, however, that the words in the first column in (1) which end in *-o* are problematic if the definition of the indeclinable class is to remain strictly phonological. These examples are of the form of Russian neuter declinable nouns, such as [okno] 'window', and they are borrowed as neuters. This problem is resolved if we adopt Repetti's (to appear) proposal that borrowed nouns are likely to be analyzed as stems; for now, it will suffice to say that the final vowel is not treated as a morphological ending in the examples in (1), and thus these nouns remain uninflected.

(1)   Indeclinable borrowings in Russian[1]

[palʲto]	'coat'	[pensne]	'pince-nez'
[metro]	'metro'	[kaʃne]	'scarf'
[salʲto]	'somersault'	[kafe]	'café'
[flamingo]	'flamingo'	[tabu]	'taboo'
[ura]	'hurrah'	[viski]	'whiskey'

In Czech, as in Russian, there is a fairly large group of indeclinable nouns, as shown in (2). These nouns are mostly vowel-final, with a number of exceptions such as

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[1] In colloquial Russian, *e-* and *o*-final borrowed nouns are declined as neuters.

tangens, blues, etc. Interestingly, while in Russian most indeclinables are assigned neuter gender (with the exception of words like *kofe* 'coffee' and *viski* 'whiskey' which are variably masculine or neuter, at least in colloquial Russian), in Czech indeclinable nouns come in all three genders.[2]

(2)   Indeclinable nouns in Czech (Grepl *et al* 1995: 280–281)

        a.   Masculine[3]
              V: ataše, abbé (adjectival declension is possible, e.g. abbého *gen.sg.*),
                 sou [su:], penny, leu [lei]
              -u: emu, zebu, kakadu
              -ns: tangens, kotangens, sekans

        b.   Feminine
              -i/-u/-e: brandy, rallye [reli], whisky, jury [ʒiri], revue; Lori, Noemi,
                 Kaliopi, Bety; Nike
              C: Ingrid, Marylin, Dolores, Mercedes, Iris, Ruth

        c.   Neuter
              -V: aroma, malaga, agáve, aloe, entrée, filé, alibi, Tbilisi, zoo, šodo,
                tabu
             -C: blues, Buenos Aires, copyright[4], rekviem, Cannes, Los Angeles,
                Port au Prince

The words in (2) remain uninflected since they do not fit the phonological pattern of any declension class in Czech. For example, if *aroma* were to be borrowed as a feminine noun and analyzed as having a morphological ending *-a*, it would decline according to the feminine declension. However, it is neuter and thus indeclinable since no neuter noun in Czech can end in *-a*.

In a paper on morphology and phonology of English borrowings into Italian, Repetti (to appear) proposes two constraints whose interaction accounts for indeclinable borrowings. The fact that borrowed nouns remain unchanged can be accounted for by a principle in (3a) which requires speakers to analyze borrowed words as morphologically simple, thus not interpreting final vowels which could be treated as inflectional endings as such. This analysis was developed for Italian but extends easily to Czech and other languages, as in (3b).

(3)   *Principle of Morphological Analysis of Borrowed Nouns* (Repetti *to appear*)
        a.   foreign noun = Italian stem
        b.   foreign noun = native stem

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[2] For assignment of gender to loan words see Corbett (1991), Fisiak (1995), Poplack, Pousada & Sankoff (1982), Rabeno & Repetti (1997), Thornton (2001), among others.
[3] The assignment of *u*-final nouns to masculine, feminine or neuter, or *i*-final nouns to feminine or neuter is idiosyncratic. For example, *ralley* [reli] is variably feminine or neuter, and *bronz, esej, kredenc* are variably masculine or feminine (Grepl *et al.* 1995: 233).
[4] More frequently masculine (Grepl *et al.* 1995: 281).

A further constraint in (4) is responsible for the fact that no additional morphological material is added to such a stem, that is, the right edge of the stem is aligned with the right edge of the prosodic word.

(4)   Repetti (to appear):
        "If possible, no additional morphological material (i.e., inflectional morphemes) should be added to the noun."
                Align-R (Stem, PrWd)
                i.e., do not add an inflectional morpheme

        The constraints in (3) and (4) allow us to account for the examples in (2): borrowed nouns are analyzed as stems and no additional inflectional material is supplied. The most harmonic stems do not fit the phonological pattern of any noun class available in Czech and thus are assigned to the uninflected class.

3.   Inflectional Classes in Czech

While there is a sizeable class of indeclinables, many borrowed nouns in literary Czech are declined, including recent loans.[5] Traditionally, the division into inflectional classes in Slavic languages including Czech is based on their gender and the ending. Within a given gender and final vowel, a further subdivision into types and subtypes is made (Grepl *et al.* 1995). If we consider a class of animate masculine nouns, further subdivision to declension classes is dependent on the last segment (usually, a consonant) of the nominal stem.
        (5) shows examples of declension for animate masculine nouns in seven cases of Czech both in singular and plural. The division into subtypes 'mister' and 'husband' depends on the phonological properties of the stem-final consonant: the first subtype specifies stems which end in a 'hard' consonant, while the second includes stems which end on a 'soft' consonant.

(5)   Animate masculine nouns (Grepl *et al.* 1995: 244)

	Singular	*Plural*	*Singular*	*Plural*
N	pán-Ø[6]	pán-i/ové 'mister'	muž-Ø	muž-i/ové 'husband'
A	pán-a	pán-y	muž-e	muž-e
G	pán-a	pán-ů	muž-e	muž-ů
D	pán-ovi/u	pán-ům	muž-i/ovi	muž-ům
L	pán-ovi/u	pán-ech	muž-i/ovi	muž-ích
I	pán-em	pán-y	muž-em	muž-i
V	pan-e	pán-i/ové	muž-i	muž-i/ové

(6) shows the declension paradigms of masculine and feminine nouns in *-a* which will be relevant for the analysis of borrowings proposed below; note that there is a mismatch

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between the masculine gender of a noun ('chairman' in our example) and the ending *-a* which usually marks feminine gender.

(6)

	a. Masculine in *-a*		b. Feminine in *-a*	
	Singular	Plural	Singular	Plural
N	předsed-a	předsed-ové 'chairman'	žen-a	žen-y 'wife'
A	předsed-u	předsed-y	žen-u	žen-y
G	předsed-y	předsed-ů	žen-y	žen-Ø
D	předsed-ovi	předsed-ům	žen-ě	žen-ám
L	předsed-ovi	předsed-ech	žen-ě	žen-ách
I	předsed-ou	předsed-y	žen-ou	žen-ami
V	předsed-o	předsed-ové	žen-o	žen-y

In (7), there is a table of inflectional classes of singular nouns in Czech[7], constructed on the basis of Aronoff's (1994) definition of an inflection class as a group of nouns which share the same set of inflectional generalizations, that is, the same set of endings for a given paradigm. Ignoring the further division into phonological subtypes, Czech has roughly six general classes of declinable nouns and a class of uninflected nouns.[8] The classification in (7) is very general, and there are many exceptions to the patterns which have to be separately listed.

(7)   Inflectional classes in Czech

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
Nominative	∅	a	∅	a	∅	o	Uninflected
Accusative	a/e[9]	u	∅	u	∅	o	
Genitive	a/e	y/i	u/a/i	y/i	i	a	
Dative	ovi/u/i	ovi	u/i	e	i	u	
Locative	ovi/u/i	ovi	u/e/i	e	i	e/u	
Instrumental	em	ou	em	ou	í	em	
Vocative	e/u/i	o	e/u/i	o	i	o	

The examples of nouns belonging to each declension class are shown in (8):

(8)   Class 1: masculine animate in -C
         pán 'mister', *muž* 'husband'

       Class 2: masculine animate in *-a*
          předseda 'chairman'

       Class 3: masculine inanimate
          hrad 'castle', *stroj* 'mechanism'

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[7] Aronoff (1994) and Corbett (1991) present accounts of Russian noun classes and their relation to gender, see also Zaliznjak (1977) for the fullest proposed system of Russian declension classes and Harris (1985, 1991, 1992) for the account of inflectional classes in Spanish;
[8] Note that Class 2 and Class 4 share inflectional markers in all cases except Dative/Locative.
[9] The allomorphy is phonologically conditioned.

Class 4: feminine in *-a*
 žena 'wife', *ruka* 'hand'

Class 5: feminine in -C
 kost 'bone', *řeč* 'speech'

Class 6: neuter
 město 'town', *jablko* 'apple'

Class 7: indeclinables
 whisky, zoo

In the following discussion we will be primarily concerned with declinable classes 1, 2 and 4 as well as with the class of indeclinables.

4. How Do Loanwords Get Assigned to Declension Classes?

In this section we discuss how loanwords get assigned to declinable noun classes. As was mentioned in the previous sections, morphologically most borrowings into Czech are inflected. Phonologically, there are two possible strategies of loan adaptation: borrowed nouns either remain unchanged[10] or, if consonant-final, supplied with the final *-a*. This loan adaptation process results in masculine animate or feminine inanimate nouns.

 For borrowed words whose phonological form remains unaltered in Czech, the assignment to noun classes depends on the phonological shape and the inherent gender of the word in question. (9) illustrates this type borrowings: (9a) shows masculine nouns ending in a consonant or a consonant cluster (assigned to declension class 1), (9b) gives examples of feminine nouns in *-a* (declension class 4), and (9c) lists examples of neuter nouns in *-o* (declension class 6).

(9) a. Masculine nouns in -C
   -ent: asistent, aspirant, imigrant
   -CC: adept, architekt, elf
   -r, -m, -n, -l: agresor, agronom, dominikán, admirál
   -ang: bumerang
   -ik: akademik
   -p: biskup, filantrop
   -log: dialektolog
   -krat: advokát, byrokrat
   -at: diplomat, homeopat

  b. Feminine nouns
   -a: láva
      ekliptika
      ropa 'oil'
      charisma

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[10] That is, no morphological ending is supplied. Of course, borrowed nouns undergo phonological changes, e.g. stress shift, in compliance with the phonotactics of Czech. Stress in Czech is word-initial with no exceptions.

c.   Neuter nouns
-o: pončo
              rádio
              auto
              tango
              bendžo

The animate nouns listed in (9a) not only end in a consonant (which is expected from a masculine noun in Czech) in a source language, but also have inherently masculine semantics interpretable precisely because of their animacy.

In section 2, it was mentioned that one of the constraints responsible for the fact that borrowed nouns remain unchanged was a requirement that the right edge of the stem should be aligned with the right edge of the prosodic word (Repetti to appear):

(10)   Align-R (Stem, PrWd)
        i.e., do not add an inflectional morpheme

The constraint in (10) is only operative if the borrowed stems can be assigned to the existing inflectional classes of the language. If a stem cannot be assigned to a morphological class, it either join the class of indeclinables or a vowel suffix is added. This is the usual situation described by Repetti for Italian. In (11), there are examples of consonant-final borrowings in Standard Italian which retain their segmental structure and join the indeclinable class of feminine or masculine nouns (Repetti's class VI).

(11)   Standard Italian (class VI)

French:	bazar	[baddzar]	mas.
	boutique	[butik]	fem.
English:	computer	[kompju:ter]	mas.
	jeep	[ʤip]	fem.

If an Italian noun cannot be assigned to a morphological class without the addition of an inflectional morpheme, a vowel suffix is added. The constraint responsible for this is given in (12):

(12)   Align-R (Stem, σ) (Repetti to appear)
        i.e., if a suffix must be added, keep it prosodically distinct from the stem

(13) shows the integration of loans into North American varieties of Italian: a suffix (*o, a, e*) is added and then the noun is assigned to the declension class I, II, or III, according to its final vowel.

(13)   North American varieties of Italian (class I, II, III) (Repetti to appear)

a. Noun becomes type I noun (mas.)
      lock   ['lɔkk+o]
      suit   ['sutt+o]

   b. Noun becomes type II noun (fem.)

      brush   ['brɔʃʃ+a]

      tape   ['tepp+a]

   c. Noun becomes type III noun (mas. or fem.)

      business   [bisi'niss+e]   mas.

      home   ['ɔmm+e]   fem.

As in Italian, the non-etymological vowel suffix appears in certain borrowings in Czech, as shown in (14).

(14)   Borrowed feminine nouns in *-a*[11]

a.	fakulta	'department'	from Latin *facultas*
	syntéza	'synthesis'	from Greek *synthesis*
	kapitula	'chapter'	from Old Latin *capitulum*
	modalita	'modality'	from Latin *modalitas*
b.	apokalypsa	'apocalypses'	from Greek *apokálypsis*
	komuna	'commune'	from German *Kommune*
	šablona	'template'	from German *Schablone*
c.	replika	'rejoinder'	from German *Replik*
	disketa	'floppy disk'	from English *diskette*
	karanténa	'isolation'	from French *quarantaine* 'forty days'
	kapota	'hood'	from French *capote*

Consonant-final inanimate nouns in (14) are not phonotactically acceptable, and the available strategy for loan integration is to supply the *-a* ending.[12] These nouns are thus assigned feminine gender and belong to the declension class 4.

However, there is a handful of borrowed masculine animate nouns in which non-etymological *-a* is supplied word finally, as in (15a). Note that without the final *-a* these words do not violate Czech phonotactics.[13]

(15)   Masculine animates in *-a*

a.	asketa	'ascetic'	from Greek *askētḗs*
	despota	'tyran'	from Greek *despótēs*
	bandita	'bandit'	from Italian *bandito*
	hoplita	'hoplite'	
	chetita	'hittite'	
	invalida	'invalide'	from French *invalide*

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[11] The data here come from Klimes (2002), Pech (1948). Etymological information is from Gebauer (1903), Lyer (1978), Rejzek (2001).

[12] Note that in some cases the consonant of the source noun is lost and the final vowel is changed to *-a*.

[13] Most animate nouns which acquire a non-etymological *-a* are [+human]; however, there is an animate non-human example such as *doga* 'mastiff' from English 'dog'.

b.   poeta   'poet'   from Latin *poeta*
      patriarcha   'patriarch'   from Late Latin *patriarcha*
      kolega   'colleague'   from Latin *collega*

Examples of borrowings with the etymological *-a* are given in (15b) for comparison. The nouns in (15b) are analyzed as having internal morphological structure (*-a* is treated as a morphological ending). These *a*-final nouns stay in declension class 2 since they have inherently masculine semantics.

(16) gives examples of masculine animate borrowings which exhibit final *-C/-a* variation. Note that even though these nouns are consonant-final in the source languages, the form with the final *-a* in Czech can be a more or a less common variant.

(16)   Masculine animates: C/-a variation

More common   *Less common*
archimandrita   archimandrit
akolyta   akolyt
despota   despot
anachoret   anachoreta

Finally, (17) shows examples from a large class of masculine animate borrowings ending in *-ista/-asta*. This suffix has the semantics of 'belonging to a profession' or 'participating in an activity on a regular basis'. The suffix was borrowed into Czech through several sources (e.g. from Latin *baptista* 'baptist', from French *cycliste* 'bicyclist'), and subsequently nativized, so the coining of such new words as *bohemista* 'a scholar specializing in Czech language' became possible.

(17)   Masculine animates in *-ista/-asta*

a.   arabista   'arabist'
      cellista   'cello player'
      expresionista   'expressionist'
      fatalista   'fatalist'
      artista   'artist'   from French *artiste*

b.   fantasta   'fantasy writer'
      dynasta
      chiliasta

So, as opposed to Italian, in Czech the vowel /a/ is added to phonotactically acceptable stems resulting in masculine nouns. The puzzle is thus twofold: what is the reason for the addition of the final *-a* to the consonant-final inanimate borrowings, and why they remain masculine given that *-a* signifies feminine gender elsewhere in the language. The fact that statistically, feminine nouns in *-a* (Class 2) are the most common in Czech, and masculine animates in *-a* are quite rare also makes it surprising that borrowed masculine nouns are frequently assigned to this class and supplied with a final *-a*.

To solve this puzzle it is important to pay attention to two regularities of Czech declension paradigms. First, we need to notice that declension classes 2 (feminine nouns

in -*a*) and 4 (masculine animate nouns in -*a*) have identical endings except in the dative and locative cases, as shown in (18) (in the plural, however, the set of endings for *a*-final masculines is identical to the consonant-final masculines). The endings are predictably different depending on gender, so classes 2 and 4 are collapsible. The new class is statistically the largest.

(18)

	Singular		*Plural*	
	Fem. -*a*/masc. -*a*	Masc. -C	Fem. -*a*	Masc. -*a* / masc. -C
Nominative	a	Ø	y	i/ové
Accusative	u	a/e	y	y
Genitive	y/i	a/e	Ø	ů
Dative	e ovi	ovi/u/i	ám	ům
Locative	e ovi	ovi/u/i	ách	ech
Instrumental	ou	em	ami	y
Vocative	o	e	y	i/ové

Yet another important observation is the frequency of the suffix -*ista/-asta* which denotes professions and occupations. It is worth noting that most masculine borrowings which acquire final -*a* are always *t*-final (with one exception ending in -*d* as in *invalida* and the noun *doga* which etymology and the time of borrowing is uncertain) in the source language. The existence of a large class of -*ista/-asta* nouns belonging to the declension class 2, together with the high frequency of the *a*-final nouns in general, makes it possible to generalize the *a*-final borrowings to a class of masculine animates. The fact that variability still exists for certain nouns of this type shows that the analogy is still incomplete.

Conclusion

In this paper, we provided an account of loan word adaptation in Czech. In particular, we concentrated on declinable masculine animate nouns which surprisingly acquire a non-etymological ending while the source form does not violate the phonotactics of Czech. We argued that the solution for this puzzle is connected with the high frequency of *a*-final nouns in Czech, together with the existence of the -*ista* suffix denoting professions and occupations and surfacing in masculine nouns.

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