

# Nominal tendency in the non-native vocabulary of Czech

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## Introduction

### Verbal morphology of Czech

Czech is a West Slavic language (Indo-European family) with 10 million speakers

- synthetic morphology with mandatory overt inflection on verbs
- theme – conveys grammatical aspect (perfective vs. imperfective)
- infinitival marker

no verbal simplexes (single-morpheme verbs) in Czech

### Loanwords in Czech

loanwords have to adopt the markers to be used as verbs

without adaptation, loanwords may appear in Czech as nouns

### Research questions

What role do verbs with loan roots play compared to same-root nouns? – cf. (1)

How do these noun/verb pairs differ from pairs with native roots? (1) vs. (2)

- (1) *start-ova-t* – *start*                      (2) *řez-a-t*                      – *řez*  
*start-IPFV-INF*    *start*                      *cut-IPFV-INF*    *cut*  
 'to start'                      'start'                      'to cut'                      'cut'

## Data

\*all\* verbs and the same-root suffixless nouns extracted from a 100-million corpus of written Czech (Křen et al. 2015)

- 401 noun/verb pairs with non-native roots vs. 1,657 with native roots

semi-automatic assignment of phonological and morphological features

manual annotation of the semantic relationship between the verb and the noun:

- 800 pairs labeled by two human annotators in parallel – fair agreement, bordering on excellent (Krippendorff's alpha 0.79)
- single annotation for the rest of the data

extraction of suffixed action nouns as direct competitors to the verbs:

- available with almost 40 % of loan-root pairs:
  - (3) *filtr* 'filter' – *filtrovat* 'to filter' – *filtrace* 'filtration'
- rare with native-root pairs (available with 4 %):
  - (4) *lék* 'medicine' – *léčit* 'to treat' – *léčba* 'treatment'

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<http://hdl.handle.net/11234/1-5142>

## Borrowability of verbs – the history of the debate

verbs are underrepresented among borrowings as compared to nouns (e.g. Whitney 1881, Meillet 1921, Haugen 1950, Weinreich 1970, Moravcsik 1975)

Moravcsik in Greenberg's 1978 *Universals of Human Language*:

"A lexical item whose meaning is verbal can never be included in the set of borrowed properties."

rephrased by Wohlgemuth (2009):

- Verbs cannot be borrowed as verbs but are borrowed as nouns.
- Loan verbs must be adapted (re-verbalized) in the recipient language.
  - confirmed as a strong tendency on 400 languages

morphological type of the language plays an important role (Tadmor 2009):

- it is much easier to borrow verbs as such into isolating languages than it is to synthetic languages

## Verbs with non-native roots behave as denominatives

verbs with non-native roots resemble native verbs that are derived from nouns in

- containing the theme *ova*
- not changing grammatical aspect by theme substitution
- having lower corpus frequencies than the corresponding nouns

although loan-root verbs and nouns cover the same meanings as native pairs, e.g.

– ACTION: *start* 'start' – *startovat* 'to start'; *slib* 'promise' – *slibit* 'to promise',

– RESULT: *profit* 'profit' – *profitovat* 'to profit'; *výhra* 'win' – *vyhrát* 'to win',

– AGENT: *pilot* 'pilot' – *pilotovat* 'to pilot'; *král* 'king' – *kralovat* 'to rule',

– ADDED: *jód* 'iodine' – *jódovat* 'to iodize'; *vosk* 'wax' – *voskovat* 'to wax',

the loan-root nouns are preferred (in terms of frequency) over verbs in all semantic categories; cf. the left boxplot of each color in Fig. 1

this is in contrast to native data where ACTION (and RESULT) meanings are primarily referred to by verbs, while nouns dominate in the other categories (cf. the right boxplot in each color in Fig. 1)

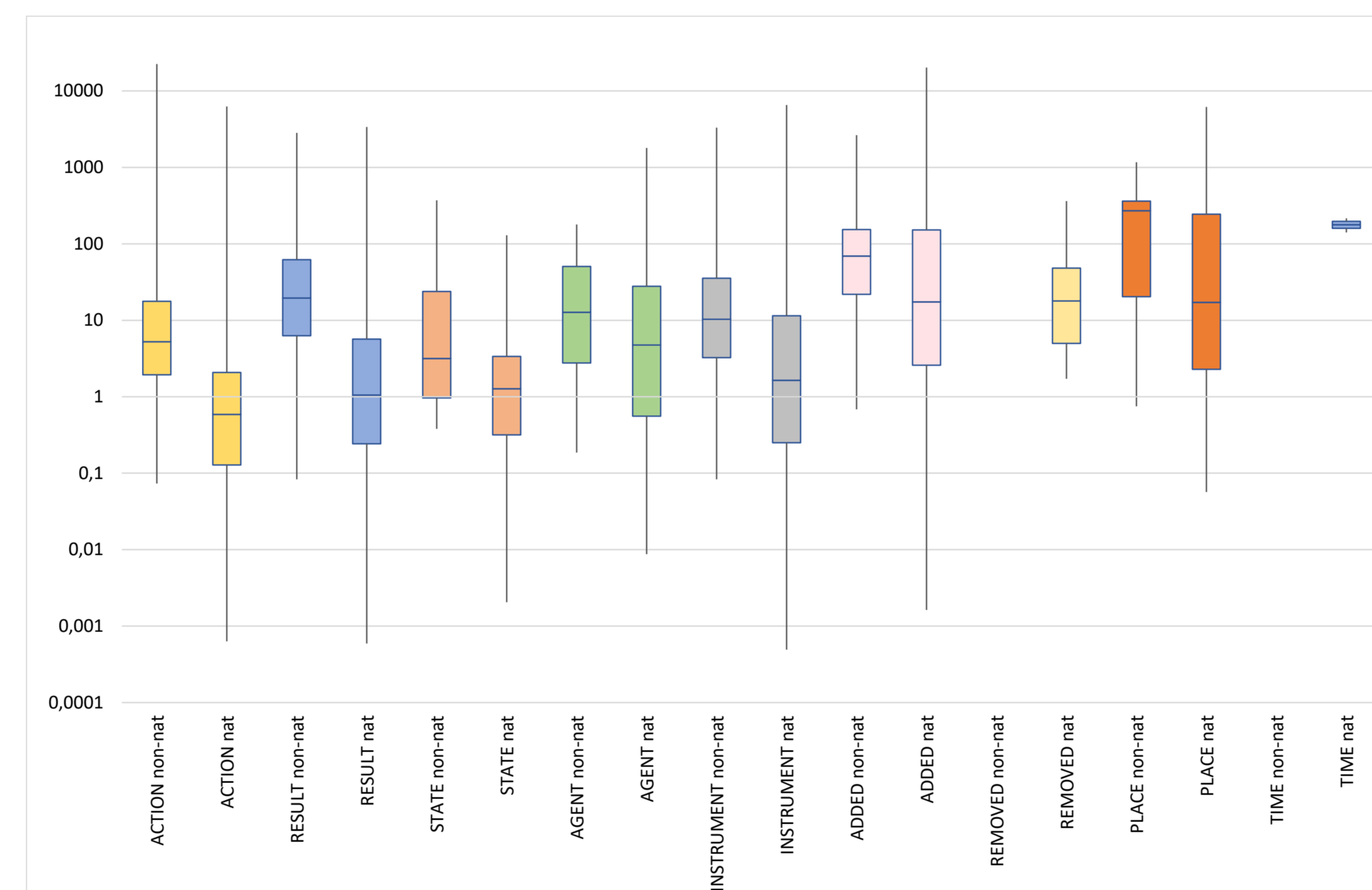


Figure 1. Distribution of ratios of absolute frequency counts of suffixless nouns and related verbs with non-native roots (left in each color) vs. native roots (right) in ten semantic categories; the ratio has a value greater than 1 for pairs with nouns outnumbering the verbs, but a value under 1 for pairs with more frequent verbs

## Preference for loan nouns over verbs as a general tendency

loan-root verbs (e.g. *extrahovat* 'to extract') compete for the expression of actions not only with suffixless nouns (*připravit extrakt* 'to make an extract'), but also with action nouns with loan suffixes (*provádět extrakci* 'to perform extraction')

### A. Nouns with non-native roots and suffixes can be formed in Czech

in order to saturate the need to have nominal expressions for action meanings in the non-native vocabulary, action nouns with loan suffixes are used even if direct counterparts are not attested in foreign languages; cf. Table 1

suffixless noun	freq. verb	freq. suffixed noun	freq.
<i>archiv</i> 'archive'	4,235 <i>archivovat</i> 'to archive'	208 <i>archivace</i> 'archiving' (not * <i>archivation</i> )	247
<i>parfém</i> 'perfume'	1,188 <i>parfémovat</i> 'to perfume'	5 <i>parfemace</i> 'perfuming'	22
<i>telefon</i> 'phone'	18,107 <i>telefonovat</i> 'to call'	1,480 <i>telefonát</i> 'phone call'	1,271

Table 1. Pairs of suffixless nouns and verbs with corresponding suffixed action nouns that do not have direct counterparts in other languages; absolute frequency counts from the SYN2015 corpus

### B. Loan-root nouns occur prior to verbs

action nouns with non-native roots and suffixes can be used in Czech before the verb is attested

corpus data covering the last 30 years (from five corpora of comparable size and design) document that verbs appear only after the nouns; see Table 2

suffixed noun x verb	SYN2000	–2005	–2010	–2015	–2020
<i>anestezie</i> x <i>anestetizovat</i> 'anaesthesia' 'to anaesthetize'	84x0	127x0	112x0	317x0	674x2
<i>brainstorming</i> x <i>brainstormovat</i> 'brainstorming' 'to brainstorm'	28x0	53x0	126x0	33x0	60x2
<i>multitasking</i> x <i>multitaskovat</i> 'multitasking' 'to multitask'	19x0	17x0	11x0	78x0	108x7
<i>prokrastinace</i> x <i>prokrastinovat</i> 'procrastination' 'to procrastinate'	0x0	1x0	0x0	37x0	156x35

Table 2. Suffixed action nouns and corresponding verbs with frequency counts from five corpora

### C. Nouns are the sole option for the expression of action meanings

some well-established nouns do not have verbal counterparts in Czech, even if the verbs exist in English

the nouns are the only means of referring to the actions:

- demise* 'demission' (with no Czech counterpart of the verb *to demit*)
- incidence* 'incidence' (without a counterpart of the verb *to incide*)
- inflation* 'inflation' (with no counterpart of *to inflate*)
- kremace* 'cremation' (with no counterpart of *to cremate*)
- transfuzie* 'transfusion' (with no counterpart of *to transfuse*)

## Conclusions

verbs with non-native roots and the corresponding suffixless nouns were compared to native noun/verb pairs with analogous internal structure in Czech

verbs with non-native roots exhibit characteristics typical of denominal verbs, giving support for the "difficulty of borrowing verbs as verbs" (Haspelmath 2008)

the denominal behavior is shown as part of a broader tendency towards nominal expression in the non-native segment of the Czech lexicon:

- verbs are overridden by nouns even in expressing action meanings, for which verbs are clearly preferred in the native data
- under the pressure of having an action noun available, the formation of these nouns seems to take place in Czech, without support in other languages
- in some families with non-native roots, nouns are the only means to convey action meanings, because same-root verbs occur later or not at all in Czech, despite having direct models in English

## References & Acknowledgments

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This work has been supported by the Ministry of Education, Youth and Sports of the Czech Republic, Project No. LM2023062 LINDAT/CLARIAH-CZ.