# JAZYKOVEDNÝ ČASOPIS

JAZYKOVEDNÝ ÚSTAV ĽUDOVÍTA ŠTÚRA

SLOVENSKEJ AKADÉMIE VIED

1

ROČNÍK 74, 2023

sciendo

SAP
SLOVAK ACADEMIC PRESS

# JAZYKOVEDNÝ ČASOPIS
**VEDECKÝ ČASOPIS PRE OTÁZKY TEÓRIE JAZYKA**

# JOURNAL OF LINGUISTICS
**SCIENTIFIC JOURNAL FOR THE THEORY OF LANGUAGE**





**Vydáva/Published by: Jazykovedný ústav Ľudovíta Štúra Slovenskej akadémie vied, v. v. i.**
- v tlačenej podobe vo vydavateľstve SAP – Slovak Academic Press, s. r. o.
- elektronicky vo vydavateľstve Sciendo – De Gruyter
  https://content.sciendo.com/view/journals/jazcas/jazcas-overview.xml

**Adresa redakcie/Editorial address:** Jazykovedný ústav Ľ. Štúra SAV, Panská 26, 811 01 Bratislava
Kontakt: jazykovedny.casopis@juls.savba.sk
Elektronická verzia časopisu je dostupná na internetovej adrese/The electronic version of the journal is available at: https://www.juls.savba.sk/ediela/jc/, https://www.sav.sk/?lang=sk&doc=journal-list&journal_no=26

Vychádza trikrát ročne/Published triannually

Dátum vydania aktuálneho čísla (2023/74/1) – september 2023

Quartile ranking 2022: Q2
CiteScore 2022: 0,5
SCImago Journal Rank (SJR) 2022: 0,296
Source Normalized Impact per Paper (SNIP) 2022: 0,721

**JAZYKOVEDNÝ ČASOPIS je evidovaný v databázach/JOURNAL OF LINGUISTICS is covered by the following services:** Baidu Scholar; Cabell's Directory; CEJSH (The Central European Journal of Social Sciences and Humanities); CEEOL (Central and Eastern European Online Library); CNKI Scholar (China National Knowledge Infrastructure); CNPIEC – cnpLINKer; Dimensions; DOAJ (Directory of Open Access Journals); EBSCO (relevant databases); EBSCO Discovery Service; ERIH PLUS (European Reference Index for the Humanities and Social Sciences); Genamics JournalSeek; Google Scholar; IBR (International Bibliography of Reviews of Scholarly Literature in the Humanities and Social Sciences); IBZ (International Bibliography of Periodical Literature in the Humanities and Social Sciences); International Medieval Bibliography; J-Gate; JournalGuide; JournalTOCs; KESLI-NDSL (Korean National Discovery for Science Leaders); Linguistic Bibliography; Linguistics Abstracts Online; Microsoft Academic; MLA International Bibliography; MyScienceWork; Naver Academic; Naviga (Softweco); Primo Central (ExLibris); ProQuest (relevant databases); Publons; QOAM (Quality Open Access Market); ReadCube; SCImago (SJR); SCOPUS; Semantic Scholar; Sherpa/RoMEO; Summon (ProQuest); TDNet; Ulrich's Periodicals Directory/ulrichsweb; WanFang Data; WorldCat (OCLC).

**ISSN 0021-5597 (tlačená verzia/print)** **ISSN 1338-4287 (verzia online)** **MIČ 49263**

# CONTENTS

sciendo
DOI 10.2478/jazcas-2023-0036

# THROUGH DERIVATIONAL RELATIONS TO VALENCY OF NON-VERBAL PREDICATES IN THE NOMVALLEX LEXICON

VERONIKA KOLÁŘOVÁ – VÁCLAVA KETTNEROVÁ
– JIŘÍ MÍROVSKÝ
Institute of Formal and Applied Linguistics, Faculty of Mathematics and Physics,
Charles University, Prague, Czech Republic

KOLÁŘOVÁ, Veronika – KETTNEROVÁ, Václava – MÍROVSKÝ, Jiří: Through Derivational Relations to Valency of Non-verbal Predicates in the NomVallex Lexicon. Journal of Linguistics, 2023, Vol. 74, No 1, pp. 182 – 192.

**Abstract:** NomVallex is a manually annotated valency lexicon of Czech nouns and adjectives that enables a comparison of valency properties of derivationally related lexical units. We present new developments in how the lexicon facilitates research into changes in valency across part-of-speech categories and derivational types. In particular, it provides links from derived lexical units to their base lexical units and also allows to search and display a base lexical unit together with all lexical units directly derived from it. Using an automatic procedure, any difference in valency between two derivationally related lexical units is specified. As a case study, focusing on nouns and adjectives directly or indirectly motivated by verbs, the facilities provided by the lexicon are used to show differences in what ways the particular deverbal derivatives representing various derivational types express the valency complementation standing in the base verbal construction in the subject position.

**Keywords:** adjectives, derivational relation, derivational type, nouns, valency behavior, valency lexicon

## 1 INTRODUCTION

Derivational relations in Czech are in focus of both theoretical studies (e.g. Ševčíková 2021) and projects aimed at automatic modeling of word-formation relations, for example DeriNet (Vidra et al. 2019).[1] Deverbal derivatives such as deverbal nouns and adjectives are often endowed with valency and they usually share some of the valency properties with their verbal base (the phenomenon referred to as the so-called argument inheritance, e.g. Booij 2007). In this paper, we deal with valency of nouns and adjectives directly or indirectly motivated by verbs (namely deverbal nouns, deverbal adjectives and nouns derived from deverbal adjectives); these deverbal derivatives represent those non-verbal predicates that typically denote actions, abstract results of actions or a quality and as such they are likely to be valent. In order to compare their valency behavior, we introduce the way the research can be facilitated by a lexicographic software.

[1] Accessible at https://ufal.mff.cuni.cz/derinet.

Valency properties of non-verbal predicates are covered in several Czech valency lexicons, first in a printed dictionary compiled by Svozilová, Prouzová and Jirsová (2005), second in two electronic valency lexicons, PDT-Vallex (Urešová et al. 2021) and NomVallex (Kolářová – Vernerová 2022). Out of these lexical resources, only NomVallex aims to systematically capture derivational relations between non-verbal predicates, making it possible to verify the hypothesis of argument inheritance (Sect. 2). First, we introduce the way NomVallex enables comparison of valency properties of derivationally related words, including both the annotation scheme (Sect. 3) and its visualisation (Sect. 4). Second, we present how the language material and facilities provided by NomVallex can be exploited in research into changes in valency across part-of-speech categories and derivational types (Sect. 5).

## 2 THE NOMVALLEX LEXICON

NomVallex is a manually created valency lexicon of Czech nouns and adjectives, adopting the theoretical framework of the Functional Generative Description (FGD) as its theoretical basis. Its newest version, NomVallex 2.0 (available in an electronic form, both as publicly available web-pages[2] and as downloadable and machine readable data; Kolářová – Vernerová – Klímová 2022), comprises 1,027 lexical units contained in 570 lexemes. As for derivational categories, it covers deverbal and deadjectival nouns, and deverbal, denominal, deadjectival or primary adjectives.

NomVallex adopts and further modifies, where necessary, the annotation scheme of the valency lexicon of Czech verbs VALLEX (Lopatková et al. 2022) (Fig. 1). The lexicon entry contains a lexeme, an abstract unit associating lexical forms with their lexical units (LUs), i.e., word senses. Each lexical unit is described by synonyms (the `synon` attribute) and assigned its id (e.g. blu-n-nadšenost-2 for the noun *enthusiasm* in Fig. 2). Aspectual counterparts formed by affixation, such as *vyzývání*$^{impf}$ – *vyzvání*$^{pf}$ ‘appealing’ or *ohrožovaný*$^{impf}$ – *ohrožený*$^{pf}$ ‘threatened’, are treated within a single lexeme; the aspectual properties are captured in the superscript of lemmas representing lexemes by the abbreviations *impf*, *pf* or *biasp*. Nouns or adjectives that do not express aspect are assigned the flag *no-aspect*, e.g. *výzva*$^{no\text{-}aspect}$ ‘appeal’.

The lexicon applies the valency theory of the FGD (Panevová 1980): valency properties of a lexical unit are captured in a valency frame, modeled as a sequence of valency slots, each supplemented with a list of morphemic forms. The following types of complementations may be a part of valency frames: obligatory or optional actants (i.e., ACTor, PATient, ADDRessee, EFFect, and ORIGin, e.g. *Petrova*ACT

[2] Accessible at https://ufal.mff.cuni.cz/nomvallex.

*výzva k pomoci*PAT ‘Peter’s appeal for help’, *prodejný mládeži*ADDR ‘marketable to the youth’, *odvolatelný z funkce*ORIG ‘dismissible from the post’), and obligatory free modifications, especially those with the meaning of direction (e.g. *muž povolaný do armády*DIR3 ‘a man drafted into the army’). In NomVallex, valency properties of a lexical unit are documented by examples from the Czech National Corpus (the `examplerich` attribute).[3]

In order to make it possible to study the relationship between valency behavior of base words and their derivatives, lexical units of nouns and adjectives in NomVallex are linked to their respective base lexical units (contained either in NomVallex itself or, in case of verbs, in the VALLEX lexicon, Sect. 3.1), linking together up to three parts-of-speech (i.e., noun–verb, adjective–verb, noun–adjective, and noun–adjective–verb). NomVallex aims to provide language material and lexicographic software allowing for linguistic research into various phenomena related to noun and adjectival valency, for example systemic (regular) and non-systemic (irregular) valency behavior (Sect. 3.2), including phenomena related to derivational type specificity (Sect. 3.3), and thus it employs facilities enabling to perform complex searches and comparisons (Sect. 4 and 5).

## 3 DERIVATIONAL RELATIONS IN NOMVALLEX

NomVallex describes derivational relations in several manually or automatically processed attributes (Sect. 3.1–3.3).[4]

### 3.1 Interlinking derivationally related lexical units

Derivationally related lexical units of nouns and adjectives are linked to each other (or to their base verbs in VALLEX) by means of two attributes, keeping both directions, namely:
(i) the attribute `derivedFrom` provides a link from a particular LU to its base LU;
(ii) the attribute `derivedLUs` captures links to all LUs derived from the base LU.

### 3.2 Automatic comparison of valency frames

Each lexical unit of an adjective or a noun (both deverbal and deadjectival) with a link to its respective base LU provided in the `derivedFrom` attribute is automatically supplemented with information on differences between valency frames of the two LUs; namely, the number and types of valency complementations and their morphemic forms are automatically compared. The changes (if any) are specified in the `valdiff` attribute.

[3] Accessible at https://www.korpus.cz/.

[4] In the following sections, we introduce recent developments in the data to be a part of the future published version; it concerns especially implementation of the attribute `derivedLUs` (Sect. 3.1), new labels for derivational types, including the numbers of lexical units representing them (Tab. 1 in Sect. 3.3), and the visualization part (Sect. 4).

### 3.3 Derivational types of nouns and adjectives

Each LU of an adjective or a noun is assigned a label indicating its derivational type (filled in the attribute `type`), see Tab. 1. The label provides the information on both part-of-speech membership of the LU (whether it is a noun (N) or an adjective (A)) and its derivational base (whether it is deverbal (DV), deadjectival (DA), denominal (DN) or primary (P)). Further, if the LU is directly or indirectly motivated by a verb, the label contains a number used to differentiate derivational history of the LU, reflecting especially the suffix by which the direct derivative was derived from the base verb. In the labels for deverbal nouns, number 1 is used for nouns ending in *-ní/-tí*, such as *vnímání* 'perceiving', number 2 indicates nouns derived from verbs by various suffixes, e.g. *-ka*, such as *námitka* 'objection', or by the zero suffix, such as *vjem* 'perception'. In the labels for deverbal adjectives, for instance number 5 marks adjectives derived from verbs by the suffix *-telný*, such as *vnímatelný* 'perceptible' (for more details see Kolářová – Vernerová – Klímová 2021).[5] Moreover, the labels for nouns are supplemented by the term most often used for their derivational type, such as *stem* or *root* deverbal nouns, or by the segment they typically end in (e.g. the nouns labeled as N-DA-3-lost are derived from deverbal adjectives of type 3 and they mostly end in *-lost*, e.g. *závislost* 'dependence').[6] Nouns derived from adjectives other than the deverbal ones get the label N-DA-O.

| Part-of-speech category | Derivational category | Derivational type | Example | Lexical units | Lexemes |
|---|---|---|---|---|---|
| Nouns | deverbal | N-DV-1-stem | *vnímání* 'perceiving' | 331 | 162 |
| | | N-DV-2-root | *vjem* 'perception' | 185 | 91 |
| | deadjectival | N-DA-1-cnost | *nemohoucnost* 'weakness' | 3 | 174 |
| | | N-DA-3-lost | *závislost* 'dependence' | 29 | |
| | | N-DA-4-1-nt-ost | *žádanost* 'demand'<br>*použitost* 'state of usage' | 31 | |
| | | N-DA-4-2-nt-ost | *nadšenost* 'enthusiasm'<br>*dojatost* 'emotion' | 11 | |
| | | N-DA-5-telnost | *vnímatelnost* 'perceptibility' | 26 | |
| | | N-DA-6-vn-ost | *vnímavost* 'perceptiveness'<br>*poslušnost* 'obedience' | 70 | |
| | | N-DA-O | *žádostivost* 'desirousness',<br>*nedůtklivost* 'touchiness',<br>*hrdost* 'pride' | 96 | |

[5] In NomVallex, all Czech deverbal derivatives with adjectival inflection are regarded as deverbal adjectives, no matter whether they denote an action (e.g. *porota rozhodující o cenách* 'a jury deciding the awards', *člověk přeživší havárii* 'a man surviving the crash'), a property (e.g. *rozhodující okamžik* 'the decisive moment') or an object (e.g. *můj známý* 'an acquaintance of mine', *přeživší havárie* 'a survivor of the crash').

[6] In Czech, no nouns are derived from adjectival types A-DV-2, A-DV-7 and A-DV-8, so no types N-DA-2, N-DA-7 and N-DA-8 are reflected in Tab. 1.

| | | | | | |
|---|---|---|---|---|---|
| Adjectives | deverbal | A-DV-1 | *nemohoucí* ‘not able’ | 11 | 133 |
| | | A-DV-2 | *přeživší* ‘having survived’ | 5 | |
| | | A-DV-3 | *závislý* ‘dependent’ | 30 | |
| | | A-DV-4-1 | *žádaný* ‘desired’ | 47 | |
| | | A-DV-4-2 | *nadšený* ‘enthusiastic’ | 11 | |
| | | A-DV-5 | *vnímatelný* ‘perceptible’ | 31 | |
| | | A-DV-6 | *vnímavý* ‘perceptive’ | 66 | |
| | | A-DV-7 | *zasunovací – zasouvací* ‘sliding’ | 1 | |
| | | A-DV-8 | *přeživší* ‘survivor’ | 5 | |
| | denominal | A-DN | *žádostivý* ‘desirous’ | 28 | 14 |
| | deadjectival | A-DA | *nedůtklivý* ‘touchy’ | 6 | 6 |
| | primary | A-P | *hrdý* ‘proud’ | 62 | 28 |
| Total | | | | 1,085 | 608 |

**Tab. 1.** Derivational types of nouns and adjectives in NomVallex

## 4 VISUALIZATION OF DERIVATIONAL RELATIONS

The NomVallex data can be searched at its web-pages (see footnote 2) or using the ‘vallex-like lexicons search tool’, called the Blue Search Engine (BlueSE),[7] which makes it possible to visualize all releases of the NomVallex data as well as their working version. Both the search tools allow for formulating complex queries based on a wide range of criteria, for example (a) derivational type of the noun or adjective (e.g. stem vs. root nouns), (b) its aspectual characteristics, (c) types of its valency complementations and their morphemic forms (including their distribution depending on the type of the word and/or the type of the complementation itself, individually and in combinations), and (d) the relation of the noun or the adjective to its base LU including the differences in valency behavior.

The BlueSE tool currently enables to visualize not only the list of individual LUs satisfying the criteria laid down in the query, but it also provides a facility that allows users to search and display a base LU together with all LUs directly derived from it, so that the research into the valency phenomena related to derivational type specificity is facilitated. The base LU can be represented by a verb (from VALLEX), an adjective or a noun. The LUs directly derived from the base LU are listed in the attribute `derivedLUs` (Sect. 3.1) and simplified entries of the particular derived LUs are then sketched out beside the base LU to enable the user to look over them and compare them. Two results of such a search are presented here:

(i) a verbal base LU, i.e., the verb *nadchnout se* ‘become enthusiastic’, and the LUs directly derived from it, i.e., the adjective *nadchnutý-nadšený-2* ‘enthusiastic’, and the noun *nadchnutí (se)* ‘becoming enthusiastic’ (Fig. 1);

[7] Accessible at https://quest.ms.mff.cuni.cz/vallex/.

(ii) an adjectival base LU, i.e, the adjective *nadchnutý-nadšený-2* ‘enthusiastic’, and the LU directly derived from it, i.e, the noun *nadšenost-2* ‘enthusiasm’ (Fig. 2).

As exemplified, LUs directly or even indirectly motivated by the verb *nadchnout se* ‘become enthusiastic’ are easily obtainable via BlueSE. The fact that all the derivatives are assigned their derivational type and that they have the information on changes in their valency provided in the `valdiff` attribute opens the possibility of the systematical study of the changes in their valency structure brought about in different types of derivational processes.

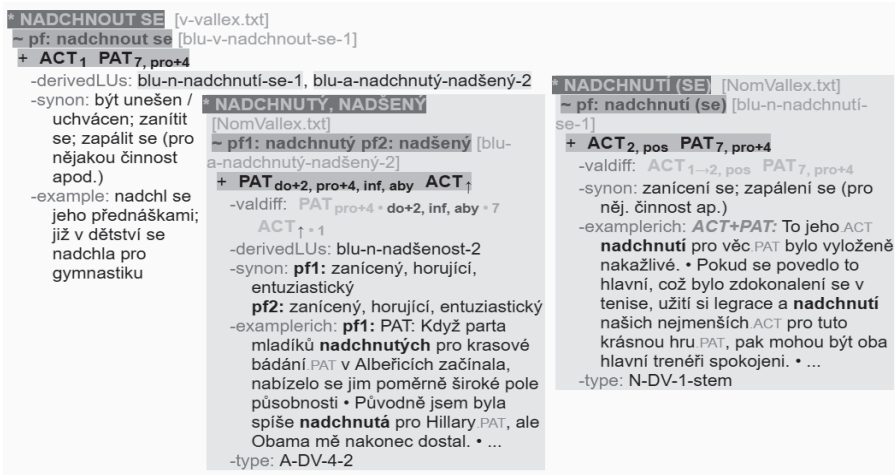


**Fig. 1.** Visualization of the LUs derived from the verb *nadchnout se* ‘become enthusiastic’

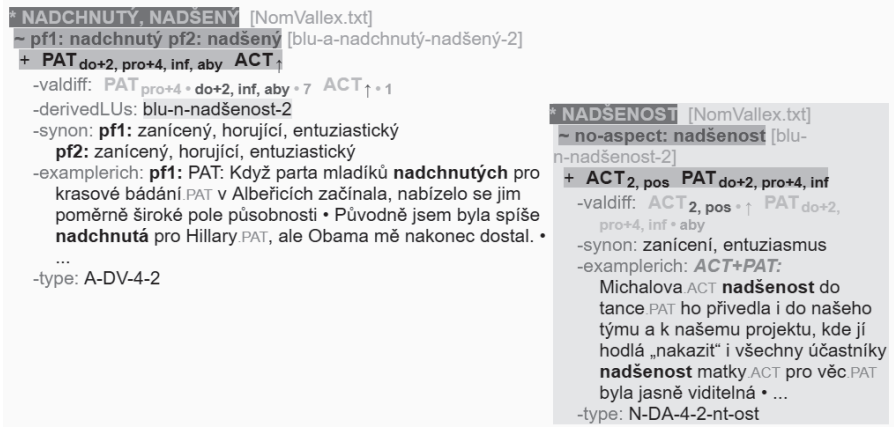


**Fig. 2.** Visualization of the LU derived from the adjective *nadchnutý-nadšený-2* ‘enthusiastic’

## 5 A CASE STUDY: THE VALENCY COMPLEMENTATION IN THE SUBJECT POSITION AND ITS CORRELATES ACROSS DERIVATIONAL TYPES

To illustrate the possibility of the systematical study of changes in valency structure across part-of-speech categories and derivational types, we focus on the valency complementation expressed in the base verbal structure in the subject position and on its correlates in noun and adjectival constructions, presenting changes in their structural configuration.

For example, the verb *vnímat* 'perceive', precisely its respective LU in example (1), forms a derivational base for several nouns and adjectives. First, its direct derivatives are represented by the deverbal nouns *vnímání* 'perceiving' and *vjem* 'perception', and by the deverbal adjectives *vnímatelný* 'perceptible' and *vnímavý* 'perceptive'.[8] Second, its indirect derivatives are exemplified by the deadjectival nouns *vnímatelnost* 'perceptibility' and *vnímavost* 'perceptiveness', directly derived from the adjectives *vnímatelný* 'perceptible' and *vnímavý* 'perceptive', respectively. The individual derivational relations are specified in Tab. 2, together with simplified valency frames of the derivatives.[9] The annotation maintains correspondences between individual valency complementations in valency frames across derivationally related lexical units, which allows for their comparison.

A close examination of the valency frames reveals differences in morphemic forms the particular derivational types use to express the valency complementation Actor standing in the base verbal construction of the verb *vnímat* 'perceive' in the subject position, see $\text{ACT}_{\text{Nom}}$ in the valency frame of the verb in Tab. 2 and example (1).

(1) *muž*ACT-Nom *vnímá vysoký zvuk*PAT-Acc
'a man perceives a high sound'

(i) The Actor of the deverbal nouns *vnímání* 'perceiving' and *vjem* 'perception' can take on three forms, namely prepositionless instrumental (Ins), see (2), prepositionless genitive (Gen), see (3), or a possessive form (Poss), see (4).[10]

(2) *vnímání vysokého zvuku*PAT-Gen *mužem*ACT-Ins
'perceiving of a high sound by a man'

[8] According to Ševčíková (2021), the direction of motivation in pairs of Czech suffixless nouns (a part of the type N-DV-2-root) and verbs may be denominal in some cases (i.e., *vjem* 'perception' > *vnímat* 'perceive') rather than deverbal (i.e., *vnímat* 'perceive' > *vjem* 'perception').

[9] In the valency frames in Tab. 2, the abbreviation *cont* stands for dependent content clauses regardless of their complementatizers.

[10] The Actor of some other deverbal nouns, for example *žádost* 'request', can be expressed by the prepositional phrase *od* 'from'+Gen (see e.g. Kolářová – Vernerová – Verner 2019).

(3) *vjem muže*ACT-Gen, *že zvuk je*PAT-cont *vysoký*
‘perception of a man that the sound is high’
(4) *mužův*ACT-Poss *vjem vysokého zvuku*PAT-Gen
‘man’s perception of a high sound’

(ii) It is typical of adjectival valency structures, unlike the verbal and noun ones, that one valency complementation of the adjective is systematically elided from the surface and thus cannot be expressed on the surface as a modification of the adjective. Instead, it refers to its antecedent which is expressed outside the adjectival structure either as the noun governing the adjective, see (5), or as the subject of the copula verb the adjective forms a predicate with, see (6), cf. Kettnerová – Kolářová (2023).[11] In valency frames of adjectives, this valency complementation is marked by an upward arrow (see adjectival valency frames in Tab. 2). This sign is also used in (5–6) and (8) to pinpoint the antecedents of the systematically elided adjectival valency complementations.

(5) *muž*↑ *vnímavý k vysokému zvuku*PAT-k+Dat
‘a man perceptive about/of a high sound’
(6) *muž*↑ *je vnímavý k vysokému zvuku*PAT-k+Dat
‘a man is perceptive about/of a high sound’

| Verb | Direct derivatives | | Indirect derivatives | | Valency frame |
|---|---|---|---|---|---|
| | Type | Lemma | Type | Lemma | |
| *vnímat* ‘perceive’ | | | | | $ACT_{Nom}$ $PAT_{Acc,cont}$ |
| | N-DV-1 -stem | *vnímání* ‘perceiving’ | | | $ACT_{Gen,Ins,Poss}$ $PAT_{Gen,Poss,cont}$ |
| | N-DV-2 -root | *vjem* ‘perception’ | | | $ACT_{Gen,Ins,Poss}$ $PAT_{Gen,Poss,cont}$ |
| | A-DV-5 | *vnímatelný* ‘perceptible’ | | | $ACT_{Ins,pro+Acc}$ $PAT_{\uparrow}$ |
| | | | N-DA-5 -telnost | *vnímatelnost* ‘perceptibility’ | $ACT_{Ins,pro+Acc}$ $PAT_{Gen,Poss}$ |
| | A-DV-6 | *vnímavý* ‘perceptive’ | | | $ACT_{\uparrow}$ $PAT_{k+Dat}$ |
| | | | N-DA-6 -vn-ost | *vnímavost* ‘perceptiveness’ | $ACT_{Gen,Poss}$ $PAT_{k+Dat}$ |

**Tab. 2.** Derivatives of the verb *vnímat* ‘perceive’

[11] In Kolářová – Vernerová (2022), this phenomenon was referred to as non-canonical realization of adjectival valency.

While the adjective *vnímavý* ‘perceptive’ systematically elides the Actor from the surface, see (5) and its valency frame provided in Tab. 2, reflecting hypothetically the active structure of its base verb in (1), the adjective *vnímatelný* ‘perceptible’ manifests a regular ellipsis of the Patient, see (8) and the valency frame in Tab. 2, mirroring rather the passive structure of the base verb, as illustrated in (7). The Actor of the adjective *vnímatelný* ‘perceptible’ is then either expressed by the form corresponding to the form of the Actor in verbal passive constructions (i.e., by Ins) or by the prepositional phrase *pro* ‘for’+Acc, see (8).[12]

(7) *vysoký zvuk*PAT-Nom *je/může být vnímán mužem*ACT-Ins
‘a high sound is/can be perceived by a man’
(8) *vysoký zvuk*↑ *vnímatelný mužem*ACT-Ins/*pro muže*ACT-pro+Acc
‘a high sound perceptible by a man/to a man’

(iii) In valency constructions of deadjectival nouns, valency complementations that are systematically elided in their base adjectival structures are “reactivated”, being expressed on the surface as an adnominal modification, typically in the form of Gen or Poss, see the Actor of the noun *vnímavost* ‘perceptiveness’ in (9–10) and its valency frame given in Tab. 2.[13] In contrast, the form of the Actor of the noun *vnímatelnost* ‘perceptibility’, derived from the adjective reflecting the passive structure of the base verbal construction, cf. (7–8), remains the same as in the adjectival construction, i.e., it is either Ins or sometimes a prepositional phrase, in this case *pro* ‘for’+Acc, see (11–12).

(9) *vnímavost muže*ACT-Gen *k vysokému zvuku*PAT-k+Dat
‘perceptiveness of a man to a high sound’
(10) *mužova*ACT-Poss *vnímavost k vysokému zvuku*PAT-k+Dat
‘man’s perceptiveness of/to a high sound’
(11) *vnímatelnost zvuku*PAT-Gen *mužem*ACT-Ins/*pro muže*ACT-pro+Acc
‘perceptibility of a sound by a man/to a man’
(12) *jeho*PAT-Poss *vnímatelnost mužem*ACT-Ins/*pro muže*ACT-pro+Acc
‘its perceptibility by a man/to a man’

Our examination of valency frames of direct and indirect derivatives of the verb *vnímat* ‘perceive’ has revealed a wide range of ways to express the subject of the

[12] The prepositional phrase *pro* ‘for’+Acc is not evidenced in the valency frame of the verb *vnímat* ‘perceive’, but it is attested in valency frames of adjectives of the given type, e.g. *ta instrukce není pro mě pochopitelná* ‘the instruction is not understandable to/for me’.

[13] It should be stressed that the “reactivation” concerns all the valency complementations that are subject to the systemic ellipsis regardless of their type, see examples (11–12) illustrating constructions of the noun *vnímatelnost* ‘perceptibility’ in which PAT is reactivated.

base verb, showing not only differences in morphemic forms the particular noun derivational types use to express it but also the specific ways it is expressed in adjectival constructions. We assume that the valency constructions of the verb *vnímat* 'perceive' and its derivatives illustrate typical changes in valency structures of derivationally related deverbal derivatives and we suggest that the changes are connected with particular derivational types the derivatives represent.

## 6 CONCLUSION

We have introduced the way how the NomVallex lexicon facilitates the research into changes in valency across part-of-speech categories and particular derivational types. Linking derivationally related words opens the possibility of the systematical study of (ir)regularity in their valency behavior. We have specified means for capturing derivational relations among verbs, nouns and adjectives, and described possible visualization of them. As a case study, we have examined valency frames of nouns and adjectives directly and indirectly motivated by the verb *vnímat* 'perceive', concentrating on the valency complementation expressed in the base verbal structure in the subject position and on its correlates in noun and adjectival constructions. We suggest that the differences in their structural configuration depend on respective derivational types represented by the deverbal derivatives.

## ACKNOWLEDGEMENTS

The research reported in the paper was supported by the Czech Science Foundation under the project 22-20927S. The work described herein has been using data and tools provided by the LINDAT/CLARIAH-CZ Research Infrastructure (https://lindat.cz), supported by the Ministry of Education, Youth and Sports of the Czech Republic (Project No. LM2023062).

## References

Booij, G. (2007). The Grammar of Words. Oxford: Oxford University Press, 345 p.

Kettnerová, V., and Kolářová, V. (2023). K reciprocitě adjektiv v češtině. Slovo a slovesnost, 84(3), pages 179–200.

Kolářová, V., and Vernerová, A. (2022). NomVallex: A Valency Lexicon of Czech Nouns and Adjectives. In Proceedings of the 13th Conference on Language Resources and Evaluation (LREC 2022), pages 1344–1352, European Language Resources Association, Marseille, France.

Kolářová, V., Vernerová, A., and Klímová, J. (2021). Systemic and non-systemic valency behavior of Czech deverbal adjectives. Jazykovedný časopis, 72(2), pages 371–382.

Kolářová, V., Vernerová, A., and Klímová, J. (2022). NomVallex 2.0., LINDAT/CLARIAH-CZ digital library at the Institute of Formal and Applied Linguistics (ÚFAL),

Faculty of Mathematics and Physics, Charles University. Accessible at: http://hdl.handle.net/11234/1-4663.

Kolářová, V., Vernerová, A., and Verner, J. (2019). Non-systemic valency behavior of Czech deverbal nouns based on the NomVallex lexicon. Jazykovedný časopis, 70(2), pages 424–433.

Lopatková, M., Kettnerová, V., Mírovský, J., Vernerová, A., Bejček, E., and Žabokrtský, Z. (2022). VALLEX 4.5. LINDAT/CLARIAH-CZ digital library at the Institute of Formal and Applied Linguistics (ÚFAL), Faculty of Mathematics and Physics, Charles University. Accessible at: http://hdl.handle.net/11234/1-4756.

Panevová, J. (1980). Formy a funkce ve stavbě české věty. Praha: Academia, 222 p.

Svozilová, N., Prouzová, H., and Jirsová, A. (2005). Slovník slovesných, substantivních a adjektivních vazeb a spojení. Praha: Academia, 579 p.

Ševčíková, M. (2021). Action nouns vs. nouns as bases for denominal verbs in Czech: A case study on directionality in derivation. Word Structure, 14(1), pages 97–128.

Urešová, Z. et al. (2021). PDT-Vallex: Czech Valency lexicon linked to treebanks 4.0 (PDT-Vallex 4.0), LINDAT/CLARIAH-CZ digital library at the Institute of Formal and Applied Linguistics (ÚFAL), Faculty of Mathematics and Physics, Charles University. Accessible at: http://hdl.handle.net/11234/1-3499.

Vidra, J. et al. (2019). DeriNet 2.0: Towards an All-in-One Word-Formation Resource. In Proceedings of the 2nd Int. Workshop on Resources and Tools for Derivational Morphology (DeriMo 2019), pages 81–89, Prague.