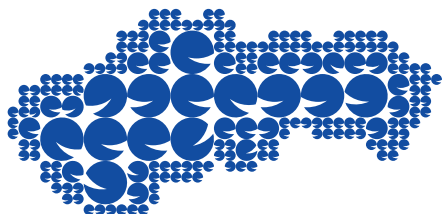


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PREDHOVOR**SLOVAK WE LIVE BY IN A COGNITIVE CONTEXT***Martina Ivanová*

This special issue of *Slovenská reč* on Cognitive Linguistics (CL) in the Slovak and Slavic context, the first of its kind, comprises nine papers with a focus on current topics in the field of CL.

In its early days, CL was dominantly Anglocentric. However, especially due to close affinities between the ideas developed within traditional Slavic linguistics and the assumptions of the cognitive paradigm, Slavic languages have become an ideal laboratory for CL studies in the course of its development (cf. Divjak – Janda – Kochaňská 2007). Since the 1980's, Polish, Czech, Croatian, and other Slavic national linguistics have started to host CL research and activities. Unfortunately, Slovak linguistics has continued to stand aside from impulses and visions from within the field of CL for many years. This is, of course, partly an oversimplification of the situation. In recent years, several papers and monographs on Slovak have been published, using – to a greater or lesser extent – concepts and theoretical underpinnings familiar from CL theoretical and methodological toolkit, e.g. Kesselová (2011, 2013), Bohunická (2013, 2018), Kyseľová – Ivanová (2013), Karčová (2014), Kováčová (2015), Dudová (2017, 2024), Kyseľová (2017), Horsch (2019, 2021, 2023a, 2023b), Gálisová (2022), Lačoková – Uhláriková (2022), to name just a few. However, there are still many challenges to be addressed and many issues to be tackled with respect to qualitative diversification and quantitative growth occurring within the heterogeneous field of CL studies. Therefore, this issue brings together original and pioneering studies by both renowned and emerging scholars working in the CL paradigm whose research interest focus on Slovak or other Slavic languages attempts to fill in the existing gap in CL studies within the Slovak context.

In their summarizing article on CL, Divjak, Levshina, and Klavan (2016) mention cognitive, social, and methodological axes along which contemporary CL research expands.

In its early stages, CL movement both proceeded from and profiled itself against the tenets of the formal-generative framework. Cognitive linguistics, or Cognitivism with a capital “C”, rejected many of the core tenets of the “cognitive” Generative Grammar while retaining the general aim: studying language via studying cognition, or, vice versa, studying cognition by studying language. This claim has found its reflection in the “Cognitive Commitment” with its postulate “not to isolate linguistics from the study of the mind, but to take seriously the widest range of other data about the mind” (Lakoff 1990, p. 46). It is the mentalist orientation to which CL is indebted for its name. Embodied cognition and its links to language were discussed in the early works of the “founding fathers” of CL in the 1980s when the works of Lakoff and Johnson (1980), Lakoff (1987), Langacker (1987), Johnson (1987) and many others formed the leading strands of the CL theory.

Apart from the “cognitive axis”, the social basis of language is accentuated in “Sociosemiotic Commitment” (Geeraerts 2016), the requirement to look at language as an intersubjective, historically, and socially variable tool. It was especially the Lublin school of Polish cognitivism which livened up interest in the social and cultural aspects of language. Bartmiński’s “cognitive ethnolinguistics” (2009) is based on the concept of a “linguistic image of the world”, which is always oriented towards, and related to, a specific cultural community (Bartmiński 1980).

Methodologically, CL represents a usage-based and empirically oriented linguistic theory. Introspection had a privileged status especially in the early days of CL when the preference for introspection could be seen as a reaction to the extreme empiricism of the behaviorists. The catalyst for the “quantitative turn” (Janda 2013) has been the growing importance of corpora in CL research. However, introspection with its explanatory power incessantly underlies the theoretical assumptions of the discipline. Critical remarks on doing “numbers just for numbers” (Langacker 2016) as well as on “excessive reliance on introspective evidence” (Dabrowska 2016) try to prevent the pendulum from swinging to the extremes of “empirical imperialism” or “introspective imperialism” in CL studies (Geeraerts 2006, p. 34). The Hamletian question “to be empirical or to be introspective” (Zlatev 2016) thus remains open to both directions: the elaborate theoretical concepts of CL, emphasising the continuous and gradual nature of linguistic phenomena, represent a “neat” way how to deal with “messy data” (Janda – Dickey 2017).

This issue puts forward both theoretical and descriptive contributions which zoom in on different CL approaches to the study of language. One of them is Construction Grammar (CxG), the most prominent cognitive syntactic theory today, whose postulates are methodologically adopted in several papers. Horsch and Boas introduce the basic tenets of CxG and present the case study on Slovak comparative correlative constructions. Saicová Římalová deals with Czech collective constructions

which conceptualise large numbers of individuals not as simple sets of independent units but as groups. Makarova deals with diminutive constructions in Russian, challenging the traditional assumption that diminutive units primarily refer to size. Ivanová applies a CxG approach to the study of pragmatic modal constructions in Slovak. The socio-cultural aspects are closely scrutinized in papers by Kesselová, who analyses deanthroponymic adjectives with the suffix *-ovský* in contemporary Slovak journalism, or Hebal-Jezierska who explores the linguistic expression *holubičí národ* (“dove-like nation”) and the related collocations *holubičia povaha/nátura* (“dove-like nature”) with respect to the notion of (auto)stereotype. Several papers deal with theoretical issues and phenomena that has been continuously discussed in CL research, adopting a novel and innovative approach to their analysis, such as metonymy in Slovak distributive verbs (Kysel'ová – Ivanová), aspect and stative construal in Czech (Starý Kořánová), or iconicity of onomatopoeic words (Andrej).

All scholarly contributions in this issue are aimed at enriching understanding of CL concepts and categories, both in relation to the specific subject matters discussed in this volume, but also from a wider perspective in which the interconnections between mind, language, and society are brought to the fore, thus highlighting the advantages of bringing together distinct vantage points in novel and imaginative ways. The presented studies address a variety of theoretical and empirical phenomena in Slovak, Czech, Polish, and Russian that are important not only within the CL framework but also for Slovak and Slavic linguistics in general.

SLOVENČINA, KTOROU ŽIJEME, V KOGNITÍVNOM KONTEXTE

Predkladané špeciálne vydanie časopisu Slovenská reč, venované kognitívnej lingvistiky v slovackistickom a slavistickom kontexte, na Slovensku prvé svojho druhu, prináša deväť príspevkov zameraných na aktuálne témy pertraktované v oblasti kognitívno-lingvistických výskumov.

Vo svojich začiatkoch bola kognitívna lingvistika prevažne anglocentrická. Avšak najmä vďaka úzkej príbuznosti medzi ideami rozvíjanými v rámci tradičnej slovanskej lingvistiky a východiskovými postulátmi kognitívno-lingvistickej paradigmy sa slovanské jazyky stali ideálnym laboratóriom na štúdium kognitívnej lingvistiky a jej vývinových trendov (porov. Divjak – Janda – Kočaňská 2007). Od 80. rokov 20. storočia sa výskumu a aktivitám ukotveným v oblasti kognitívnej lingvistiky začala venovať poľská, česká, chorvátska a iné slovanské národné lin-

gvikistiky. Slovenská lingvistiky sa však, žiaľ, mnoho rokov od impulzov a vízií rozvíjaných v tejto oblasti držala stranou. Ide, samozrejme, o čiastočné zjednodušený opis jestvujúceho stavu. V posledných dvoch desaťročiach bolo v slovenskej lingvistike publikovaných viacero štúdií a monografií, ktoré vo väčšej či menšej miere aplikujú teoretické prístupy a terminologické inštrumentárium známe z teoretického a metodologického arzenálu kognitívningvistických prístupov, napr. Kesselová (2011, 2013), Bohunická (2013, 2018), Kyseľová – Ivanová (2013), Karčová (2014), Kováčová (2015), Dudová (2017, 2024), Kyseľová (2017), Horsch (2019, 2021, 2023a, 2023b), Gálisová (2022), Lačoková – Uhláriková (2022) a i. V metodologicky aj tematicky heterogénnej oblasti kognitívningvistických štúdií však stále existuje mnoho výziev súvisiacich s kvalitatívnou diverzifikáciou teoreticko-metodologickej základne a s prehodnocovaním materiálových východísk, na ktoré je potrebné reagovať. Toto špeciálne číslo Slovenskej reči preto spája originálne a priekopnícke štúdie renomovaných aj začínajúcich jazykovedcov a jazykovedkýň, ktorých výskum, orientovaný na slovenský jazyk alebo iné slovanské jazyky, možno ukotviť práve v kognitívningvistickej paradigme. Súbor predložených štúdií sa tak usiluje vyplniť existujúcu medzeru v kognitívningvistických štúdiách v slovanskom kontexte.

Vo svojej sumarizujúcej štúdii o kognitívnej lingvistike D. Divjak, N. Levshina a J. Klavan (2016) spomínajú jednotlivé kognitívne, sociálne a metodologické osi, pozdĺž ktorých sa rozvíja súčasný výskum v tejto oblasti.

V počiatočných fázach sa kognitívna lingvistiky formovala v úzkom kontakte s postulátmi generatívnych prístupov a zároveň sa proti nim do istej miery vymedzovala. Kognitívna lingvistiky, alebo kognitivizmus s veľkým „K“, odmietla mnohé zo základných postulátov „kognitívnej“ generatívnej gramatiky, pričom si zachovala jej základný cieľ: študovať jazyk prostredníctvom štúdia kognitívnych procesov, alebo naopak, študovať kognitívne procesy prostredníctvom štúdia jazyka. Toto tvrdenie sa odrazilo v „kognitívnom záväzku“, vyjadrenom v postuláte „neizolovať lingvistiky od štúdia mysle, ale (pri štúdiu jazyka) zohľadňovať čo najširší rozsah získaných poznatkov o mysli“ (Lakoff 1990, s. 46). Práve mentalistická orientácia dala kognitívnej lingvistike jej pomenovanie. V raných prácach „zakladateľov“ kognitívnej lingvikistiky v 80. rokoch 20. storočia, napr. v prácach G. Lakoffa a M. Johnsona (1980), G. Lakoffa (1987), R. Langackera (1987), M. Johnsona (1987) a mnohých ďalších, reprezentujúcich hlavný prúd kognitívningvistickeho výskumu tohto obdobia, sa intenzívne diskutovalo o vtelesnom poznávaní a jeho prepojení s jazykom.

Okrem „kognitívnej osi“ sa kognitívna lingvistiky upriamuje aj na sociálny základ jazyka. Ten je zdôraznený v „sociosemiotickej angažovanosti“ (Geeraerts 2016), v požiadavke vnímať jazyk ako intersubjektívny, historicky a sociálne varia-

bilný nástroj. Záujem o sociálne a kultúrne aspekty jazyka oživila najmä lublinská škola poľského kognitivismu. „Kognitívna etnolingvistika“ (2009) J. Bartmińskiego je založená na koncepcii „jazykového obrazu sveta“, ktorý je vždy orientovaný na konkrétnu kultúrnu komunitu a je s ňou úzko zviazaný (Bartmiński 1980).

Z metodologického hľadiska patrí kognitívna lingvistika k teóriám založeným na používaní (tzv. usage-based theories) a k empiricky orientovaným prístupom ku skúmaniu jazyka. Introspekcia mala privilegované postavenie najmä v počiatkoch kognitívningvistických výskumov, keď preferenciu introspekcie bolo možné vnímať aj ako reakciu na extrémny empirizmus behavioristov. Katalyzátorom „kvantitatívneho obratu“ kognitívnej lingvistiky (Janda 2013) bol rastúci význam korpusov vo výskume jazyka. Introspekcia so svojou vysvetľujúcou silou však neustále podmieňuje teoretické východiská tejto disciplíny. Kritické poznámky o „číslach len pre čísla“ (Langacker 2016), ako aj o „nadmernej závislosti od introspektívnych dôkazov“ (Dabrowska 2016) sa snažia zabrániť tomu, aby sa kyvadlo v kognitívningvistických štúdiách vychýlilo do extrémov „empirického imperializmu“ alebo „introspektívneho imperializmu“ (Geeraerts 2006, s. 34). Hamletovská otázka „byť empirický alebo introspektívny“ (Zlatev 2016) tak zostáva otvorená v oboch smeroch: prepracované teoretické koncepty kognitívnej lingvistiky, zdôrazňujúce kontinuálny a škálovitý charakter jazykových javov, predstavujú „prehľadný“ spôsob, ako narábať s „neprehľadnými údajmi“ (Janda – Dickey 2017).

Toto číslo prináša teoreticky zamerané aj materiálovo orientované príspevky, ktoré ilustrujú rôzne prístupy kognitívnej lingvistiky k štúdiu jazyka. Jedným z nich je konštrukčná gramatika (CxG), dnes najvýznamnejšia kognitívna syntaktická teória, ktorej postuláty sú metodologicky uplatnené vo viacerých štúdiách tohto špeciálneho čísla. J. Horsch a F. Boas vo svojej štúdii *Construction Grammar-based research on Slovak, in Slovakia: A case study and a road map* opisujú základné východiská konštrukčnej gramatiky a jej teoreticko-metodologické metamorfózy v posledných dvoch desaťročiach a predstavujú prípadovú štúdiu o komparatívnych korelatívnych konštrukciách v slovenčine. L. Saicová Římalová sa vo svojej štúdii *The conceptualization of quantity in contemporary Czech: collective constructions* zaoberá českými kolektívnymi konštrukciami, ktoré konceptualizujú veľké množstvo jednotlivín nie ako jednoduché súbory nezávislých jednotiek, ale ako kolektívne entity. A. Makarova sa vo svojej štúdii *Redundancy and rivalry in language. A case study of Russian diminutives* zaoberá deminutívnymi konštrukciami v ruštine, pričom spochybňuje tradičný predpoklad, že funkciou deminutívnych jednotiek je primárne vyjadrovať príznak menšieho rozmeru. M. Ivanová v štúdii *If you must know... Life of modal verbs after modality* aplikuje postuláty konštrukčnej gramatiky pri opise pragmatických modálnych konštrukcií

v slovenčine. Sociokultúrne aspekty sú podrobne skúmané v príspevku J. Kesselovej *Deanthroponymic adjectives with the suffix -ovský in the context of cognitive linguistics*, v ktorom sa analyzujú deantroponymické prídavné mená s príponou -ovský v súčasnej slovenskej žurnalistike, alebo M. Hebal-Jeziarskej *The collocation holubičí národ 'Dove-Like nation' and holubičia povaha/nátura 'dove-like nature' in contemporary Slovak journalism*, ktorá skúma jazykový výraz *holubičí národ* a s ním súvisiace kolokácie *holubičia povaha/ nátura* vo vzťahu k pojmu (auto)stereotyp. Viacero príspevkov sa zaoberá teoretickými otázkami a javmi, ktoré sú v kognitívnej lingvistiky predmetom neustálych diskusií, pričom k ich analýze pristupujú novým a inovatívnym spôsobom. Ide napríklad o metonymiu a jej fungovanie v konštrukciách s distributívnymi verbami, ktorá je predmetom výskumu v štúdiu M. Kyseľovej a M. Ivanovej *When one is not enough. Coercing distributive reading through metonymy*. Problematika aspektu a jeho využitia v statických konštrukciách v češtine sa analyzuje v štúdiu I. Starý Kořánovej *Verbal aspect and stative construal in Czech*. Fenomén ikonickosti a jeho uplatnenie v onomatopoických výrazoch je predmetom skúmania v štúdiu Ľ. Andreja *The adaptation of onomatopoeias within the language system*.

Všetky vedecké štúdie v tomto špeciálnom čísle majú za cieľ obohatiť chápanie konceptov a kategórií vymedzovaných v kognitívnej lingvistiky, a to nielen vo vzťahu ku konkrétnym témam diskutovaným v tomto čísle, ale aj zo širšej perspektívy. Analýzou jazykových javov sa tak do popredia dostávajú vzájomné prepojenia medzi myslou, jazykom a spoločnosťou, čím sa zdôrazňujú výhody spájania odlišných prístupov pri výskume týchto javov novými a nápaditými spôsobmi. Predstavované štúdie analyzujú rôzne teoretické koncepty a skúmajú rôznorodé jazykové javy v slovenčine, češtine, poľštine a ruštine, ktoré sú relevantné nielen pre kognitívno-lingvistické prístupy, ale môžu byť významným prínosom aj pre slovenskú a slovanskú lingvistiku vo všeobecnosti.

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ŠTÚDIE A ČLÁNKY**CONSTRUCTION GRAMMAR-BASED RESEARCH
ON SLOVAK, IN SLOVAKIA: A CASE STUDY
AND A ROAD MAP***Jakob Horsch – Hans C. Boas*

HORSCH, J. – BOAS, H. C. (2025): Construction Grammar-Based Research on Slovak, in Slovakia: A Case Study and a Road Map. In: *Slovenská reč*, 90/2, 11 – 50.

Abstract: This paper presents a pioneering application of Construction Grammar (CxG) to Slovak, a language largely underrepresented in constructionist research. After providing a comprehensive introduction to CxG and its theoretical foundations, we present a case study of the Slovak Comparative Correlative (CC) construction (e.g., *Čím menej reči tu bude, tým skôr zaspím* ‘The less talking there is here, the sooner I will fall asleep’). In the context of a large-scale corpus study based on over 3,500 tokens from the Slovak Web 2011 corpus, we demonstrate how constructionist methodology is applied, employing covarying-collexeme analysis to reveal statistically significant patterns of cross-clausal association across the CC’s subclauses. Our findings uncover an intricate network of interconnected meso-constructions, demonstrating both high productivity and a strong tendency toward formal symmetry. The case study thus provides robust empirical support for a usage-based, network-oriented view of Slovak grammar, in line with previous investigations of the English and Spanish CC constructions. Our study not only enriches our understanding of the Slovak CC construction but also argues for the value and feasibility of CxG approaches in ‘smaller’ Slavic languages. We conclude with a roadmap for future CxG-based research on Slovak, advocating for comprehensive construct-i-con projects that ‘map out’ the constructional networks of Slovak, and the integration of complementary methodologies in doing so. Our results contribute both theoretically and methodologically to constructionist linguistics and serve as a template for more comparable studies in Slovak and other underexplored languages.

Keywords: Construction Grammar, Slovak, Comparative Correlative, corpus study.

Highlights:

- The study presents a brief introduction to Construction Grammar (CxG), followed by a case study illustrating how a construction – in this case, the comparative correlative (CC) – may be analyzed within the CxG framework on the basis of corpus data.
- The study shows that Slovak lends itself very well to CxG-based studies.
- The detailed corpus study of CC constructions demonstrated the feasibility of a CxG-based analysis of syntactic patterns in Slovak based on corpus data.

- The study promotes future constructionist research on Slovak to contribute insights into the nature of the Slovak construct-i-con as well as into how construction entries are combined to license complete sentences.

1. INTRODUCTION

Construction Grammar (CxG) is a cognitive approach to language that has gained considerable popularity, with a large body of research published over the last three decades (see Section 2 below). While it initially started out in the English-speaking countries, it has since firmly established itself in many other countries such as Japan, Germany, Sweden, Brazil and France. Despite its extraordinary success, it remains largely unknown in Slovakia¹. Horsch, for example, has noted that CxG “does not appear to be well-known in [...] Czechia and Slovakia” (2023a, p. 702). We acknowledge that this observation is based on anecdotal evidence, but the lack of CxG studies on ‘smaller’ Slavic languages such as Slovak is obvious and striking (although there is a small and growing number, cf. e.g. Horsch 2021, 2023a; Ivanová 2021). As we argue in this paper, however, there is great potential in the study of these languages against a CxG background. Firstly, assuming a cognitive perspective that pays equal attention to what has traditionally been labeled the ‘core’ and the ‘periphery’ can greatly improve our understanding of specific languages. This is especially true of phenomena that have proven difficult to describe with other approaches, e.g. island structures in English (Ambridge – Goldberg 2008), so-called ethical datives in Czech (e.g. Fried 2010), or the Comparative Correlative construction in Slovak (Horsch 2021, 2023a)². Secondly, CxG, which has so far focused mainly on English and a few other languages such as French, German, Japanese, Brazilian Portuguese, Spanish, and Swedish, stands to benefit substantially from demonstrating that it is able to accommodate typologically different languages such as Slovak, thereby contributing to its “aspirations toward universal applicability” (Fried 2017, p. 249) and demonstrating how research on other languages can contribute to CxG as a theory in general. And finally, colleagues operating within other theoretical frameworks may also find useful the data and results of constructional studies, which are conducted according to the standards of scientific rigor and following good experimental practice (see Cappelle 2024 and Boas – Leino – Lyngfelt 2024).

In the remainder of this paper, we provide a brief introduction to Construction Grammar (Section 2), followed by a case study illustrating how a construction – in this case, the comparative correlative (briefly introduced in Section 3) – may be

¹ This also applies to other countries, albeit not uniformly across the former Eastern Bloc. While colleagues from Ukraine have pointed out that constructional approaches “are not widely practiced” and “not well-known in Ukraine” (Karamysheva, p.c. 2024), there is a large body of CxG research on Czech (e.g. Fried 2007, 2013, 2017; Fried – Lipská 2020) and for Russian, there is even a construct-i-con (cf. Janda et al. 2018; Janda et al. 2020; Endresen et al. 2020).

² We would like to thank an anonymous reviewer for pointing this out.

analyzed within the CxG framework. Specifically, we conduct a corpus study, whose methodology and data we discuss in Section 4. Results are presented in Section 5, followed by a discussion in Section 6. Finally, Section 7 offers a conclusion and a roadmap that suggests further steps for CxG-based research on Slovak.

2. CONSTRUCTION GRAMMAR: A BRIEF INTRODUCTION

Construction Grammar is a framework for linguistic analysis whose beginnings can be traced back to the mid-1980s, when it was developed by Charles Fillmore, Paul Kay, and George Lakoff, among others, at the University of California, Berkeley. Its intellectual roots can be traced back to Fillmore's seminal (1968) paper *The Case for Case*, which was highly influential during the late 1960s and early 1970s, but which was then largely abandoned because of a number of theoretical problems and inconsistencies (see Levin – Rappaport Hovav 2005 and Boas – Dux 2017 for details). During the late 1970s and early 1980s, Fillmore worked on revising and expanding his original ideas from his (1968) paper in a number of different ways.

One major outcome of these efforts was a new framework for dealing with linguistic meaning that he termed Frame Semantics (Fillmore 1982, 1985a), which was refined throughout the 1980s and into the 1990s. In contrast to the then mainstream prevalent theories of meaning that worked with, among other things, semantic features and terms from predicate logic to model meaning, Fillmore proposed a theory of understanding whose explicit goal was to model what a speaker of a language needs to know in order to encode and decode meaning (“semantics of understanding”). One of the central ideas of Fillmore's usage-based approach to meaning is the so-called semantic frame, which should be regarded as primary for the description and analysis of meaning (as well as its syntactic relevance, as we will see below). Fillmore and Atkins (1992, p. 76 – 77) characterize the nature of semantic frames for the understanding of words as follows:

A word's meaning can be understood only with reference to a structured background of experience, beliefs, or practices, constituting a kind of conceptual prerequisite for understanding the meaning. Speakers can be said to know the meaning of the word only by first understanding the background frames that motivate the concept that the word encodes. Within such an approach, words or word senses are not related to each other directly, word to word, but only by way of their links to common background frames and indications of the manner in which their meanings highlight particular elements of such frames.

One of Fillmore's examples illustrating the central role played by semantic frames concerns the meaning of the verb *to sell*, whose meaning requires an understanding of a number of different concepts. In frame-semantic terms, *to sell* evokes the *Commercial Transaction* frame, which requires knowledge of the concepts of exchange and market economy, and which consists of the frame elements (situation-specific semantic roles) *BUYER* (the person acquiring the *GOODS* by giving the seller *MONEY*), *SELLER* (the

person wanting to give the GOODS away in exchange for MONEY), MONEY (units of payment), and GOODS (things that can be acquired and given away) (among others). The Commercial Transaction frame is not only evoked by different types of verbs such as *to buy*, *to sell*, *to pay*, and *to purchase*, but also by different types of nouns such as *buyer*, *seller*, *payment*, *receipt*, and *money* and different types of adjectives such as *expensive*, *cheap*, and *pricey*. Mentioning of any of these different words evokes, according to Fillmore, the Commercial Transaction frame, and each of these words gives a slightly different perspective of the commercial transaction event as is evidenced by their syntactic behaviors. For example, *to buy* requires overt syntactic realization of the BUYER and the GOODS while making realization of the MONEY and SELLER optional. Compare the following examples (1a) – (1d):

- (1) a. Sascha bought the table (from Kim) (for \$200).
- b. *Sascha bought.
- c.*Sascha bought for \$200.
- d.*Sascha bought from Kim.

In contrast, the verb *to sell* requires overt syntactic realization of the SELLER and the GOODS while making realization of the BUYER and the MONEY optional, as the following examples (2a – d) illustrate:

- (2) a. Kim sold the table (to Sascha) (for \$200).
- b. *Kim sold.
- c.*Kim sold for \$200.
- d.*Kim sold to Sascha.

Finally, the adjective *cheap*, which also evokes the Commercial Transaction frame, requires obligatory syntactic realization of the GOODS and it does not allow the syntactic realization of the Seller, as the following examples show (*Kim* is supposed to be the SELLER).

- (3) a. The table was expensive.
- b.*The table was expensive for Kim.

During the 1980s and into the 1990s, Fillmore and his associates developed Frame Semantics further, investigating different types of meaning structures that can be modeled with semantic frames (for an overview, see Petruck 1996, Busse 2012, Matsumoto 2025). One of the major outcomes of these efforts was the start of the FrameNet project at the International Computer Science Institute in Berkeley, California, in 1997, which applied the concept of semantic frame to analyze and structure the English lexicon. Over the past 25+ years, FrameNet has produced a lexicographic database of English that structures the English lexicon with semantic frames together with the words that evoke them (see Fillmore et al. 2003, Fillmore – Baker 2010). The FrameNet database contains, among other things, several

thousand semantic frames organized in a frame hierarchy and more than 10,000 frame-evoking lexical entries that provide detailed information about the semantic frames they evoke, together with specific valence information about how the semantics of frames are realized syntactically (e.g. as in the three examples (1) – (3) above) (for more information on FrameNet, see Boas 2017 and Boas – Ruppenhofer – Baker 2024).

The second major outcome of Fillmore's revisions of his original ideas in *The Case for Case* during the 1980s is the concept that meaning is intricately related to form, as has already been discussed in the context of the three examples above. Fillmore formulates this close relationship between meaning and form as follows:

If new-style lexical entries for content words were to be seen instead of constructions capable of occupying particular higher-phrase positions in sentences and included both the needed semantic role and the needed specifications of structural requirements [...], we could see such structures as providing expansions of their existing categories. (Fillmore 1985b, p. 84)

Fillmore's suggestion to directly tie the meaning and form of words together in a lexical entry in a way to present them so that they can be employed for modeling different types of more abstract constructions can be seen as one of the first specifications of the notion of construction as a pairing of form with meaning. In other words, Fillmore extended the concept of Saussure's linguistic sign – an arbitrary symbolic relationship between form and meaning – to any and all linguistic material, from morphemes to complex syntactic patterns (cf. Goldberg 2003, p. 220). In a series of publications in the mid- and late-1980s (Fillmore 1985, Fillmore 1986, Fillmore 1988, Fillmore 1989, Fillmore et al. 1988, Fillmore 1990), Fillmore and associates laid out some of the basic principles of CxG as a maximalist approach to grammar (see Fried – Östman (2004, p. 24) and Boas (2025a, 2025b)). On this view, CxG aims for a comprehensive (ideally full) coverage of linguistic phenomena within a single theoretical framework, i.e. it aims to account for both peripheral intransparent (i.e., opaque) grammatical phenomena such as partially filled idioms (e.g. *jog <someone's> memory* (Goldberg 2006)), semi-productive constructions such as *What's X Doing Y?* (e.g. *What's that fly doing in my soup?*) (Kay – Fillmore 1999)), and fully regular semantic and syntactic structures such as word order constructions (Boas – Ziem 2018), the subject-predicate construction (Fillmore et al. 2012), and passives (e.g. Ackerman – Webelhuth 1998, Lasch 2016) in terms of a non-modular and non-derivational architecture of grammar (for details, see Hoffmann (2020), Boas (2021), and Boas (2025a, 2025b)).

As a usage-based theory (Barlow – Kemmer 2000, Perek 2023), CxG aims to model what a language user needs to know in order to fully understand any linguistic expression. Central to this approach is the concept of “construction,” defined as a pairing of form with meaning, according to Goldberg (1995):

C is a CONSTRUCTION if and only if C is a form-meaning pair $\langle F_i, S_i \rangle$ such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions (Goldberg 1995, p. 4).³

On this view, the basic units of language are constructions, i.e. conventionalized pairings of form with meaning at varying levels of abstraction and complexity that must be learned based on linguistic input. If an utterance cannot be licensed based on the existing inventory of constructions (or a combination of existing constructions), then one has to posit a new construction. The architecture of a construction in Figure 1 illustrates what different types of form can be associated with what different types of meaning (and function) in a construction. It is important to remember that form and meaning/function cannot be separated from each other since form and meaning/function do not typically exist on their own, e.g. as autonomous (sub-)modules as is often postulated in other syntactic theories. Since form and meaning/function constitute inseparable parts of the linguistic sign as in Figure 1, this means that a difference in form usually also signals a difference in meaning. This is known as the ‘Principle of No Synonymy’ (Goldberg 1995, p. 67). Note, however, that recently the Principle of No Synonymy has been challenged. Laporte et al., for example, have noted that “the Principle of No Synonymy largely breaks down at low levels of formal description” (2021, p. 230; cf. also Uhrig 2015). These issues have been addressed by the “Principle of No Equivalence” (Leclercq – Morin 2023; Leclercq 2024).

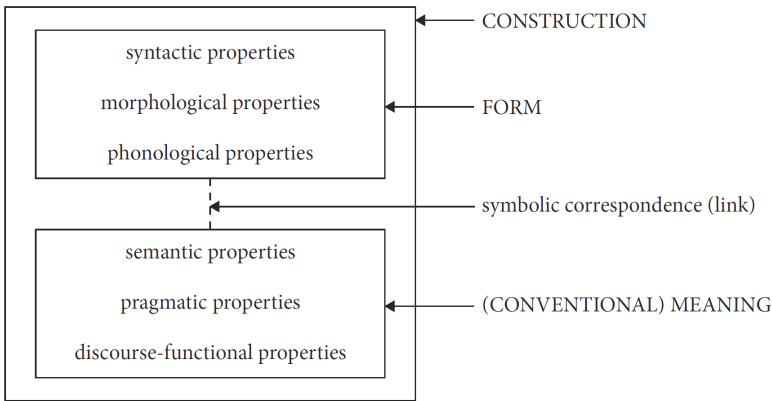


Figure 1: Types of information in constructions (Croft 2001, p. 18)⁵

³ For newer alternative definitions, see Goldberg (2006, 2019).

⁴ Constructionist principles have also been applied to morphology, see Booij (2010, 2018) and Audring and Jackendoff (2025).

⁵ Opinions differ on how to model constructional meaning and whether all constructions do in fact bear meaning. For example, Fillmore (1999) argues that the English Subject Auxiliary Inversion construction does not bear any clearly identifiable meaning, while Goldberg (2006) argues otherwise. See Willich (2020), Boas (2025a), and Boas (2025b) for a discussion of constructional meaning(s).

The question of how many different types of constructions there are in a language is still a matter of on-going research. Consider, for example, a simple English sentence such as *The tacos taste delicious*, which is licensed by a combination of different types of English constructions, including the INTRANSITIVE construction, the VP construction, the AdvP construction, the NP construction, the PLURAL construction, the VERB-INFLECTION construction, and a number of different lexical constructions. In CxG, utterances are licensed by taking the necessary construction entries from the construct-i-con⁶ (the inventory of construction entries, see Fillmore et al. 2012, Lyngfelt 2018, Boas et al. 2019) and combining them. Since in CxG there is no strict separation between syntax and the lexicon, all constructions, from the most abstract/schematic (such as SUBJECT-PREDICATE or INTRANSITIVE) to the most specific/concrete (such as entries for senses of words as in FrameNet (Fillmore – Baker 2010)) are assumed to have the same data structure, which typically makes them compatible with each other so they can combine to license utterances.⁷

Fillmore et al. (2012) provide a cursory overview of the different types of English constructions they found during a one-year long pilot project exploring the organizational principles of the English construct-i-con that employed the workflow and analytical apparatus of lexical FrameNet to cover linguistic structures beyond the lexicon. The constructions that Fillmore et al. (2012) discuss cover a wide range of different structures, including, among others, lexical idiom constructions (e.g., *in the distance*), constructions with gaps, clause-level constructions, absolute constructions, auxiliary-initial constructions, co-text specification constructions, degree modification constructions, nominal pumping constructions, verb pumping constructions, and measurement expression constructions (for details, see Fillmore et al. 2012, p. 332 – 368).

An important assumption of CxG is that language consists of a network of constructions (or, perhaps multiple networks, this is an open question) in which constructions are organized in terms of different levels of schematicity and specificity (Fillmore – Kay 1993, Goldberg 1995, Boas 2011, Diessel 2019, Schmid 2020). As a maximalist approach (see above), CxG assumes that such networks are “baroque, involving massive redundancy and vastly rich detail” (Traugott – Trousdale 2013, p. 53). On this view, constructional networks are useful for representing and organizing constructions that share certain common properties, though the exact nature of how constructional networks are organized and whether all constructional networks share the same or different organizational principles remains an open

⁶ This term is “a morphological blend of construction and lexicon” (Ziem – Flick 2019, p. 203).

⁷ For a discussion of different concepts of the nature of the construct-i-con (and how it connects to the lexicon), see Fillmore et al. (2012), Boas (2017), Lyngfelt et al. (2018), Diessel (2023), and Boas (2025b).

question.⁸ For example, Goldberg (1995) proposes a core sense and six sense extensions to cover the various realizations of ditransitive in a network of ditransitive argument structure constructions. Other researchers propose differently structured networks for different groups of constructions, including passives (Ackerman – Webelhuth 1998), conatives (Medina 2017), subject-auxiliary constructions (Fillmore 1999, Goldberg 2006), support verb constructions (Zeschel 2008), relative clause constructions (Diessel 2019), and the *V-that* construction (Perek – Patten 2019).

The concept of productivity plays an important role in CxG. While abstract schematic constructions such as the SUBJECT-PREDICATE construction impose relatively few restrictions on what types of elements can fill its open slots, other constructions that are less schematic such as the PASSIVE construction (Ackerman – Webelhuth 1998, Lasch 2016) or the CAUSED-MOTION construction (Goldberg 1995) impose significantly more restrictions of different types on their open slots (for details see Boas 2021). This means that the notion of productivity of constructions exists on a continuum that coincides with the level of abstraction and schematicity of constructions, ranging from fully productive constructions to semi- and non-productive constructions (see also Fillmore 1999, Goldberg 2006, Boas – Ziem 2018, Boas 2021).⁹

Since the mid-1980s, several different so-called “flavors” of CxG have developed out of the “original” Berkeley Construction Grammar (Fillmore et al. 1988, Fillmore – Kay 1993, Kay – Fillmore 1999, Fillmore 2013). Taken together, these are also known as “constructionist approaches” (Goldberg 2019, Ungerer – Hartmann 2023), indicating that they all share a certain **set of common assumptions** about the nature of language, including the following: (1) The **basic building block of language is a construction**, a pairing of form with meaning/function (in Goldberg’s words, “it’s constructions all the way down” (2003, p. 223)) and (almost) all of language consists of constructions of various degrees of abstraction and schematicity.; (2) Analysis of language should be **usage-based** (Barlow – Kemmer 2000); (3) The architecture of language is **non-modular**, i.e. unlike in most other models of language there are no separate modules for syntax, the lexicon, semantics,

⁸ Another open question is the exact nature of how construction entries interact with each other to license specific sentences. As discussed in detail by Boas (2025b), this central aspect of constructional syntax has so far not been addressed in sufficient detail and needs to be investigated more thoroughly by future research.

⁹ In contrast to other frameworks, in which frequency is treated as external to the grammar, many constructionist analyses regard frequency as a central concept when it comes to analyzing and explaining the nature and distribution of constructions. For the differences between a construction’s type frequency and token frequency, see Clausner and Croft (1997), Goldberg (2006), Bybee (2010), Diessel (2019), Schmid (2020), Gries (2022), and Hilpert (2025).

phonology, pragmatics, etc. This means that mechanisms that connect and relate between different so-called “modules” in other approaches are not necessary in CxG; (4) There are **no different levels of** (underlying and surface) **representation**, i.e. there are no derivations in the classical sense; (5) Language is learned on the basis of **input** and there are **no empty categories** or silent operators, i.e. ‘what you see is what you get.’ (6) The **meaning side** of (many, if not most) constructions can be modeled with **Frame Semantics** (Fillmore 1982), the sister theory of CxG. These basic assumptions about the nature of language are shared more or less by all constructionist researchers, which means that in theory it should be possible to ‘translate’ a constructional analysis from one flavor of CxG into other flavors of CxG (see Sag 2012 for details).¹⁰

Berkeley Construction Grammar started out in the mid-1980s as an alternative model of language seeking to account for all linguistic phenomena and not only those at what was then known as the ‘core’ (as opposed to the ‘periphery’) and which occurred with sufficient frequency (for a discussion of what constitutes ‘sufficient’ frequency, see Section 4.1 below). In this context it is important to note that there are different views¹¹ on what constitutes ‘constructionhood’: For example, some approaches posit a form-meaning pairing “such that some aspect of [the form] or some aspect of [the meaning] is **not strictly predictable** from [the construction’s] component parts” (Goldberg 1995, p. 4, emphasis by the authors). In other words, under this approach a construction typically has a specific meaning element that is not recoverable from the meanings of its components¹². Goldberg later developed this concept into a more extensive concept according to which **fully compositional** structures are also analyzed as constructions in their own right, as long as they are frequent enough (“sufficient frequency”, cf. (Goldberg 2006, p. 5)). At the center of this alternative approach is a sign-based conception of language that emphasizes constructions as the basic building blocks of language, pairing form with meaning and function. As Fillmore (2013, p. 112) puts it:

[T]he grammar of a language is the set of its grammatical constructions, the rules that unite formal and semantic information into various kinds of linguistic objects, together with the principles that constrain and connect them . . . Any well-formed linguistic entity can be interpreted as an assembly of the constructions that jointly license it, and an ambiguous expression permits more than one such assembly [...] **What you see is what you get.** (Fillmore 2013, p. 112, emphasis by the authors)

¹⁰ Whether the meanings of all constructions can be modeled with semantic frames remains an open question. For a discussion, see Willich (2023) and Boas (2025b).

¹¹ We would like to thank an anonymous reviewer for pointing this out.

¹² In other words, under this approach frequency is not a necessary condition for ‘constructionhood’, rather, it is a matter of the internal makeup and meaning of a structure.

In the early 1990s, Cognitive Construction Grammar (Goldberg 1995, Boas 2013) grew out of Berkeley Construction Grammar by focusing on the nature of one particular set of constructions, namely argument structure constructions such as the *Ditransitive*¹³ construction, the *Caused-Motion* construction, and the *Resultative* construction (Goldberg 1995, Goldberg 2006), and by highlighting the cognitive aspects of language, i.e. how linguistic information is learned, stored, and processed. While Cognitive Construction Grammar does not put an emphasis on notation and formalization, Berkeley Construction Grammar is keen on providing a more formalized notation of linguistic insights, similar to Sign-based Construction Grammar (Sag 2012, Michaelis 2013), which grew out of Berkeley Construction Grammar and Head-driven Phrase Structure Grammar (Pollard – Sag 1994), focusing on a more detailed unification-based formalism using Attribute-Value Matrices (AVMs) for representing constructions and interactions between constructions (see Sag – Boas – Kay 2012). Other flavors of CxG include Radical Construction Grammar (Croft 2001, Croft 2013), which is based, among other things, on insights from linguistic typology. According to Croft, each language comes with its own categories and constructions that sets it apart from all other languages. More computationally oriented flavors of CxG include Embodied Construction Grammar (Bergen and Chang 2013) and Fluid Construction Grammar (Steels 2013), which are interested in computational simulation and implementation of constructional insights into the nature of language. Finally, there is a variety of applications of CxG to fields such as second language acquisition and language pedagogy, as, for example, in Pedagogical Construction Grammar (Herbst 2016, Boas 2022), which seeks to apply constructional insights to the teaching and learning of languages. For an overview and a comparison of the various ‘flavors’ of CxG, see Boas (2020) and Boas (2021).

One of the main goals of constructional research is to find, document, and analyze all constructions of a language in order to determine how they interact to license utterances in a language. In the 1980s, CxG started out by primarily focusing on English constructions, as laid out by Fillmore and Kay (1993, p. 4 – 5):

We will be satisfied with the technical resources at our disposal, and with our use of them, if they allow us to represent, in a perspicuous way, everything that we consider to be part of the conventions of the grammar of the first language we work with. We will be happy if we find that a framework that seemed to work for the first language we examine also performs well in representing grammatical knowledge in other languages.

This quote illustrates the idea that one should first try to determine the constructions of one language before moving on to other languages. This reflects the

¹³ Following Boas and Sag (2012), constructions are rendered here with the Courier New font in italics.

assumption that there might not be an innate language faculty with universal principles (a.k.a. Universal Grammar) as proposed by other linguistic theories. Following the pioneering constructional research on English, linguists started exploring other languages, including Brazilian Portuguese, French, German, Japanese, Spanish, Swedish, and many others from a constructional perspective. As already discussed above, Croft (2001) claims that all constructions are language-specific and that it might be very difficult to come up with constructional generalizations across languages (see also Croft 2025). Other constructionist researchers, however, propose that certain types of generalizations across languages are indeed possible, especially from a contrastive approach. For example, the contributions in Boas (2010) compare a variety of different English constructions with their counterparts in other languages, including Finnish, German, Japanese, Russian, Spanish, Swedish, and Thai. Similarly, Kuzar (2012) provides a contrastive analysis of sentence patterns in English and Hebrew, while Dux (2020) shows how generalizations can be made across the different types of constructions instantiated by change and theft verbs in English and German. Other efforts looked at the nature of constructions in particular language families such as Romance (see the contributions in Boas – González García 2014) and the Nordic Languages (see the contributions in Coussé et al. 2023) or particular languages such as French (see the contributions in Bouveret – Legallois 2012), German (see the contributions in Boas and Ziem 2018), and Spanish (see the contributions in Hennecke – Wiesinger 2023).

With this short overview of how CxG has developed over the past 35+ years, in particular with respect to its expansion from English to other languages, we now turn to the main part of our paper. That is, in the following sections we will discuss the nature of a specific construction, namely the Comparative Correlative (CC) construction (e.g. *The more we walk, the more tired we get*), which has been analyzed in English (see e.g. Hoffmann 2019; Hoffmann et al. 2019, 2020; Horsch 2023b) and other languages (e.g. Spanish (Horsch 2024) and Slovak (Horsch 2021, 2023a)). More specifically, we discuss the various semantic, pragmatic, and syntactic similarities and differences between the Slovak CC Construction and its English counterpart to demonstrate how the principles of CxG can be applied to the Slovak language.

3. THE SLOVAK COMPARATIVE CORRELATIVE CONSTRUCTION

Prototypically, the Slovak Comparative Correlative (CC) consists of two subclauses C1 and C2¹⁴, as example (4) illustrates:

¹⁴ As an anonymous reviewer has noted, some analyses of the English CC have posited that it is a hypotactic construction, with C1 being the subordinate and C2 the main/matrix clause (e.g. Culicover – Jackendoff 2005, p. 504 – 507). However, recent CxG-based corpus studies have adduced evidence

- (4) [Čím menej reči tu bude,]_{C1} [tým skôr zaspím.]_{C2}
 ‘The less talking there is here, the sooner I will fall asleep.’
 (from Horsch 2019, p. 180)

Regarding its semantics, the Slovak CC – like its counterparts in many other languages – is quite complex. It encodes two distinct meanings: (1) **cause-effect**, which has been described as a “conditional, **asymmetric**, effect-cause relationship between C1 and C2” (Horsch 2021, p. 196) (talking less results in falling asleep sooner) and (2) **parallel change over time** that amounts to a “pair of semantic differentials” between which a “monotonic relationship” exists (Hoffmann 2019, p. 38; cf. also Sag 2010, p. 525 – 526) (over the same time period, there is less talking while the likelihood of falling asleep simultaneously increases). Horsch refers to this meaning as “**symmetric**” (2021, p. 196).

The Slovak CC also has a complex form, which was first extensively described by Horsch (2019, 2020, 2021). The first thing to note in this regard are the lexically/phonologically fixed clause-initial elements *čím*_{C1} and *tým*_{C2} that introduce the subclauses C1 and C2. As Horsch (2019, p. 182) has noted, there appears to be a “general uncertainty concerning the classification” of these clause-initial elements: Betáková assigned them to the category of correlative conjunctions (1955, p. 319), Dvonč et al. (1966) describe them as hypotactic conjunctions, while Oravec (1954) suggests that they have become fossilized as a pair of conjunctions. Similarly, Slovak lexicographic works have analyzed *čím*_{C1} and *tým*_{C2} as analytic subordinating conjunctions (Kačala et al. 2003; Buzássyová–Jarošová 2006)¹⁵. However, Marsinová (1955, p. 39) suggests that the pair be excluded “a priori” from the category of conjunctions because she considers the word *čím* not to be related to the conjunction *čo*. Finally, Horsch (2021, p. 197) points to an analysis by Sabol, who has described *čím*_{C1} and *tým*_{C2} as particles that modify comparatives, noting that *čím* loses its (syntactic) validity when *tým* is removed from the structure (1982, p. 53). Finally, and in a similar vein, Horsch calls the clause-initial elements *čím*_{C1} and *tým*_{C2} “construction-specific elements” based on the observation that they resemble instrumental-case pronouns but do not function as such in the CC construction (2021, p. 197).

Also note that each subclause of the Slovak CC consists of “obligatory and optional slots” (Horsch 2021, p. 197). The obligatory slot “contains a comparative

that suggests it is a paratactic structure, based on the strong formal parallelism between C1 and C2 (Hoffmann et al. 2020, p. 213). The question whether the relationship between C1 and C2 is hypotactic or paratactic is therefore also relevant against the theoretical background of CxG. In fact, this was one of the central research questions of Horsch’s study on the English CC, which was based on several thousand tokens of corpus data and a large-scale psycholinguistic experimental investigation with several hundred participants from various English-speaking countries (Horsch 2023b).

¹⁵ We would like to thank an anonymous reviewer for pointing this out.

element” in the form of a noun phrase, an adjective phrase, or an adverb phrase (Horsch 2021, p. 197). This is followed by a slot containing a verb, which is optional (i.e., it does not have to be realized), as demonstrated by example (5):

- (5) [Čím ďalej]_{C1} [tým lepšie]_{C2}
 ‘The further, the better’

Horsch has therefore distinguished between “verbless” and “full” clauses (2021, p. 198); in the literature on the CC in other languages, these are also referred to as “deleted” and “full” clauses (cf. Hoffmann 2019; Hoffmann et al. 2019). In the present study, we will adopt the latter terminology, i.e., ‘deleted’¹⁶ to describe C1 and C2 subclauses without realization of the optional clause slot and ‘full clause’ to describe realized optional clause slots.

Based on the formal features outlined above, Horsch has suggested the following maximally schematic template (6) for the Slovak CC (2019, p. 184; 2021, p. 198, based on Culicover – Jackendoff’s (1999, p. 567) template of the English CC):

- (6) [[tʃi:m] [...]_{comparative element} (clause)]_{C1} [[ti:m] [...]_{comparative element} (clause)]_{C2}

Note that from a CxG perspective, this is a construction, because there is a distinct form (cf. template (6)) that encodes a distinct meaning (asymmetric and symmetric, see above)¹⁷ (from Horsch 2023a, p. 730):

FORM:	[[tʃi:m] [...]_{comparative element1} (...) _{optional clause 1}]_{C1} [[ti:m] [...]_{comparative element2} (...) _{optional clause 2}]_{C2}
MEANING:	‘[As the degree of comparative element 1 increases/decreases with respect to clause1/ with respect to a contextually retrievable clause]_{independent variable} → [so the degree of comparative element 2 increases/decreases with respect to clause2/ with respect to a contextually retrievable clause]_{dependent variable} in a monotonic way’

However, this template is not completely satisfactory, for several reasons: Firstly, as noted by Horsch, the order of the optional and obligatory slots is quite flexible in the Slovak CC (2021, p. 198 ff.). For example, a corpus study by Horsch

¹⁶ Note that we use the term “deletion” here to stay with conventions in the literature (e.g. Hoffmann 2019; Hoffmann et al. 2019; Horsch 2021; Horsch 2023b). As two anonymous reviewers have pointed out, this terminology implies an absence of derivation operations, which does not align with the surface-based approach of CxG. Hoffmann et al. have therefore explicitly noted that “the absence of BE [and by extension, whole clauses] can also be modelled constructionally without the assumption of a deleted, covert form” (2019, p. 7).

¹⁷ The meaning side is based on Hoffmann’s (2017, p. 351) English CC paraphrase.

has shown that the comparative element does not have to immediately follow the clause-initial element (e.g. *čím som sa viac usiloval* [...] ‘the more I tried [...]’); this is not restricted to clitics (e.g. *Čím bol spisovateľ odvážnejší* [...] ‘the braver an author was [...]’) (2019, p. 185; 2021, p. 199). Secondly, the order of C1 and C2 may also be changed, so that C2 precedes C1 (e.g. [*filozofi boli tým lepší*],_{C2} [*čím boli starší*]_{C1} ‘the philosophers were better, the older they were’, from Horsch 2021, p. 200). Thirdly, there are ‘stacked’ CCs that consist of more than two subclauses (e.g. [*čím viac rastie cena komodít a energie*],_{C1} [*tým viac je americká ekonomika „spanikárená“*],_{C2} [*tým viac sa prepadá do recesie*]_{C3} ‘the more the price of commodities and energy grows, the more the American economy panics, the more it sinks into recession’, from Horsch 2019, p. 187)¹⁸.

Most importantly from a CxG perspective, however, previous corpus studies of the Slovak CC (Horsch 2021, 2023a) have uncovered statistically significant cross-clausal associations across C1 and C2¹⁹. Specifically, in these studies Horsch used so-called covarying-collexeme analyses (see Section 4.1 below) that were first used to investigate the English CC construction by Hoffmann et al. (2019). For example, in a corpus study based on a 500-token sample from the Slovak National Corpus (SNC), Horsch found a statistically significant preference for a ‘deleted’ (i.e., an unrealized) clause slot in C2 when the same was the case in C1, and vice versa (2021, p. 214). Similarly, in a 503-token data set from the Slovak Web 2011 corpus, Horsch found a statistically significant preference for the obligatory comparative element slot in C2 to contain an AdvP when the same was the case in C1, and vice versa (2023a, p. 723).

That is, despite the many different choices that speakers have when realizing C1 and C2, in the corpus data there are certain patterns that appear significantly more often than could be expected by chance. This suggests that the two subclauses C1 and C2 are formally/syntactically interdependent. Apart from implications for generativist analyses of the CC²⁰ (for more detailed discussions, cf. Horsch 2021 and in press), from a CxG point of view these cross-clausal associations are of interest

¹⁸ As an anonymous reviewer has remarked, such stacked clauses “generally refer to multiple relative clauses modifying the same head noun [and demonstrate that] CCs are not restricted to the two-part structure, as argued by Culicover and Jackendoff (2005, p. 501) and den Dikken (2005) but there are ‘tripartite’ structure CCs as well.”

¹⁹ These corpus studies were based on an earlier study of the English CC by Hoffmann et al. (2019), which turned up very similar results.

²⁰ Specifically, generativist approaches assume that C1 and C2 are daughter nodes of a mother node and otherwise independent of each other. This means that the ‘granddaughter nodes’ C1 and C2 are communicating with each other (principle of locality). As noted by Hoffmann (2019, p. 139), in syntactic trees only immediate constituents are available to a mother node: “the [mother] construction can only access information of its direct [daughters] (C1 and C2 in this case), but not information embedded within its [daughters]” (Hoffmann 2019, p. 139).

because they are evidence for so-called meso-constructions. That is, form-meaning pairings less schematic than the maximally schematic CC ‘macro-construction’ as shown in template (6) that “occur with sufficient frequency” (Goldberg 2006, p. 5) to warrant calling them constructions in their own right. Inheriting from the maximally schematic macro-construction (see template (6)) and each other, they form the nodes of an elaborate, interconnected constructional network that represents linguistic knowledge.

These meso-constructions are of varying degrees of schematicity: For example, Horsch (2021, 2023a) also detected a preference for the less schematic lexical filler pair *d’alej_{C1}-viac_{C2}* ‘further-more’ in his SNC and Slovak Web 2011 data. Of course, as constructions in their own right, corresponding form-meaning pairings can be posited for each of these statistically significant cross-clausal associations. In the case of *d’alej_{C1}-viac_{C2}*, Horsch (2023a, p. 712) has suggested the following form-meaning pair²¹:

FORM:	[[[tʃi:m] [d’alej] _{comparative element1} (...) optional clause 1] _{C1} [[ti:m] [viac] _{comparative element2} (...) optional clause 2] _{C2}
MEANING:	‘[As the point in time (with respect to clause 1) increases] _{independent variable} → [so the quantity increases (with respect to clause 2)] _{dependent variable} in a monotonic way’

To illustrate the constructional network underlying the Slovak CC construction, and how CC meso-constructions inherit from each other as well as the CC macro-construction, consider Figure 2 (from Horsch 2023a, p. 735), which is a visualization of the results of Horsch’s statistical analyses of data from the SNC and Slovak Web 2011 corpora. As is evident from the arrows in Figure 2, the network is taxonomic, i.e., less schematic constructions are licensed by/inherit from more schematic ones. Figure 2 shows that there are three levels: at the macro-constructional level at the very top, there is a maximally schematic CC macro-construction that is based on template (6). This macro-construction licenses various “semi-productive, partly substantive, partly schematic intermediate meso-constructions” (Hoffmann et al. 2019, p. 26), which in turn license so-called micro-constructions, i.e., “specific, substantive instances of a construction” (Hoffmann et al. 2019, p. 26).

Returning to the meso-constructional level, in Figure 2 we see the *d’alej_{C1}-viac_{C2}* meso-construction discussed above, which can be found on the very left of the figure. It is licensed by the CC macro-construction, as is evident from the

²¹ Note that the clause-initial elements are rendered in IPA here to indicate that they are phonologically fixed/invariable (and therefore construction-specific), unlike actual pronouns, which can change their form according to e.g. case and number.

arrow connecting the CC macro-construction with the *d'alej*_{C1}-*viac*_{C2} meso-construction. Following the arrows that protrude from this meso-construction, we see that it in turn licenses an even less schematic *d'alej*_ADV_P_NO VERB_{C1}-*viac*_ADV_P_NO VERB_{C2} meso-construction²². That is, a cross-clausal association in which not only *d'alej* in C1 and *viac* in C2 are significantly associated, but, furthermore, the comparative elements in C1 and C2 are adverb phrases and the optional clause slot is not realized. Note that constructions, including meso-constructions, can inherit from multiple other constructions. Thus, in addition to the CC macro-construction, the *d'alej*_ADV_P_NO VERB_{C1}-*viac*_ADV_P_NO VERB_{C2} meso-construction inherits from a total of 5 meso-constructions, some of which inherit from one another (cf. Figure 2):

- *d'alej*_{C1}-*viac*_{C2} CC meso-construction, e.g. (7),
 - ADV_P_{C1}-ADV_P_{C2} CC meso-construction, e.g. (8),
 - NO VERB_{C1}-NO VERB_{C2} CC meso-construction, e.g. (9),
 - *d'alej*_NO VERB_{C1}-*viac*_NO VERB_{C2} CC meso-construction, e.g. (10),
 - ADV_P_NO VERB_{C1}-ADV_P_NO VERB_{C2} CC meso-construction, e.g. (11):
- (7) [čím *d'alej* ideme,]_{C1} [tým sa počasie *viac* zlepšuje,]_{C2}
 ‘The further we go, the more the weather will improve.’
 <skTenTen TOKEN #41933821 DOC#93295>
- (8) [čím [rýchlejšie]_{AdvP} vyjdeš na vrchol,]_{C1} [tým [kratšie]_{AdvP} sa tam udržíš,]_{C2}
 ‘The faster you go to the top, the shorter you will stay there.’
 <skTenTen TOKEN #328586 DOC#657>
- (9) A jasné, že [čím bližšie k turistom,]_{C1} [tým drahšie,]_{C2}
 ‘And of course, the closer to the tourists, the more expensive.’
 <skTenTen TOKEN #8750626 DOC#18336>
- (10) Je veľa dobrých seriálov, v poslednom čase [čím d'alej,]_{C1} [tým viac,]_{C2}
 ‘There are many good TV shows, lately the further, the more.’
 <skTenTen TOKEN #19809765 DOC#43183>
- (11) A ovocia je [čím d'alej,]_{C1} [tým menej,]_{C2}
 ‘There are many good TV shows, lately the further, the more.’
 <skTenTen TOKEN #17867896 DOC#38629>

²² Note that Horsch uses “NO VERB” here to refer to what others (e.g. Hoffmann et al. 2019) refer to as “TRUNCATED”. While in general, we use the latter term, in this case we use the former to facilitate interpretation of Figure 2 below, which was taken from Horsch (2023a). The two terms, however, can be used interchangeably.

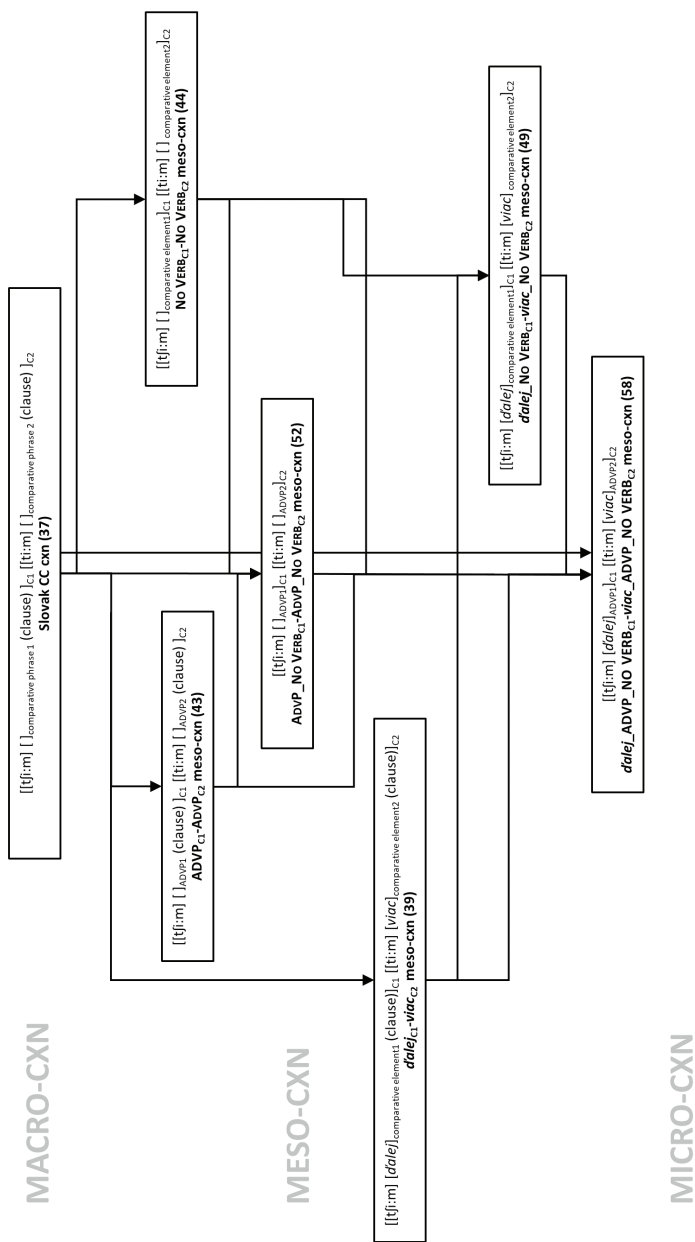


Figure 2: Detail of the taxonomy of the Slovak CC construction, based on SNC and Slovak Web 2011 data (Horsch 2023a, p. 735)

There is empirical evidence for the existence of all of these meso-constructions in the form of statistically significant cross-clausal associations in the corpus data. They can therefore also be rendered as form-meaning pairs (12 – 15) in their own right (taken from Horsch 2023a, p. 731 – 733):

(12) AdvP_{C1}-AdvP_{C2} CC meso-construction

FORM:	[[[t̃i:m] [...]] _{AdvP1} (...)] _{optional clause 1}] _{C1} [[[ti:m] [...]] _{AdvP2} (...)] _{optional clause 2}] _{C2}
MEANING:	‘[As the degree of AdvP1 increases/decreases (with respect to clause 1)] _{independent variable} → [so the degree of AdvP2 increases/decreases (with respect to clause 2)] _{dependent variable} in a monotonic way’

(13) No VERB_{C1}-No VERB_{C2} CC meso-construction (SNC, Slovak Web 2011)

FORM:	[[[t̃i:m] [...]] _{comparative element1}] _{C1} [[[ti:m] [...]] _{comparative element2}] _{C2}
MEANING:	‘[As the degree of comparative element1 increases/decreases] _{independent variable} → [so the degree of comparative element2 increases/decreases] _{dependent variable} in a monotonic way’

(14) *d’alej*_No VERB_{C1}-*viac*_No VERB_{C2} CC meso-construction (Slovak Web 2011)

FORM:	[[[t̃i:m] [<i>d’alej</i>]] _{comparative element1}] _{C1} [[[ti:m] [<i>viac</i>]] _{comparative element2}] _{C2}
MEANING:	‘[As the point in time increases] _{independent variable} → [so the quantity increases] _{dependent variable} in a monotonic way’

(15) AdvP_No VERB_{C1}-AdvP_No VERB_{C2} CC meso-construction (SNC, Slovak Web 2011)

FORM:	[[[t̃i:m] [...]] _{AdvP1}] _{C1} [[[ti:m] [...]] _{AdvP2}] _{C2}
MEANING:	‘[As the degree of AdvP1 increases/decreases] _{independent variable} → [so the degree of AdvP2 increases/decreases] _{dependent variable} in a monotonic way’

In the following, we apply Hoffmann et al.'s (2019) methodology to a considerably larger data set that consists of well over 3,500 CC tokens from the Slovak Web 2011 corpus. In doing so, we intend to not only show how many meso-constructions underlie the Slovak CC construction but also provide fellow researchers with step-by-step instructions of how to investigate the relationship between different slots of a construction using corpus data. Our hope is that this will inspire more CxG-based investigations of various Slovak multi-slot constructions.

4. METHODOLOGY AND DATA

In this section, we present the methodology we used to detect the entrenchment of constructions. In CxG, any meaningful linguistic pattern that “occurs with sufficient frequency” is considered entrenched as a construction (Goldberg 2006, p. 5). Entrenchment refers to “the ongoing reorganization and adaptation of communicative knowledge” and has been described as “a lifelong cognitive reorganization process, the course and quality of which are conditioned by *exposure to and use of language*” (Schmid 2017, p. 3, emphasis by the authors). That is, constructions are ‘learned’ as a result of their repeated use by speakers (cf. Croft 2013, p. 224). Entrenched constructions, as noted by Goldberg, are stored as “a network of constructions” (2003, p. 219; cf. also Traugott – Trousdale 2013, p. 45) such as the one illustrated in Figure 2 above. Because entrenchment is dependent on usage frequency, corpus data is highly suitable for CxG-based investigations. This follows from Schmid’s “from corpus-to-cognition principle” (2000, p. 39, as discussed in Hoffmann et al. 2019, p. 10), which posits that “text frequency ‘instantiates entrenchment in the cognitive system’” (Hoffmann 2019, p. 18, citing Stefanowitsch – Flach 2017, p. 102; for more comments and suggestions cf. also Gries 2024).

The intention of this section is to provide fellow researchers with step-by-step instructions for the statistical analysis of corpus data in the context of usage-based CxG studies²³. We hope that this will encourage others to model more multi-slot constructions in Slovak (and, of course, any other languages in which they may be interested).

4.1. COVARYING-COLLEXEME ANALYSIS

To test for cross-clausal associations between C1 and C2 and, thus, the entrenchment of meso-constructions, we employ a statistical test of relative frequencies known as **covarying-collexeme analysis** (Stefanowitsch and Gries

²³ For more details on how we proceeded, we also suggest taking a look at the coding guide that was used to train the student assistants who annotated the corpus data. The link to the OSF repository is provided in Section 4.2 below.

2005, p. 9 – 11; cf. also Gries – Stefanowitsch 2004; Gries 2019, 2022). While covarying-collexeme analysis was originally developed for testing the association of *lexical items* between two slots of a construction, Hoffmann et al. (2019) have shown that it can also be used to “extend collostructional methods by exploring the elements in slots on a *more schematic level*” (Martínez – Gries 2024, p. 164, emphasis by the authors). Thus, covarying-collexeme is really a “corpus-based method for investigating correlations between [...] items occurring in two different slots of a grammatical construction” (Stefanowitsch – Gries 2005, p. 2); it has been described as a “standard test in Construction Grammar for the association of two constructional elements” (Hoffmann et al. 2019, p. 11). Covarying-collexeme analysis works with 2-by-2 contingency tables and a Fisher-Yates exact test²⁴. The Fisher-Yates exact test is “very precise because it handles even small frequencies well” (Horsch 2021, p. 210, referring to Gries 2015, p. 313), which is particularly useful for investigating the lexical fillers in C1 and C2, many of which appeared with a very low frequency in the corpus data (see the note on hapaxes in section 5.1 below). We used the *Coll.analysis 3.2a* script for *R* (Gries 2007) to investigate the following linguistic variables: LEXICAL FILLER, FILLER TYPE and DELETION in C1 and C2 (i.e., the constructional slots), as well as their respective interactions.

Covarying-collexeme analysis works with relative frequencies to detect the entrenchment of constructions. This is based on the assumption that syntactic patterns become entrenched as conventionalized form-meaning pairings when they “occur with sufficient frequency” (Goldberg 2006, p. 5). While the literature does not agree on a particular frequency threshold that must be crossed for a pattern to be regarded entrenched as a construction, covarying-collexeme analysis uses a *p*-value of 0.05, a common convention in statistics. To distinguish between *degrees* of entrenchment, two more *p*-values are used as thresholds: *p*<0.01 and *p*<0.001. Assuming that the null hypothesis amounts to independence of occurrence and that “[t]he lower the *p*-value, the stronger the evidence against the null hypothesis” (Schmid – Küchenhoff 2013, p. 539), this means that lower *p*-values translate to higher entrenchment. Collostructional strength as output by the *Coll.analysis 3.2a* script thus indicates the “probability of obtaining [a particular] distribution or a more extreme one” (Schmid – Küchenhoff 2013, p. 535).

Note that the *Coll.analysis 3.2a* script does not provide *p*-values, but a value called ‘collostructional strength’. This is a value that was originally intended to “gauge the degree of attraction” (Schmid – Küchenhoff 2013, p. 535) between constructions and lexemes but can be used to investigate more schematic ‘slots’ of a construction as well, as Hoffmann et al. (2019) first demonstrated. It is rendered as

²⁴ Such a “contingency or two-by-two table [is] familiar to many linguists from applications of the χ^2 test” (Schmid – Küchenhoff 2013, p. 534).

a negative log-transformed p -value (cf. Gries 2007), which facilitates the interpretation of significant results (i.e., $p < 0.05$) (Stefanowitsch – Gries 2005, p. 7, Gries et al. 2005, p. 671). The p -value thresholds correspond to the following collostructional strengths:

- $p=0.001$ coll. str. = 3 (***)
- $p=0.01$ coll. str. = 2 (**)
- $p=0.05$ coll. str. = 1.30103 (*)

Following conventions in the literature, any rows in the results table that contain statistically significant results will be shaded gray (cf. Hoffmann et al. 2019) and “ranked from [...] the highest to the lowest collostructional strength” (Horsch 2021, p. 212). Only pairs with an expected frequency of ≥ 5 will be displayed, “an assumption often required for goodness-of-fit tests such as the chi-square test” (Hoffmann et al. 2019, p. 15). This is done to preclude “the identification of pairs as significant that have an observed frequency of only 1” (Horsch 2023b, p. 46; cf. also Hoffmann et al. 2019, p. 15). Note that the results tables output by the *Coll.analysis* 3.2a script include more columns with information about attraction and repulsion (Gries 2015, p. 314), as well as so-called ΔP values that indicate how dependent one constructional element is on the other (Gries 2015, p. 314). These, however, will be excluded from results tables shown in the following, since they are of no relevance to this study.

4.2. CORPUS DATA

The corpus study is based on a data set consisting of 3,670 Slovak CC tokens, extracted from the Slovak Web 2011 corpus (skTenTen 11) using the Sketch Engine web interface^[1] (Kilgarriff et al. 2004, 2014). As implied by its name, the 540 million-word Slovak Web 2011 corpus consists of “texts collected from the Internet” (<https://www.sketchengine.eu/sktenten-slovak-corpus/>).

The Slovak Web 2011 corpus was queried in January 2021 using the regular expression (16), which was composed based on the template (6) for the Slovak CC construction as first suggested by Horsch (2019, p. 184). No filters or subcorpora were used. The regular expression (16) accounts for the lexically fixed clause-initial elements ([word=“čím|tým”])²⁵, the obligatory comparative element slots ([tag=“(k2*(d1|d2|d3)|k6*(d1|d2|d3)).*”]), and the flexibility in ordering clause and comparative element slots ([{,6}]).

²⁵ Note that this part of the regular expression also accounts for CCs with C2C1 order, which, however, are not part of the present investigation.

(16) Regular expression (CQL) for extracting CCs from skTenTen11²⁶

```
[word="čím|tým"] [] {,6} [tag="(k2*(d1|d2|d3)|k6*(d1|d2|d3)).*"] []*  
[word="tým|čím"] [] {,6} [tag="(k2*(d1|d2|d3)|k6*(d1|d2|d3)).*" ] within  
<s/>
```

The query yielded a total of 4,998 tokens, which were manually annotated by two Slovak student assistants²⁷. Each student assistant annotated half of the data set; interrater agreement was not measured. However, to ensure maximum consistency in annotation, following the methodology of Hoffmann et al. (2019, p. 11 – 12), the student assistants (both L1 speakers of Slovak) received extensive training based on sample data sets and were provided with a coding guide that contained detailed instructions. Moreover, the data set was reviewed by one of the authors after annotation by the student assistants. After identifying and discarding false positives²⁸, a data set²⁹ of 3,002 relevant tokens remained. These were then annotated for the following linguistic variables:

- LEXICAL FILLER C1, LEXICAL FILLER C2 (levels: e.g. *viac* ‘more’, *skôr* ‘sooner’, 405 levels in C1 and 616 levels in C2)
- FILLER TYPE C1, FILLER TYPE C2 (levels: ADJP, AdvP, NP, PP)
- DELETION C1, DELETION C2 (levels: FULL CLAUSE, TRUNCATED)

Note that there are already corpus studies on the Slovak CC construction employing the same methodology (Horsch 2021, 2023a). However, this study was considerably smaller in scale, with just 442 CC tokens (Horsch 2021, p. 204). Now, with almost seven times as many tokens, it is possible to conduct a much more detailed investigation that will provide a considerably more fine-grained picture of the Slovak CC: As noted by Schmid and Küchenhoff (2013, p. 547), covarying-collexeme analysis yields more results the larger the tested sample is. Moreover, by applying the same methodology to a larger dataset it will be possible to see whether

²⁶ The regular expression retrieved strings with the clause-initial elements ([word="čím"] and [word="tým"]), each followed by a comparative adverb ((k2*(d1|d2|d3)) or adjective (k6*(d1|d2|d3))). To account for optional clauses, within <s/> was used; to account for variation in word order, the wild card [] {,6} was inserted between the clause-initial element and the comparative words. Also note that the regular expression was formulated such that both C1C2 and C2C1 patterns were extracted (by using the pipe command "|"): [word="čím|tým").

²⁷ The student assistants were employed in the context of the research project “Comparing Comparative Correlatives: The more languages, the better” (DFG-HO 3904/5–2; 2021–24). This project was generously funded by the German Research Foundation (DFG).

²⁸ Including cases of C2 preceding C1, e.g. *Tie sa vyvíjajú [tým rýchlejšie,] čím lepšie podmienky jej ľudský organizmus nechtiac vytvára*_{C1} ‘These develop (the) faster, the better conditions the human organism creates unintentionally’.

²⁹ This data set, along with the results of covarying-collexeme analysis and the student assistant coding guide, is available in an OSF repository^[2].

earlier studies can be replicated. Finally, it is an important contribution to overcoming the “big/small divide in corpus work” (Mair 2005, p. 24).

After annotation, the linguistic variables were subjected to covarying-collexeme analysis to detect statistically significant cross-clausal associations, following the methodology of Hoffmann et al. (2019). In addition to the individual variables, their interactions were also tested, for two reasons: (1) to test for prototype effects (for example, in Hoffmann et al.’s (2019) corpus study, the significantly associated LEXICAL FILLER association *more*_{C1}-*more*_{C2} turned out to function “as a strong prototype” for the cross-clausal association ADVP_{C1}-ADVP_{C2} (2019, p. 16)); (2) to obtain a more fine-grained picture of the CC meso-constructional network by testing for less schematic meso-constructions (as demonstrated by Horsch 2025, in press).

5. CORPUS STUDY RESULTS

The following sections (3.2.1 – 3.2.7) present the results of covarying-collexeme analysis, revealing a great number of statistically significant cross-clausal associations and thus, evidence for not only numerous meso-constructions, but also an extensive, elaborate network in which these meso-constructions are interconnected. Where applicable, results will be compared to Horsch’s earlier (2021) corpus study. The results tables will show cross-clausal combinations ranked from highest to lowest collostructional strength, i.e., from highest to lowest statistical significance.

5.1. LEXICAL FILLER

The data set contained 1,165 different LEXICAL FILLER pairs, of which 985 (84.5%) were hapaxes, which can be seen as evidence of the high degree of variability and productivity of this constructional slot. It is interesting to note that similar numbers were observed in previous corpus studies on the CC construction in English (855/965=88.6%) (Hoffmann et al. 2019, p. 15) and Spanish (2,053/2,228=92.15%) (Horsch 2024, p. 229).

Testing so many different levels using covarying-collexeme analysis produced a large results table. For ease of exposition, the tables below are reduced in size by showing only pairs exhibiting attraction and a collostructional strength of ≥ 1.31 , i.e. those that are of interest in the context of the present study.

The results Table 1 reveals 12 significant LEXICAL FILLER associations.

Table 1: Covarying-collexeme analysis of LEXICAL FILLER in C1 and C2 (expected frequency ≥ 5 , Coll. strength ≥ 1.31 , attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
<i>skôr</i> ‘sooner’	<i>lepšie</i> ‘better’	461	841	295	129.15	69.46	***
<i>skôr</i> ‘sooner’	<i>skôr</i> ‘sooner’	461	141	99	21.65	51.04	***
<i>d’alej</i> ‘further, longer’	<i>viac</i> ‘more’	1133	342	228	129.08	30.03	***
<i>horšie</i> ‘worse’	<i>lepšie</i> ‘better’	48	841	44	13.45	19.92	***
<i>d’alej</i> ‘further, longer’	<i>menej</i> ‘less’	1133	263	167	99.26	18.14	***
<i>d’alej</i> ‘further, longer’	<i>častejšie</i> ‘more often’	1133	84	70	31.7	17.41	***
<i>menej</i> ‘less’	<i>lepšie</i> ‘better’	146	841	73	40.9	8.18	***
<i>d’alej</i> ‘further, longer’	<i>horšie</i> ‘worse’	1133	92	61	34.72	7.78	***
<i>d’alej</i> ‘further, longer’	<i>ťažšie</i> ‘heavier, more difficult’	1133	97	56	36.61	4.41	***
<i>viac</i> ‘more’	<i>viac</i> ‘more’	102	342	25	11.62	3.93	***
<i>menej</i> ‘less’	<i>menej</i> ‘less’	146	263	26	12.79	3.57	***
<i>dlhšie</i> ‘longer’	<i>ťažšie</i> ‘heavier, more difficult’	180	97	14	5.82	2.8	**
<i>vyššie</i> ‘higher’	<i>lepšie</i> ‘better’	72	841	27	20.17	1.31	*

Note that all three LEXICAL FILLER pairs determined by Horsch (*skôr*_{C1}-*lepšie*_{C2} ‘sooner_{C1}-better_{C2}’, *d’alej*_{C1}-*viac*_{C2} ‘further/longer_{C1}-more_{C2}’, *viac*_{C1}-*viac*_{C2} ‘more_{C1}-more_{C2}’) as statistically significant (2021, p. 213) also emerged as significant here. Moreover, mirroring Horsch’s (2021) results, *skôr*_{C1}-*lepšie*_{C2} ‘sooner_{C1}-better_{C2}’ turned out to be the most significantly associated FILLER TYPE pair.

5.2. FILLER TYPE

Table 2 shows the FILLER TYPE pairs that emerged as statistically significant: NP_{C1}-NP_{C2} (coll. str. 12.03***), AdvP_{C1}-AdvP_{C2} (coll. str. 10.44***) and AdjP_{C1}-AdjP_{C2} (coll. str. 8.71***). It is notable that all of them are symmetric. That is, C1 mirrors C2 and vice versa. While in Horsch’s (2021) smaller study, no statistically significant FILLER TYPE pairs could be determined, the results of the present study are reminiscent of previous investigations of the CC in English (Hoffmann et al. 2019) and Spanish (Horsch 2024). In both of these studies, exactly the same three cross-clausal associations emerged as statistically very significant (i.e., with a collostructional strength of >3 ***). This suggests a strong cross-linguistic tendency towards symmetry on more abstract meso-constructional levels that Horsch has previously described as “‘under-the-surface’ parataxis” (2024, p. 232, referring to Hoffmann et al. 2019).

Table 2: Covarying-collexeme analysis of FILLER TYPE in C1 and C2 (expected frequency ≥ 5 , attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
NP	NP	167	194	38	10.79	12.03	***
ADVP	ADVP	2617	2282	2043	1989.34	10.44	***
ADJP	ADJP	210	524	71	36.66	8.71	***

5.3. DELETION

Table 3 shows the results for the variable DELETION. Two pairs emerged as statistically significant: FULL CLAUSE_{C1}-FULL CLAUSE_{C2} (coll. str. 251.12***) and TRUNCATED_{C1}-TRUNCATED_{C2} (coll. str. 251.12***). As was the case with FILLER TYPES, there were only symmetric pairs. Furthermore, these results reflect Horsch’s study³⁰, where the same pairs also exhibited very significant (collostructional strength >3***) attraction (2021, p. 214).

Table 3: Covarying-collexeme analysis of DELETION in C1 and C2 (attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
FULL_CLAUSE	FULL_CLAUSE	1289	1381	1037	592.97	251.12	***
TRUNCATED	TRUNCATED	1713	1621	1369	924.97	251.12	***

5.4. LEXICAL FILLER:FILLER TYPE INTERACTION

To address Horsch’s call for a “closer inspection of the interaction between FILLER TYPES and LEXICAL FILLERS” in the Slovak CC construction (2021, p. 217), we also tested for this interaction. This was done by “collapsing the factors FILLER TYPE C1 and DELETION C1 as well as FILLER TYPE C2 and DELETION C2” (Hoffmann et al. 2020, p. 203) before inputting them into the *R* script.

One reason for testing for LEXICAL FILLER:FILLER TYPE interactions³¹ was to ensure that no significant FILLER TYPE associations (see Section 5.2) were due to “specific LEXICAL FILLER interactions that interact with the variable FILLER TYPE” (Hoffmann et al. 2019, p. 15). For example, the AdvP_{C1}-AdvP_{C2} association (collostructional strength 10.44, see section 5.2) could be due to a high frequency of the LEXICAL FILLER pair *skôr_{C1} - lepšie_{C2}* (collostructional strength 69.46***, see Section 5.1) that would simply have been annotated as ADVP in the data (Horsch 2024, p. 233).

Secondly, we wanted to obtain a more fine-grained picture of the meso-constructional network by testing for less schematic constructions. For example, the interaction *skôr_{ADVP_{C1}} - lepšie_{ADVP_{C2}}*, which turned out to be very significant (collostructional strength 74.02***, see Table 4 below), can be said to inherit from two more schematic meso-constructions: *skôr_{C1} - lepšie_{C2}* (collostructional strength 69.46***) and ADVP_{C1}-ADVP_{C2} (collostructional strength 10.44***). (We discuss this

³⁰ Note that Horsch called this variable “VERB PRESENCE” (2021, p. 214). To avoid confusion, we chose to use “DELETION” instead, in line with most other studies (e.g. Hoffmann 2019; Hoffmann et al. 2019, 2020; Horsch 2023a, 2023b, 2024).

³¹ As one anonymous reviewer pointed out, it would also be an option to examine lexically partially specific cases, for example, LEXICAL FILLER in C1 and FILLER TYPE in C2. We suggest incorporating such cases in future studies.

network consisting of meso-constructions of varying degrees of schematicity in more detail in section 6).

As Table 4 shows, a total of 12 significant LEXICAL FILLER:FILLER TYPE interactions could be detected. A glance at the observed frequency column indicates that indeed, several LEXICAL FILLER pairs might be suspected to have acted as prototypes for the ADVP_{C1}-ADVP_{C2} pair. However, when comparing their observed frequencies to the frequency of ADVP_{C1}-ADVP_{C2}, it becomes clear that, in the words of Hoffmann et al., the ADVP_{C1}-ADVP_{C2} pair “cannot be fully explained by lexical effects” (2019, p. 16). For example, the most frequent pair, *skôr*_ADVP_{C1}-*lepšie*_ADVP_{C2} (288 tokens), makes up just about 14% of the ADVP_{C1}-ADVP_{C2} pair (2,043 tokens). Note that the other two FILLER TYPE pairs (ADJP_{C1}-ADJP_{C2} and NP_{C1}-NP_{C2}) do not show up at all in Table 4 below. We therefore conclude that lexical effects play a negligible role and that all FILLER TYPE pairs that covarying collexeme analysis detected (see Section 5.2) may be considered meso-constructions in their own right.

Table 4: Covarying-collexeme analysis of LEXICAL FILLER:FILLER TYPE in C1 and C2 (expected frequency ≥ 5 , attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
<i>skôr</i> _ADVP	<i>lepšie</i> _ADVP	461	776	288	119.17	74.02	***
<i>skôr</i> _ADVP	<i>skôr</i> _ADVP	461	140	99	21.5	51.51	***
<i>d'alej</i> _ADVP	<i>viac</i> _ADVP	1132	342	228	128.96	30.1	***
<i>horšie</i> _ADVP	<i>lepšie</i> _ADVP	47	776	44	12.15	22.41	***
<i>d'alej</i> _ADVP	<i>menej</i> _ADVP	1132	262	167	98.8	18.44	***
<i>d'alej</i> _ADVP	<i>častejšie</i> _ADVP	1132	83	69	31.3	17.07	***
<i>d'alej</i> _ADVP	<i>ťažšie</i> _ADJP	1132	36	31	13.57	8.63	***
<i>d'alej</i> _ADVP	<i>horšie</i> _ADJP	1132	39	32	14.71	7.84	***
<i>menej</i> _ADVP	<i>lepšie</i> _ADVP	145	776	68	37.48	7.77	***
<i>viac</i> _ADVP	<i>viac</i> _ADVP	102	342	25	11.62	3.93	***
<i>menej</i> _ADVP	<i>menej</i> _ADVP	145	262	26	12.65	3.64	***
<i>d'alej</i> _ADVP	<i>horšie</i> _ADVP	1132	53	29	19.98	2.09	***

5.5. LEXICAL FILLER:DELETION INTERACTION

Next, we tested the LEXICAL FILLER:DELETION interaction. Table 5 presents the results, a total of 20 cross-clausal associations ranging from collostructional strengths of 84.96*** (*skôr*_TRUNCATED_{C1}-*lepšie*_TRUNCATED_{C2}) to 1.8* (*dlhšie*_FULL CLAUSE_{C1}-*lepšie*_FULL CLAUSE_{C2}).

Table 5: Covarying-collexeme analysis of LEXICAL FILLER:DELETION in C1 and C2 (expected frequency ≥ 5 , attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
<i>skôr</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	179	753	164	44.9	84.96	***
<i>skôr</i> _FULL_CLAUSE	<i>skôr</i> _FULL_CLAUSE	282	138	96	12.96	71.43	***
<i>dalej</i> _TRUNCATED	<i>menej</i> _TRUNCATED	1073	133	129	47.54	53.5	***
<i>dalej</i> _TRUNCATED	<i>viac</i> _TRUNCATED	1073	105	101	37.53	40.52	***
<i>horšie</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	44	753	42	11.04	22.86	***
<i>dalej</i> _TRUNCATED	<i>častejšie</i> _TRUNCATED	1073	48	48	17.16	21.75	***
<i>menej</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	40	753	37	10.03	18.87	***
<i>dalej</i> _TRUNCATED	<i>ťažšie</i> _TRUNCATED	1073	42	40	15.01	15.51	***
<i>viac</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	28	753	25	7.02	11.98	***
<i>dalej</i> _TRUNCATED	<i>horšie</i> _TRUNCATED	1073	78	56	27.88	10.25	***
<i>viac</i> _FULL_CLAUSE	<i>viac</i> _FULL_CLAUSE	74	237	24	5.84	9.26	***
<i>skôr</i> _FULL_CLAUSE	<i>lepšie</i> _TRUNCATED	282	753	109	70.74	7.08	***
<i>dlhšie</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	24	753	18	6.02	6.44	***
<i>vyššie</i> _TRUNCATED	<i>lepšie</i> _TRUNCATED	34	753	21	8.53	5.24	***
<i>dalej</i> _TRUNCATED	<i>viac</i> _FULL_CLAUSE	1073	237	112	84.71	4.01	***
<i>dalej</i> _TRUNCATED	<i>rýchlejšie</i> _TRUNCATED	1073	14	12	5	3.76	***
<i>skôr</i> _FULL_CLAUSE	<i>lepšie</i> _FULL_CLAUSE	282	88	19	8.27	3.44	***
<i>dlhšie</i> _FULL_CLAUSE	<i>viac</i> _FULL_CLAUSE	156	237	22	12.32	2.34	**
<i>dalej</i> _TRUNCATED	<i>častejšie</i> _FULL_CLAUSE	1073	36	20	12.87	1.94	*
<i>dlhšie</i> _FULL_CLAUSE	<i>menej</i> _FULL_CLAUSE	156	130	13	6.76	1.8	*

5.6. DELETION:FILLER TYPE INTERACTION

The third two-way interaction to be tested using covarying-collexeme analysis was DELETION:FILLER TYPE. As Table 6 below shows, 11 pairs emerged as statistically significant, ranging in collostructional strength from 127.83*** (FULL CLAUSE_ADVPC₁-FULL CLAUSE_ADVPC₂) to 1.83* (FULL CLAUSE_NPC₁-FULL CLAUSE_ADJP₂).

Table 6: Covarying-collexeme analysis of DELETION:FILLER TYPE in C1 and C2 (expected frequency ≥ 5 , attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
FULL_CLAUSE_ADVP	FULL_CLAUSE_ADVP	1079	1108	704	398.24	127.83	***
TRUNCATED_ADVP	TRUNCATED_ADVP	1538	1174	861	601.47	85.72	***
TRUNCATED_ADVP	TRUNCATED_ADJP	1538	344	290	176.24	41.5	***
TRUNCATED_ADJP	TRUNCATED_ADJP	89	344	40	10.2	15.28	***
FULL_CLAUSE_ADJP	FULL_CLAUSE_ADJP	121	180	30	7.26	11.36	***
FULL_CLAUSE_ADVP	FULL_CLAUSE_ADJP	1079	180	107	64.7	10.5	***
TRUNCATED_ADVP	TRUNCATED_NP	1538	101	77	51.74	6.86	***
FULL_CLAUSE_ADJP	FULL_CLAUSE_ADVP	121	1108	63	44.66	3.43	***

FULL_CLAUSE_NP	FULL_CLAUSE_ADVP	88	1108	47	32.48	3	***
FULL_CLAUSE_ADVP	FULL_CLAUSE_NP	1079	93	48	33.43	2.92	**
FULL_CLAUSE_NP	FULL_CLAUSE_ADJP	88	180	11	5.28	1.83	*

5.7. DELETION:FILLER TYPE:LEXICAL FILLER INTERACTION

Finally, the three-way interaction DELETION:FILLER TYPE:LEXICAL FILLER was tested. As Table 7 shows, 20 pairs emerge as statistically significant. These range in collostructional strength from 90.36*** (TRUNCATED_ADVP_škôr_{C1}-TRUNCATED_ADVP_lepšie_{C2}) to 1.57* (FULL_CLAUSE_ADVP_dlhšie_{C1}-FULL_CLAUSE_ADVP_menej_{C2}).

Table 7: Covarying-collexeme analysis of DELETION:FILLER TYPE:LEXICAL FILLER in C1 and C2 (expected frequency ≥5, attraction only)

C1	C2	Freq. C1	Freq. C2	Obs. C1C2	Exp. C1C2	Coll. str.	Sign.
TRUNCATED_ADVP_škôr	TRUNCATED_ADVP_lepšie	179	703	164	41.92	90.36	***
FULL_CLAUSE_ADVP_škôr	FULL_CLAUSE_ADVP_škôr	282	138	96	12.96	71.43	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADVP_menej	1072	133	129	47.49	53.56	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADVP_viac	1072	105	101	37.49	40.56	***
TRUNCATED_ADVP_horšie	TRUNCATED_ADVP_lepšie	43	703	42	10.07	25.37	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADVP_častejšie	1072	47	47	16.78	21.31	***
TRUNCATED_ADVP_menej	TRUNCATED_ADVP_lepšie	40	703	36	9.37	18.47	***
TRUNCATED_ADVP_viac	TRUNCATED_ADVP_lepšie	28	703	25	6.56	12.71	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADJP_ťažšie	1072	28	27	10	10.9	***
FULL_CLAUSE_ADVP_viac	FULL_CLAUSE_ADVP_viac	74	237	24	5.84	9.26	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADJP_horšie	1072	35	30	12.5	8.92	***
FULL_CLAUSE_ADVP_škôr	TRUNCATED_ADVP_lepšie	282	703	108	66.04	8.57	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADVP_ťažšie	1072	14	13	5	4.86	***
TRUNCATED_ADVP_dalej	FULL_CLAUSE_ADVP_viac	1072	237	112	84.63	4.03	***
TRUNCATED_ADVP_dalej	TRUNCATED_ADVP_horšie	1072	43	26	15.36	3.12	***
TRUNCATED_ADVP_vyššie	TRUNCATED_ADVP_lepšie	27	703	14	6.32	2.93	**
FULL_CLAUSE_ADVP_dlhšie	FULL_CLAUSE_ADVP_viac	151	237	21	11.92	2.18	**
TRUNCATED_ADVP_dalej	FULL_CLAUSE_ADVP_častejšie	1072	36	20	12.86	1.95	*
FULL_CLAUSE_ADVP_škôr	FULL_CLAUSE_ADVP_lepšie	282	73	13	6.86	1.78	*
FULL_CLAUSE_ADVP_dlhšie	FULL_CLAUSE_ADVP_menej	151	129	12	6.49	1.57	*

6. RESULTS AND DISCUSSION

Using covarying-collexeme analysis, our corpus study of the Slovak CC construction has revealed a total of 80 statistically significant associations across C1 and C2. Based on this, we argue that these cross-clausal associations can be considered to “occur with sufficient frequency” (Goldberg 2006, p. 5) to be regarded as “conventionalized form-meaning pairings” (Hoffmann 2019, p. 6). Following the tenets of CxG, we assume these meso-constructions of varying degrees of

schematicity to form interconnected nodes of an elaborate network of linguistic knowledge (see Section 3) – in the words of Langacker, a “structured inventory of conventional linguistic units” (2008, p. 222). For example, less schematic meso-constructions, e.g. $\text{TRUNCATED_ADV}_{C_1}\text{-TRUNCATED_ADV}_{C_2}$ (see Section 5.6) **inherit** from more schematic ones (in this case, $\text{ADV}_{C_1}\text{-ADV}_{C_2}$ (Section 5.2) and $\text{TRUNCATED}_{C_1}\text{-TRUNCATED}_{C_2}$ (Section 5.3)). In turn, they **license** even less schematic meso-constructions, e.g. $\text{TRUNCATED_ADV}_{C_1}\text{-TRUNCATED_ADV}_{C_2}$ (Section 5.7). This is illustrated in Figure 3 below:

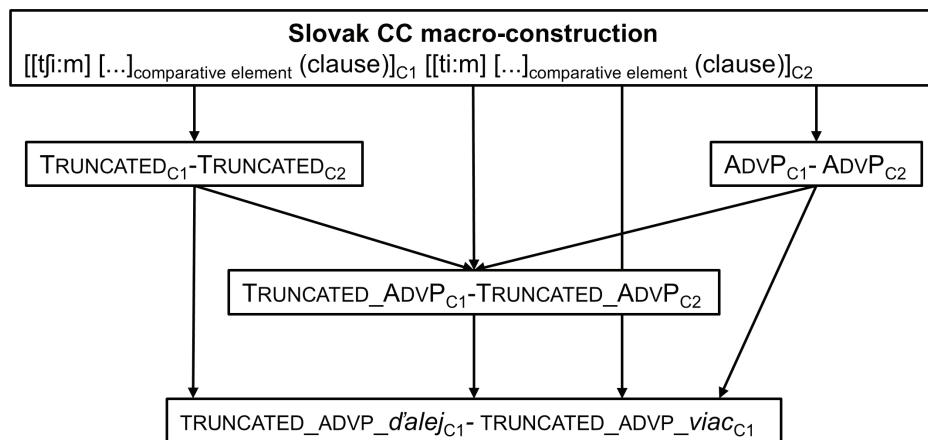


Figure 3: Excerpt of the Slovak CC network based on corpus study results (cf. Sections 5.1 – 5.7)

Note that as Figure 3 shows, any meso-construction can inherit from *and* simultaneously license multiple other meso-constructions. Thus, the least schematic meso-construction $\text{TRUNCATED_ADV}_{C_1}\text{-TRUNCATED_ADV}_{C_2}$ at the bottom of Figure 3 inherits from all other meso-constructions as well as the macro-construction.

On a final note, most of the meso-constructions (cf. Sections 5.2 – 5.7) are symmetric in nature, i.e., C_1 formally mirrors C_2 , and vice versa. For example, the only FILLER TYPE associations that emerged as statistically significant were $\text{NP}_{C_1}\text{-NP}_{C_2}$, $\text{AdvP}_{C_1}\text{-AdvP}_{C_2}$ and $\text{AdjP}_{C_1}\text{-AdjP}_{C_2}$ (section 5.2); the only DELETION associations to do so were $\text{FULL_CLAUSE}_{C_1}\text{-FULL_CLAUSE}_{C_2}$ and $\text{TRUNCATED}_{C_1}\text{-TRUNCATED}_{C_2}$ (Section 5.3). This also concerns the interactions that were tested. For example, of the five most significant DELETION:FILLER TYPE interactions, only one ($\text{TRUNCATED_ADV}_{C_1}\text{-TRUNCATED_ADV}_{C_2}$) was not symmetric (Section 5.6).

These results reflect findings of previous corpus studies on Slovak (Horsch 2021, 2023a) and other languages (Hoffmann et al. 2019; Hoffmann et al. 2020;

Horsch 2023b (English) and Horsch 2024 (Spanish)). The strong preference for symmetric form regarding cross-clausal associations has previously been attributed to the cognitive principle of iconicity (Bybee 2012), which posits that “the meaning of constructions is encoded in their form” (Horsch 2021, p. 219). That is, the **symmetric**, parallel change-over-time semantics³² (see Section 3) appear to influence speakers’ choice of FILLER TYPES and DELETION patterns.

Of course, in this context it must be noted that the CC also encodes **asymmetric** semantics (as discussed in Section 3). That is, we can expect a competition between formal symmetry and asymmetry. This is evident, as Horsch has previously argued, from the form of the phonologically/lexically fixed clause-initial elements *čím... čím...* that, unlike in English, clearly “differ from each other in form” (Horsch 2021, p. 197). For a more detailed discussion of the implications of these results – that is, cross-clausal associations, meso-constructions and the formal encoding of symmetric and asymmetric semantics – we would like to refer the reader to two recent corpus investigations of the Slovak CC (Horsch 2021; 2023a).

7. CONCLUSION AND ROADMAP

As our corpus study has demonstrated, the mental constructional network underlying the Slovak CC construction is, to return to Traugott and Trousdale’s quote, “baroque, involving massive redundancy and vastly rich detail” (2013, p. 53). That is, many empirically attested cross-clausal associations that, according to the basic tenets of Construction Grammar, are conventionalized form-meaning pairings – meso-constructions that are formally related to each other. Each meso-construction may license and inherit from a multitude of other meso-constructions, of which the corpus study has identified 80 in total. This provides us with a small glimpse of the Slovak construct-i-con, i.e., “[t]he totality of our knowledge of language” (Goldberg 2003, p. 223).

In the following, we intend to lay out a **roadmap** for further CxG-based research on Slovak. The ultimate goal is a Slovak construct-i-con, modeled after similar projects for other languages. To achieve this, we suggest the following short-, medium- and long-term objectives.

In the short term, we would like to encourage fellow researchers to start exploring more individual Slovak constructions. We welcome any studies applying our methodology for investigating entrenchment in constructional slots, i.e., by

³² Recall that these symmetric semantics, as discussed in section 3, are monotonic in nature, that is, “the meaning of each individual clause denotes an increase or decrease over time” (Hoffmann et al. 2019, p. 26). That is, each clause separately encodes a monotonic (but not necessarily linear) change over the same time period, which is then reflected in symmetric structures (principle of iconicity). This aspect of the CC semantics does not cover the conceptual relationship between the two events, which is causal in nature and is covered by the asymmetric cause-effect meaning.

using covarying-collexeme analysis. In this regard, we specifically call for studies of all kinds of syntactic patterns. We have shown how this may be done by investigating the linguistic variables FILLER TYPE and DELETION (see Sections 4 and 5). Any construction, no matter whether fully substantive (e.g. collocations), partly substantive and partly schematic (e.g. the Comparative Correlative) or fully schematic (e.g. the ditransitive construction), is suitable for this kind of investigation. The same holds for what in traditional terms is called the ‘core’ and the ‘periphery’; both are worthy of our attention. This is fully in line with the CxG approach; as noted by Goldberg, “the constructionist approach does not assume that language should be divided up into ‘core’ grammar and the to-be-ignored ‘periphery’” (2003, p. 223). Rather, CxG distinguishes itself by its “holistic framework: no one level of grammar is autonomous, or ‘core’” (Traugott – Trousdale 2013, p. 3).

The more Slovak constructions that are ‘mapped out’ in this way, the closer we will come to the ultimate goal of a Slovak construct-i-con (see below). In this regard, there is much work to be done: The Swedish construct-i-con, for example, has 441 entries^[3] and the Russian construct-i-con comprises over 3600 constructions^[4]. However, we believe there is great potential, especially because the data on which such investigations are based – that is, corpus data – is readily available in Slovakia. The Slovak National Corpus department at the Slovak Academy of Sciences provides access to a wealth of corpora that cover many different registers, periods and even dialects of Slovak^[5]. This will also address a more general issue in CxG-based research: As Fried has noted, “syntactic patterning [...] has been generally left just about untouched in Slavic linguistics” (2017, p. 241).

Of course, “[c]orpus data can [...] be said to offer one, but obviously not the only window onto the entrenchment of constructions” (Hoffmann et al. 2019, p. 10). In fact, as Horsch has noted, “even the largest corpora have an inherent flaw: As language *samples* they are by definition *finite*. However, [language] is by definition *infinite*” (2023c, p. 60, emphasis Horsch). This flaw, referred to as “negative data problem” (Hoffmann 2011, p. 1), cannot be resolved with ever larger corpora, since they will always be, by definition, finite samples of language (Horsch 2023c, p. 61). There is also the “positive data problem”, which Hoffmann summarizes as follows: “just because a construction appears in a corpus it does not automatically follow that it is grammatical” (2011, p. 1). Put more succinctly, absence of evidence is not evidence of absence, and vice versa.

This is why we recommend using a corroborative approach that employs other types of data to complement corpus studies. The importance of such “complementary” approaches (McEnery – Wilson 2001, p. 16) has been acknowledged before. Szmrecsányi et al., for example, specifically suggest “spot-check[ing] the cognitive robustness of [...] corpus-derived probabilities via rating experiments” (2016,

p. 134). We believe that such rating experiments, if carried out following good scientific practice, are highly suitable for complementing corpus data. As noted by Hoffmann, “several studies have [...] shown that the results from experimental and corpus-based studies often converge” (2019, p. 18). We therefore explicitly recommend psycholinguistic experimental studies to corroborate corpus-based claims about the entrenchment of constructions (as suggested by Hoffmann et al. 2019, p. 10; cf. also Horsch (2023c)).

Given that CxG-based investigations of Slovak are still relatively uncommon, we encourage a contrastive approach that uses English as a basis, because it is “the most widely analyzed language” in CxG (Boas 2010, p. 3). This will also address the “striking absence of cross-linguistic generalizations” in CxG (Boas 2010, p. 2) and contribute to CxG’s “aspirations toward universal applicability” (Fried 2017, p. 249).³³ We therefore encourage researchers to present their studies at domestic and international conferences alike.

In the medium term, we recommend identifying and describing interactions between the individual constructions that will have been explored at this point. Again, this will be an important step towards the ultimate goal of mapping the Slovak construct-i-con (see below) in its entirety. We also call for a full CxG-based syntactic analysis of an entire Slovak sentence to demonstrate the feasibility of this approach, following Ziem et al.’s example (2014), who did the same for a German sentence. In this context, we would like to encourage colleagues from other theoretical backgrounds to contribute by analyzing the same sentence against their specific theoretical background – again, following an example from German (cf. Hagemann – Staffeldt 2014).

At this stage, researchers should also visualize their results to illustrate meso-constructional networks, following Hoffmann et al. (2019) and Horsch (2023a, 2023b). For example, an expanded version of Figure 2 in Section 6 that incorporates *all* 80 meso-constructions that we have identified in Section 5.

Finally, **in the long term**, we call for creating a construct-i-con, following the methodology that has been employed for other languages, such as English (Fillmore et al. 2012), Swedish (Lyngfeldt 2018), Russian (Janda et al. 2018), and other languages. Creating a construct-i-con is a large and complicated task, both methodologically and financially. Diessel (2023) discusses some of the key challenges that researchers face when compiling a construct-i-con, while Boas (2025b) compares different empirical methodologies for creating construction

³³ Of course, any other language can be taken as a basis for such contrastive investigations, too. The reason why we are suggesting to start with English is because at this point, constructional research on English is the most prominent and there are the greatest number of publications couched in constructional terms available.

entries. At the heart of the matter is the open question of how many constructions there are in a given language, how many different types of constructions there are in a language, and how construction entries are organized in a construct-i-con, both internally (what types of information should be stored in a construction entry?) and externally (how are construction entries organized vis-a-vis each other?). When compiling a construct-i-con for Slovak, it is also not clear how many of the organizational principles of construct-i-cons of other languages can be applied to Slovak or not. Once there is a significant number of construction entries stored in the construct-i-con, we then expect it to be possible to conduct systematic investigations of how different types of construction entries interact in order to license full sentences. This interaction of different constructions, i.e. combining them, is then what constructional researchers would call the ‘grammar’ part of CxG.

In summary, what we have shown in this case study is that Slovak lends itself very well to CxG-based studies. Our detailed corpus study has demonstrated the feasibility of a CxG-based analysis of syntactic patterns in Slovak based on corpus data. It has also shown that CxG is an empirically falsifiable theory. While corpus data play a central role in this regard, as we have argued above, it is desirable to incorporate other types of data due to the shortcomings of corpora. We expect future constructional research on Slovak to contribute insight into the nature of the Slovak construct-i-con as well as into how construction entries are combined to license complete sentences (the ‘grammar part’). We would also like to suggest that the data and results obtained by such constructional research in the future will not only be of interest to constructional researchers, but also to the broader discipline of linguistics, including other theoretical frameworks that might benefit from constructional insights. Finally, given how constructional insights have been applied to the teaching and learning of foreign languages (see, e.g. Herbst 2016 and Boas 2022), we also fully expect for constructional insights to be applied to the teaching and learning of Slovak.

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Konstrukčnogramatické výskumy slovenčiny, na Slovensku: prípadová štúdia a cestovná mapa

Resumé

Štúdia sa venuje možnostiam priekopníckeho uplatnenia konštrukčnej gramatiky (CxG) na slovenčinu, jazyk, ktorý je vo výskume konštrukcionizmu vo veľkej miere nedostatočne zastúpený. Po komplexnom úvode do CxG a jej teoretických základov predstavujeme prípadovú štúdiu slovenskej komparatívnej korelatívnej (CC) konštrukcie (napr. *Čím menej rečí tu bude, tým skôr zaspím*). V kontexte rozsiahlej korpusovej štúdie založenej na viac ako 3500 tokenoch zo slovenského korpusu Web 2011 demonštrujeme, ako možno pri výskume aplikovať konštrukcionistickú metodológiu, pričom využívame analýzu kovariantných kolokácií na odhalenie štatisticky významných vzorcov jestvujúcich v rámci CC. Naše zistenia odhaľujú zložitú sieť prepojených mezokonštrukcií, ktoré vykazujú vysokú produktivitu a silnú tendenciu k formálnej symetrii. Prípadová štúdia tak poskytuje robustnú empirickú podporu pre používateľsky založený, sieťovo orientovaný pohľad na slovenskú gramatiku, ktorý je v súlade s predchádzajúcimi výskumami anglických a španielskych CC konštrukcií. Naša štúdia nielen obohacuje chápanie slovenskej CC konštrukcie, ale je významným argumentačne podloženým príspevkom ilustrujúcim hodnotu a realizovateľnosť CxG prístupov v „menších“ slovanských jazykoch. V závere štúdie bližšie opisujeme možnosti budúceho výskumu slovenského jazyka založeného na CxG prístupoch. Jeho súčasťou by mohli byť práce komplexného charakteru zamerané na budovanie tzv. construct-i-conu, v rámci ktorého sa „zmapujú“ konštrukčné siete slovenského jazyka, pričom zároveň môže dôjsť k integrácii komplementárnych metodológií uplatnených pri ich realizácii. Výsledky tejto štúdie sú teoreticky aj metodologicky významným príspevkom k rozvíjaniu konštrukčnogramatickej lingvistiky a môžu poslúžiť ako vzor pre ďalšie analogicky založené štúdie v slovenčine a v iných málo preskúmaných jazykoch.

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DEANTHROPONYMIC ADJECTIVES WITH THE SUFFIX *-OVSKÝ* IN THE CONTEXT OF COGNITIVE LINGUISTICS

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KESSELOVÁ, J. (2025): Deanthroponymic Adjectives with the Suffix *-ovský* in the Context of Cognitive Linguistics. In: *Slovenská reč*, 90/2, 51 – 73.

Abstract: The subject of the research is deanthroponymic adjectives with the suffix *-ovský* (*baťovský* ‘Baťa-esque’) in Slovak journalistic texts. The research material is a subcorpus of journalistic texts prim-10.0-public-inf with a size of almost 932 million words. The study presents the following research results: (a) the distribution of deanthroponymic adjectives depending on the sphere of action of the person whose name is the motivating unit of the adjective, (b) semantic specifications of deanthroponymic adjectives. The socio-cultural meanings of adjectives are interpreted in the categories of cognitive linguistics (conceptual metaphor and metonymy, categorization, simulation, conceptual integration, anthropocentrism, contextual competence).

Keywords: deanthroponymic adjectives, anthroponymic motivating unit, textual function, journalistic text, cognitive operations, Slovak language.

Highlights:

- The subject of the research is deanthroponymic adjectives ending with the suffix *-ovský* in Slovak journalistic texts.
- The research material is the prim-10.0-public-inf subcorpus of journalistic texts.
- The result is the understanding of (a) the spheres from which the personal motivating units of the adjectives come preferentially, (b) the socio-cultural meanings of the studied adjectives.
- Complex meanings of adjectives are interpreted as the result of the interaction of several cognitive operations.

1. INTRODUCTION

The study focuses on the research of adjectives, in the words of J. R. Taylor (1992, pp. 1 – 35), a long-term problem of cognitive grammar. The subject of the research is deanthroponymic adjectives ending in *-ovský*, e.g. *Baťa – baťovský* ‘Baťa – Baťa-esque’¹. From the formal point of view, the only restriction on the

¹ The translation of deanthroponymic adjectives (DAs) with the suffix *-ovský* into English follows these rules. First, the form captured in explanatory dictionaries (*aristotelovský* ‘Aristotelian’, *byronovský* ‘Byronic’, *tizianovský* ‘Titian-esque’, *ježišovský* ‘Jesus-like’) is respected. If DA is not captured in

formation of adjectives of this type is registered if the motivating proper noun itself has the form of the adjective with the suffix *-ovský*. Suffix reduplication and cacophony may account for the use of the proper name *Majakovský* ‘Majakovskian’, which breaks out of the range of deanthroponymic adjectives in the following example (*byronovská vzbura* ‘Byronic rebellion’, *apollinairovské nekonečno* ‘Apollinairean infinity’, but *Majakovského*² *spor* ‘Majakovský’s dispute’). From the examples above, it can be concluded that the motivating unit of adjectives is the name of a well-known personality functioning as a cultural code. Through the deanthroponymic adjective, it is repeated in the text, updated and stored in the memory of the readers, while its (de)coding presupposes encyclopaedic knowledge on the part of both the creator and the receiver of the text. Some linguists assume that denominal adjectives have a purely transpositional function; converting a noun into an adjective, in many cases, they are simply adjectival forms of noun concepts. This characteristic corresponds to Gaeta’s formulation (2017, p. 330): “In fact, also denominal adjectives might be viewed as unprototypical as for instance in the case of deanthroponymic adjectives like *Chomskian*, *Dresslerian*, etc., which come close to true genitives.”³ In the understanding of deanthroponymic adjectives, the approach of H. J. Giegerich is more appropriate as he understands denominal adjectives as associative adjectives (2005, p. 579): “It would appear that the morphosyntax provides the basic relationship of ‘associated with’ in these cases; the specifics – for example, that a musical clock makes music while an electrical clock doesn’t make electricity but is powered by it – constitute encyclopaedic knowledge”. According to the author of this article, encyclopaedic knowledge⁴ in adjectives derived from appellatives is the result of the normal derivation of the unexpressed member from an explicit noun-object conjunction (the *makes* component in the case of *musical clock*, the *powered* component in the case of *electrical clock*).

dictionaries, the suffix is chosen according to frequency and the form established and preferred in the usage (*corbusierovský* ‘Corbusier-esque’, *westwoodovský* ‘Westwoodian’). DAs that are not captured by dictionaries or not evidenced in usage are translated with the suffix *-esque* (*baťovský* ‘Baťa-esque’). This suffix is usually used for new lexical units. It is added to the base form of the possessive with a hyphen (*studenkovský* ‘Studenková-esque’, *vančurovský* ‘Vančura-esque’).

² The adjective *brunovskovský* ‘Brunovský’s’ with the motivating proper noun *Brunovský* shows that derivational limits are not absolute even in this case.

³ An overview of views of this type is given by F. Rainer (2013, pp. 12 – 13), in Slovak linguistics G. Horák (1966, pp. 196 – 232), M. Nábělková (1993, 1999, pp. 43 – 58), within eponyms K. S. Pang (2010, pp. 1321 – 1349), B. Y. Norman – A. M. Plotnikova (2017, pp. 84 – 96), M. Ološtiak (2018).

⁴ F. Rainer (2013, p. 15) reflects on conceptual knowledge: “The relational meaning that links the base noun of the adjective and the head noun of the noun phrase is considered as extra-linguistic in nature, intimately linked to the conceptual knowledge associated with the two nominal concepts in long-term memory and, occasionally, to the immediate context of the utterance.”

In deanthroponymic adjectives, encyclopaedic knowledge is broader.⁵ Connotations, associations, prejudices, stereotypes, as well as factual knowledge associated with the personality name enter the semantics of the adjective. The associative-connotative complex of the anthroponym is not lost in the adjective; on the contrary, it remains present in it and is further modified and specified in the adjective-substantive conjunction. The functioning of adjectives of this type is described by S. Vinogradova (2014, p. 74): “Neither should it be overlooked that the derivational character of the relative adjective enables it to refer back to the original word (and the original concept), to contain a signal, a hint to everything that is connected with the natural environment of this word, its notion, and the underlying reality.” There is no doubt that the production and understanding of phrases such as *kafkovský neobčan* ‘Kafka-esque non-citizen’, *ionescovský návrh* ‘Ionesco-esque proposition’, *kunderovská ľahkosť bytia* ‘Kundera-esque lightness of being’ are determined not only by encyclopaedic knowledge but also by subjective social and cultural experience with a certain sample of the world. This socio-cultural potential of the topic of the study enhances its compatibility with the theoretical framework of the cognitive paradigm as defined by D. Divjak, L. A. Janda and A. Kochańska in the introductory study of the collection *Cognitive Paths into the Slavic Domain* (2007, p. 4): “The theoretical framework of the cognitive paradigm has the potential to move research in the domain of Slavic languages a level up, where precise and detailed descriptions of the conceptual import of multiple linguistic structures can be offered, where numerous and diverse linguistic phenomena can be characterized in terms of a limited number of general well-attested cognitive mechanisms, where the workings of languages can not only be meticulously described, but also seen as motivated by things larger than language itself – by the general human cognitive make-up, by our biological, social, and cultural experience of the world.” In addition to socio-culturally⁶ contingent meanings, deanthroponymic adjectives provide a good opportunity to investigate such processes as anthropocentrism, conceptual metaphor and metonymy, categorization, conceptual integration, conceptual and imaginative approaches to meaning, including contextual competence. The above approaches intensify the study’s connection to the theoretical framework of cognitive linguistics.

⁵ According to M. Nowakowska (2004, pp. 118 – 122) the construction of the meaning of adjectives motivated by proper nouns (both personal and geographical) involves elements of a pragmatic and, above all, cultural nature, and therefore they can be constantly redefined in discourse; e.g. Polish *hollywoodzki* ‘(of) Hollywood’ could mean ‘accessible to the general public’, but also ‘who doesn’t keep his friendships, who limits his interpersonal relationships to work and profit’.

⁶ Within cognitive linguistics, cultural linguistics or cognitive ethnolinguistics is considered (Nebeská – Karlík 2017).

2. RESEARCH OBJECTIVES, RESEARCH SAMPLE AND METHOD

The subject of the research is deanthroponymic adjectives with the suffix *-ovský* in Slovak journalistic texts and focuses on answering these questions:

(1) What is the distribution of deanthroponymic adjectives depending on the sphere of activity of the person whose name is the motivating unit of the adjective?

(2) What are the semantic concretizations of deanthroponymic adjectives⁷ and how can the meanings of the studied adjectives be interpreted in the categories of cognitive linguistics?

The research material is a subcorpus of journalistic (informative) texts prim-10.0-public-inf with a size of 931,861,092 words.⁸ This subcorpus contains 365,617 adjectival lemmas. There are 9,834 adjectival lemmas with the suffix *-ovský*. Among them, a research sample of deanthroponymic adjectival lemmas with the suffix *-ovský* with the number of 1,866 (after merging orthographic variants into one lemma) were manually selected.⁹ Deanthroponymic adjectives with the suffix *-ovský* represent 0.5% of the total number of adjectival lemmas in the studied subcorpus.

To interpret the results, it is necessary to know not only the size but also the structure of the texts studied. Journalistic (informative) texts with adjectives are genre varied and include documentary genres, announcement genres, short epic genres, catchphrase genres, studies, reports, term papers, seminar papers, manuals, analytical genres, news genres, essays, work guides, reviews, articles, monographs, features, fiction genres, reflections, letters, radio transcripts, chronicles, memoirs, biographies, autobiographies, discussion pieces, addresses (political, occasional) and speeches.¹⁰

The size of the corpus and the genre diversity of the texts minimize the risk of results representing the individual way of using the studied adjectives in the texts of individuals, and maximize the intention to give a picture of the general tendencies of their functioning in journalistic texts in Slovak. Corpus data accommodates the claim that cognitive grammar “describes only phenomena that are attested in language and avoids abstract and purely theoretical structures” (Janda 2017).

⁷ Special attention is paid to deanthroponymic adjectives formed by prefixation, which is a part of confixation, and pure prefixation (3.2.4. Temporal semantics, 3.2.5 Deanthroponymic adjectives with a categorization function).

⁸ <https://korpus.sk/prim-10-0/>

⁹ Adjectives with the suffix *-ovský* attested in the subcorpus prim-10.0-public-inf also have non-anthroponymic proper nouns as motivating units: logonyms, toponyms, animal names, names of man-made objects.

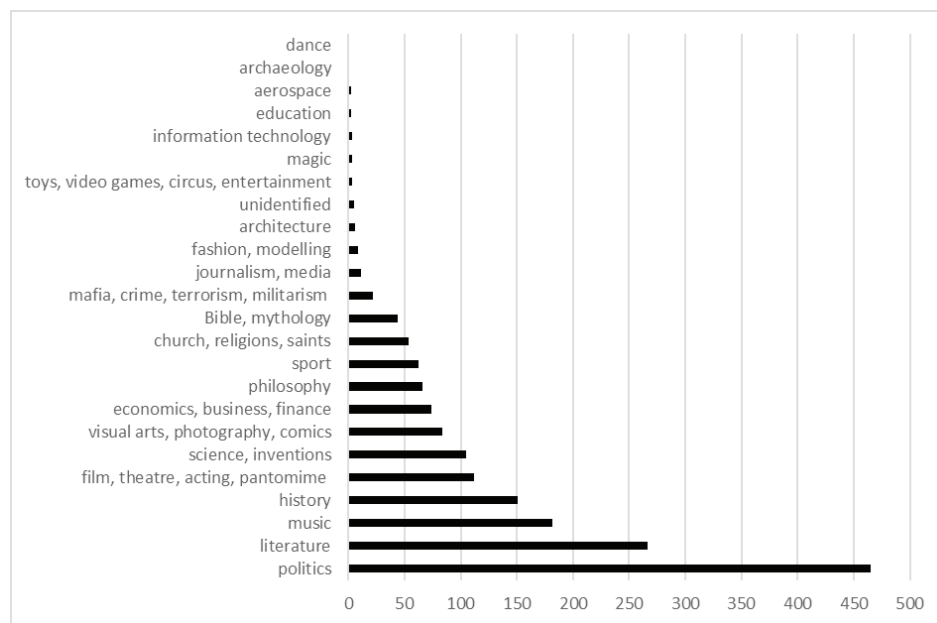
¹⁰ The above order of genres corresponds to the descending frequency distribution of adjectives according to relative frequency. The categorization of genres respects the style-genre annotation of the creators of the Slovak National Corpus (Šimková – Gajdošová 2020).

3. DATA ANALYSIS AND INTERPRETATION

3.1. DISTRIBUTION OF DEANTHROPONYMIC ADJECTIVES ACCORDING TO THE SPHERES OF ACTION OF A PERSON

Motivating units of deanthroponymic adjectives¹¹ are the names of people who represent a certain sphere of action in the present or in the past. The question arises about which spheres of human activity represent a richer source of motivating units of DAs and which spheres are less compatible with them. The frequency distribution of DAs depending on the sphere of a person's activity is given in Graph 1.

Graph 1: Frequency distribution of deantroponymic adjectives depending on the person's sphere of action



The central source of motivating units for DAs are the spheres of politics, literature, music, history, film – theatre – acting – pantomime, science – inventions. This type of adjectival lemma accounts for 75% of the research sample. Deanthroponymic adjectives from the sphere of politics are dominant, representing individual politicians (*trumpovský* ‘Trumpian’, *fidelcastrovský* ‘Fidel Castro-esque’), relationships between politicians (*ficovsko-orbánovský* ‘Fico-Orban-esque’),

¹¹ Furthermore, the abbreviations DA (*deanthroponymic adjective* in singular) and DAs (*deanthroponymic adjectives* in plural) are used.

mizikovsko-mazurekovský ‘Mizík-Mazurek-esque’), or a person whose life story has been politicized (*hedvigovský* ‘Hedviga-esque’¹²).

The preference for proper names from the political sphere stems from the functions of a journalistic text: to be a link between the representatives of political power and citizens, to inform the addressees about political attitudes, decisions and their consequences, to orient them in the socio-political events and to shape public opinion. These functions stimulate the appearance of names of persons who are political power holders, actors in the political arena or affected by these events. In the art sphere, the adjectives studied are mainly applied in texts about literature (*pišt'ankovský* ‘Pištánek-like’, *pratchettovský* ‘Pratchett-like’), music (*predmozartovský* ‘pre-Mozartian’), *michaelojacksonovský* ‘Michael Jackson-esque’), film (*piussiovský* ‘Piussi-esque’, *woodyallenovský* ‘Woody Allen-esque’), theatre and pantomime (*borodáčovský* ‘Borodáč-like’, *najgoldoniovskejší* ‘the most Goldoni-like’), acting (*kronerovský* ‘Kroner-esque’, *studenkovský* ‘Studenková-like’), while in addition to the names of authors of works and artists, the names of characters from works of art are also a motivating unit (*švejkovský* ‘Švejk-like’, *pinocchioovský* ‘Pinocchio-esque’). Although topicality is typical for journalistic texts, the frequency centre also includes adjectives whose motivating units are the names of characters from Slovak and world history (*jánošíkovský* ‘Jánošík-like’, *bourbonovský* ‘Bourbonic’). They are mainly used when a current event is interpreted by reference to a past experience.

The middle part consists of adjectives whose personal motivating units represent the fine arts (*galandovský* ‘Galanda-esque’, *tizianovský* ‘Titian-esque’) and sports (*saganovský* ‘Sagan-like’, *federerovský* ‘Federer-like’), the fields of economics, business and finance (*pseudokeynesovský* ‘Pseudo-Keynesian’, *baťovský* ‘Baťa-esque’), as well as philosophy (*aristotelovský* ‘Aristotelian’, *najschopenhauerovskejší* ‘the most Schopenhauerian’), church and religion (*ježišovský* ‘Jesus-like’, *harekrishnovský* ‘Hare Krishna-esque’). The field of creative expressions is supplemented by destructive phenomena such as crime, mafia, terrorism and militarism. The presence of destructiveness can be explained by the reader’s interest in negatively acting phenomena (*chapmanovský* ‘Chapmanian’, *breivikovský* ‘Breivikian’). In terms of frequency distribution, mid-band adjectival lemmas account for 22% of the total number of adjectives in the sample.

Peripherally, adjectives whose personal motivating units are related to journalism and the media (*pulitzerovský* ‘Pulitzerian’), fashion (*westwoodovský* ‘Westwoodian’), architecture (*corbusiérovský* ‘Corbusier-esque’), archaeology (*schliemanovský*

¹² The motivating unit of the adjective *hedvigovský* ‘Hedviga-esque’ is the first name of Hedviga Malinová, a Slovak citizen of Hungarian nationality who was physically assaulted due to her nationality. This event became part of the media-political discourse through the statements of politicians and the adjective *hedvigovský* refers not only to the event associated with H. Malinová, but also to other events interpreted in a similar way.

‘Schliemannian’), information technology (*sinclairovský* ‘Sinclairian’), astronautics (*postarmstrongovský* ‘post-Armstrongian’), and games and entertainment (*barbieovský* ‘Barbie-like’) are all used in journalistic texts. In addition to spheres with a certain degree of exclusivity, the periphery also includes adjectives motivated by the names of persons in the education field. The probability of communicative realization of adjectives from this sphere increases in a journalistic text if a doubt about the legality of a procedure is associated with a personal motivating unit or if a representative from the sphere of education is also realized in the sphere of politics. Finally, part of the periphery includes adjectives whose identification can be disputed. The indeterminacy of identification increases if the motivating surname is frequent, is not specified in the text by a given name or at least its initial, and the noun that the adjective is supposed to specify is vague and evokes subjective connotations. For example, the text on R. Ferienc’s exhibition in Venice, presenting books, artworks and various objects related to Venice, speaks of a *Byrne-esque* atmosphere. The bearers of the surname *Byrne* are persons from different spheres, and the text does not provide an orientator by which the addressee could reliably relate the adjective to an individual and specify the syntagm *byrneovská atmosféra* ‘Byrne-esque atmosphere’. The vagueness of identification may, of course, also be a consequence of the subjectivity of understanding and lack of encyclopaedic context on the recipient’s part. In terms of frequency distribution, the adjectival lemmas of the peripheral band represent approximately 3% of the total number of adjectives in the research sample.

The first part of the study introduced DAs in terms of personal motivating units from different spheres of human activities and created an idea of the socio-cultural nature of the studied data.

3.2. SEMANTICS OF DEANTHROPONYMIC ADJECTIVES WITH THE SUFFIX *-OVSKÝ* IN A COGNITIVE LINGUISTIC FRAMEWORK

The need to further investigate the textual functioning and semantics of DAs with the suffix *-ovský* and to interpret the results in a cognitive linguistic framework arose from the study of the adjective competition relations.

3.2.1. The semantics of typicality

Among the most widespread textual concretizations is the meaning of typicality¹³ in the sense of ‘characteristic of the person whose name is the motivating unit of the adjective’ (1).

¹³ The shift in semantics from pure relational meaning to the meaning of typicality is sometimes indicated by quotation marks. The relation of the adjective to the proper name is so vivid in some authors that they retain capitalization in adjectives (*tradičné Shawovské prednosti* ‘traditional Shawian preference’). In the documents the form given in the corpus texts is followed.

- (1) *Dan Bárta přidáva spřestření k svojmu „danbártovskému” obrazu.*
 ‘Dan Bárta adds embellishments to his “**Dan Bárta-esque**” image’.

In the semantics of the adjective *danbártovský* ‘Dan Bárta-esque’ two components can be distinguished:

(a) objective, consisting in the identification of the person whose name is at the basis of the adjective (referring to Dan Bárta, a contemporary Czech singer);

(b) subjective, which is the result of semantic concretization of the adjective due to its association with a noun. The phrase *danbártovský obraz* ‘Dan Bárta-esque image’, if not specified by the author of the text, may be associated in the addressee’s mind with some of the qualities such as singing technique, specific voice, recognizable kinetics and gesticulation, cooperation with other expressive musicians, but also other subjectively preferred qualities, or a combination of them. Meaning specification is individually determined by the extent of the addressee’s knowledge and the updating of their encyclopaedic and experiential context, which leads to subjective understanding.¹⁴

Explicit clues for the actualization of the meaning of ‘typical of person X’ tend to be the attributes *peculiar, traditional, typical, habitual, specific, characteristic, the same* as in example (2). A different comprehension strategy may result from inference. The utterance (3) is preceded by the context *We have tried to preserve Doyle’s style*, so the syntagm *Doyle’s world* can be decoded as ‘typical of A. C. Doyle’s world’. The concrete idea of a Doylean world is already a subjective blend of the reader’s associations, knowledge, cultural connotations and imagination.

- (2) *[...] je to vlastně tá istá brežínovská robustná úprimnosť.*
 ‘[...] it’s actually the same **Brezina-like** robust honesty.’
 (3) *Hra osloví [...] nostalgiou doylovského sveta.*
 ‘The play appeals [...] with the nostalgia of **Doyle-like** world.’

Shifting the purely relational meaning of an adjective to the meaning of typicality does not affect the operability of adjectives, specifically the ability to compare and negate. This is a natural consequence of the fact that the attributes of typicality, peculiarity and particularity can also be judged on a scale. On one side of the scale there is negation (*necruisovský Tom Cruise* ‘a non-Cruise-like Tom Cruise’),

¹⁴ H. H. Clark (1983, pp. 301 – 305) considers DAs as one type of contextual expressions. “Adjectives derived from nouns, like *gamey, impish, and athletic*, from *game, imp, and athlete*, are common in English. Although most such adjectives are idiomatic and have conventional senses, many of them can be innovative, with meanings dependent on the time, place, and circumstances of the utterance. *Churchillian*, for example, might mean ‘with a face like Churchill’, ‘smoking a cigar like Churchill’, ‘with a speaking style like Churchill’, or any number of other things. In principle, the list is unlimited; in practice, it is limited by what the speaker can assume the addressees know about Churchill and will be able to see that he is alluding to.” I thank the reviewer for the link to the study.

on the other side there is superlative (*najbondovskejši Bond* ‘the most Bond-esque Bond’) and a specific syntactic construction of the type of *viac goetheovský ako Goethe* ‘more Goetheian than Goethe’.

3.2.2. Similarity semantics

The second textual concretization is the semantics of similarity in the sense of ‘phenomenon Y is similar to phenomenon X represented by the person whose name is the motivating unit of the adjective’. The essential difference from the previous semantics of typicality is the double relationality of the adjective with the suffix *-ovský*. The first level is the purely relational meaning of the adjective resulting from its relation to the motivating proper noun; the second level is the relational meaning of the adjective to another phenomenon, which is constructed in the utterance as if it were equivalent to the phenomenon referred to by the relational adjective. In statement (4), these two levels are represented by the *Chagall – Fulla* relations. Both the production and the perception of the double relationality is possible based on the knowledge and experience of the creator/receiver of the text and based on the ability to perceive the similarity relations between X and Y phenomena. Adjectives with the suffix *-ovský* direct the interpretation of phenomenon Y in such a way that they actualize knowledge and experience of phenomenon X in the mental equipment of the recipient.

- (4) *Fulla napĺňa svoje obrazy **chagallovskou** voľnosťou predmetov.*
‘Fulla fills his paintings with a **Chagall-like** freedom of objects.’

The similarity to some aspect of person X is determined by the sphere the person represents. In the example (5), this means that ‘Mercier uses a similar method of representing the world as Eco’. In literature, philosophy, and science, the similarity is ‘X thinks in that sense, in that spirit, from that point of view as Y’; in music, ‘X creates, interprets a musical work as Y’; in politics, ‘X thinks, acts, behaves, speaks, decides as Y’; in physical appearance, ‘X looks like Y’; and so on. In a similarity relation, two phenomena belonging to the same sphere, to close spheres, but also to quite different spheres, including the similarity between the real and the fictional sphere, can be in a similarity relation. In example (5), the methods of writing literature are correlated, with the author of the statement explicitly defining the similarity himself after the colon.

- (5) *P. Mercier sa teda vydal na „**ecovskú**” cestu: [...]*
‘P. Mercier thus embarked on an “**Eco-like**” journey: [...]

Exemplification (6) brings two phenomena from close spheres (an art installation and a painting) into a similarity relationship, leaving the perception of similarity to the

percipient.¹⁵ A varied network of similitive relations also emerges across different spheres. The authors of statements (7, 8) find similarities between visual art on the one hand and poetry/prose on the other. The similarity relationship is applied reciprocally: in exemplification (7), painting serves as a source domain to clarify the nature of poetry; in exemplification (8), prose is a source domain to characterize the painter's artistic method.

- (6) *Inštalácia P. Kalmusa je **malevičovskou** reakciou na priestor.*
'Installation of P. Kalmus is a **Malevič-like** reaction to the space.'
- (7) *Uvažovanie o neviditeľnom sa u poetky zblízuje so **cézannovským** zviditeľňovaním svetla.*
'Contemplation of the invisible in the poetry converges with **Cézanne-like** visualisation of light.'
- (8) *H. Daumier mal priam **balzacovskú** pozorovaciu schopnosť.*
'H. Daumier had an almost **Balzac-like** power of observation.'

Similarity relations are also realized in the journalistic text between more distant spheres, e.g. literature and sport (*danteovský boj* 'the Dantean struggle' – the fight between Djokovic and Nadal), literature and the state of society (*joyceovské work in progress* 'the Joycean work in progress' – the situation in Slovakia), literature and politics (*proustovské hľadanie strateného času* 'the Proustian search for lost time' – the relationship between politics and culture in Slovakia), as well as between real persons and fictional characters (*fantozziiovské postavičky* 'the Fantozzian characters' – the Norwegian police). In the conjunction of a deanthroponymic adjective with the negation of the verb, the similarity meaning is transformed into the meaning of difference. Statements are usually constructed by first rejecting the apparent and primordially expected associations of similarity (by negation of the verb, by using the pronoun *none*, by using the conjunction *nor*) and then explicitly explaining the differences between the two phenomena. In the statement "*The effects of global climate change represent Hell for me*", the author seems to assume that the *Hell* stimulus will prompt a biblical connotation in the percipient. Therefore, he directs the reader's imagination with his commentary (9).

- (9) *Nie to biblické, ani **danteovské**, ale brutálne reálne [...]*
'Not the biblical nor the **Dantean**, but the brutally real' [...]

The similarity-dissimilarity contrast between phenomena X and Y is not a complementary but a gradual contrast. To a greater or lesser extent the similarity/

¹⁵ It could also be added that examples (5) – (6) can be differentiated based on the fact whether the text uses explication strategy when using such type of adjective. As can be seen in the examples, in certain cases the author of the texts relies on the knowledge of the addressee, whereas in other cases the examples are explicative. I thank reviewer for this remark.

difference of the phenomena corresponds to a range of expressions from participle to particle (*takmertatarkovská próza* ‘almost Tatarka-like prose’), through the verbum *blížiť sa* ‘to approach’ (*blížil sa k verdiovskému barytónu* ‘approaching a Verdian baritone’), axiological adjectives (*pravý verdiovský soprán* ‘a true Verdian soprano’), superlative adjectives (*najväčší wagnerovský tenorista* ‘the greatest Wagnerian tenor’), composite adjectives with two motivating proper nouns to intensify the evaluation (*chavezovsko-castrovská nenávisť* ‘Chavez-Castro-like hatred’), adverbs of degree (*príliš wagnerovská opera* ‘too Wagnerian an opera’), axiological nouns (*rossiniovský guru* ‘Rossinian guru’). On the other hand, deceptive similarity (*pseudotolkienovský* ‘pseudo-Tolkien’) and apparent similarity (*kvázidylanovský* ‘quasi-Dylan’) are implied by prefixes, signalling a negative evaluative attitude towards the phenomenon named by the noun.

The functioning of adjectives, which bring two phenomena X and Y into a similarity relation, can be interpreted from the perspective of cognitive linguistics from several points of view. In the first place, a proper noun enters the semantics of the DA, which is transposed from the identifier of a self-existing individual in the adjective to the naming of a relation with a wide extension and poor intentionality (*chagallovský* ‘concerning Chagall’). In an attributive syntagm with a noun, the semantics of the adjective narrows down to one of the potential concretizations of the semantics. Reciprocally, the semantics of the noun in the head noun position is also enriched by the meanings supplied by the adjective. Finally, the semantics of the attributive syntagm is nested within the cognitive context of the utterance and the meaning of the text. This aspect of the functioning of DAs can be described through the theory of conceptual integration (the terms integration of concepts or blending are also used). G. Fauconnier and M. Turner in their study *Conceptual Integration Networks* (1998, pp. 133 – 187) present conceptual integration as one of the basic cognitive operations. Creating new meaning is an active and creative process of establishing different relationships between mental spaces in which different aspects of information are integrated. The theory of conceptual integration is further elaborated by R. W. Langacker (2008, p. 331), also in connection with the relationship between adjective and noun: “Even seemingly straightforward cases, like the direct, restrictive modification of a noun by an adjective, prove subtle and varied when examined in detail. A lot of this hidden complexity pertains to conceptual integration. We can profit by looking more closely at the basic generalization that the noun’s profile corresponds to the adjective’s trajectory. While this is perfectly valid as a coarse-grained description, however, there is much to learn from the fine-grained details of particular examples.” The purpose of the study is to enrich cognitive linguistic knowledge with details of the functioning of a defined type of adjectives in Slovak language.

In the textual functioning of DAs, conceptual integration is applied at a higher level than just the adjective-substantive relation. Let us give an example of a similitive relation from the review of a concert by the Polish pianist K. Kobyliński, who presented himself in Slovakia for the first time as a new performer, probably unknown to most of the addressees. The review states that his playing ranges between *chopinovským romantizmom a jarrettovskou improvizáciou* ‘Chopinian romanticism and Jarrettian improvisation’. The use of adjectives derived from the proper names of well-known musicians has the potential to create in the listener an idea of an unknown performer that is a mixture of information as well as previous musical experience. The conceptual integration is the combination of two attributive syntagms and their relation to the denoted, so far unknown person. At this point, a Lakoffian-Johnsonian interpretation of the conceptual metaphor is offered in the sense that the new and unknown entity is clarified in categories more accessible from previous sensory perception. Syntagms with DAs with the suffix *-ovský* update the previous sensory experience and represent the source domain, which is transferred to the target domain to reach an understanding of the new entity. K. Kobyliński’s piano concerto is partly structured, perceived, understood and grasped in speech like *Chopinian romanticism* and *Jarrettian improvisation*. In other words, one kind of thing is understood and experienced in the category of another kind of thing.¹⁶ This is made possible by updating the similarity properties between entities. The inclusion of entity X with Y and Z is only fictional, imaginary, subjective, connected with metaphorization, not determined by the objective structure of the world. If the writer of the review placed Kobyliński’s music in the same category with the romanticism of Chopin and the improvisation of Jarrett, he did so based on the fiction that the entities in question are in a relationship of equivalence. In the light of J. Dolník’s theory (1999, pp. 45 – 77), this cognitive operation can be understood as a fictional equivalence. This is because the choice of source and target domains does not reflect the real order and objective relations of things in the world. It is a way of seeing the world and understanding the relations between entities by humans. Cognitive linguistics highlights the role of humans imposing their priorities on the world through language. The choice of priorities is clarified by the principle of perceptual or conceptual saliency. “Saliency is not a result of the world’s primacy over the human conceptualiser, but rather reflects the human conceptualiser’s primacy over the world. It is the human perceiver or conceptualiser that imposes his gestalt-based priorities on the world” (Dirven 1999, p. 63). Cognitive salience is also considered in the context of describing the ways in which the mind acquires, processes, and

¹⁶ This is the reference to the explanation of the nature of metaphor in G. Lakoff and M. Johnson (1980, p. 5): “The essence of metaphor is understanding and experiencing one kind of thing in terms of another.”

organizes information. This term belongs to the theory of pathways of mental access (Langacker 2008, p. 501), which refers to the mental processes that enable a person to access knowledge, concepts, and memory traces: “If you think of the letter A, you are likely to think of B. This facilitates the activation of C, which in turn leads to D, and so on. One conception can lead to another due to an established connection between them, as with the alphabet, or just by virtue of creating the conditions for its emergence.” Analogically, in our material the adjective *chagallovský* ‘Chagall-like’ is associated with L. Fulla, *malevičovský* ‘Malevič-like’ with P. Kalmus, *trumpovský* ‘Trumpian’ with A. Babiš etc.

On the cognitive path, according to R. W. Langacker (2008, p. 502), there are metonymic reference points with varying degrees of cognitive salience. A series of conceptions where each leads readily to the next is called a natural path: speaker > hearer > other; human > animate > inanimate; concrete > abstract; actual > virtual; given > new.¹⁷ Deanthroponymic adjectives are related to motivating units with the properties other, human, concrete, predominantly actual and given, thus representing reference points with a high degree of cognitive salience. Z. Kövecses and G. Radden (1998, p. 65), on the relation concrete > abstract, state that “[A]t a more general level, the CONCRETE OVER ABSTRACT principle also accounts for the ontological metonymy FORM FOR CONCEPT, in which the concrete visual or acoustic shape of a sign stands for the abstract concept denoted by the form”. Evidence is also provided by the research material. For example, the abstract notion of ‘contemplating the invisible’ in M. Haugová’s poetry (7) is represented by the sensuous visual form ‘Cézanne’s visualization of light’. Regarding the relation actual > virtual, anthroponymic motifs representing persons from history (i.e., with the attribute of non-actuality) account for 8% of the research sample. More broadly, anthroponomic motifs with the virtual attribute to be the names of characters from works of art, legends and mythology can be also considered (*prométheovský* ‘Promethean’, *robinhoodovský* ‘Robin Hoodian’, *poseidonovský* ‘Poseidonian’, *spidermanovský* ‘Spidermanian’). Together they do not represent even a tenth of the sample of adjectives studied. Let us add to the given > new relation that anthroponymic motivating units represent persons who are generally known and present in the cultural memory of language users as established cultural codes given by the knowledge and experience of the members of a linguistic-cultural society.

They function as precedent names on which a sum of connotations is superimposed. The adjective *napoleonovský* ‘Napoleonic’ evokes ideas of military genius, ambition, power, defeat, or a low-stature complex; the adjectives *holmesovský* ‘Holmesian’ or *sherlockovský* ‘Sherlockian’ evoke ideas of detective skills and logical thinking. The

¹⁷ > sign for the relationship: the preceding member of the series is cognitively more expressive than the following member of the series.

proper nouns as motivating units of DAs are ideal, typical or stereotypical representations of categories (in our case, a general and a detective). Thus, they function not only by themselves but become representatives of the whole category. The relation MEMBER OF A CATEGORY FOR THE CATEGORY is a typical metonymic relation, namely the relation of the part and the whole. In summary, DAs represent metonymic reference points with a high degree of cognitive salience. Their frequency in journalistic texts is not high (0.5% of the total number of adjectival lemmas in the subcorpus of journalistic texts). Cognitive saliency is associated with a high degree of mental burden for the addressee of the text. Excessive concentration of the above adjectives could cause the means of understanding to become a means of obscuring meaning, a mannerism of the author or a redundant hyperbole as in example (10).

- (10) *Da vinciovská kresba ľudských tiel, munchovské kričiace ústa, brunovskovský dramatický grafický detail obklopi diváka v galérii v Topoľčanoch.*
 ‘**Da Vinci-like** drawing of human bodies, **Munch-like** screaming mouths, **Brunovský-like** dramatic graphic detail surrounds the viewer in the gallery in Topoľčany.’

It can be concluded that, on the one hand, DAs represent a source domain for understanding the phenomenon that is the target domain, and thus function on the basis of conceptual metaphor. On the other hand, the transfer of the source domain to the target domain is possible not only as being based on similarity, but also on the basis of substantive relations such as MEMBER OF A CATEGORY FOR THE CATEGORY, FORM FOR CONCEPT, PART FOR WHOLE, CONCRETE FOR ABSTRACT, which are metonymic relations. The functioning of the adjectives studied is not based on either metaphor or metonymy, but on their interplay. This conclusion is not unique. It has long been assumed in cognitive linguistics, “[...] that many metaphors have a metonymic basis. [...] Metaphor does cognitive work that metonymy does not (such as providing rich knowledge about the target), but it seems that metonymic relationships often make conceptual metaphors possible” (Kövecses – Radden 1998, pp. 61 – 62).¹⁸

Thus, it means that the conceptual integration of the meanings of DAs with the contextual environment also requires the interplay of metaphorical-metonymic cognitive mechanisms.

3.2.3. Semantics of quantity

The corpus data document that DAs with the suffix *-ovský* are also compatible with the semantics of quantity¹⁹ expressed grammatically or lexically. In the case of

¹⁸ One type of metaphorical-metonymic constructions in Slovak was pointed out by M. Ivanová (2022, pp. 3 – 18).

¹⁹ M. Nábělková (1993, p. 106) observes the opposition of singularity/plurality of the subject in deappellative adjectives.

the grammatical expression of quantity, the compatibility of the studied adjectives with the plural of nouns in the head noun position is at issue. Plurality tends to be intensified by repetition in the coordinative syntagm (*dvořákovské unikáty, listy, podobizne a prvé nahrávky* ‘Dvořák-esque uniqueness(es), letters, likenesses and first recordings’) or by lexemes with quantitative semantics in the contextual surroundings (*prílev povestných zemanovských hlášok* ‘the influx of Zeman-esque proverbial catchphrases’). If the head noun position contains an expression with the semantic component of plurality, complexity, structure, longevity, extensiveness, or repetition, DAs are also compatible with singular nouns. The claim is derived from corpus evidence of adjective compatibility and the following meanings:

- a) plurality: *wagnerovský klan* ‘the Wagnerian clan’;
- b) structure: *lennonovský komplet* ‘the Lennonian set’;
- c) extensiveness: *potterovská sága* ‘the Potter-like saga’;
- d) longevity: *wagnerovský maratón* ‘the Wagnerian marathon’;
- e) repetition: *tolkienovský maliar* ‘the Tolkienian painter’.²⁰

Repetition also takes the specific form of precedent statements of real persons or fictional characters in works of art. The DA implies the author of the statement, which by repetition has become known and comprehensible to a certain linguistic-cultural society. In Slovak journalistic texts, statements from the Czech political scene and culture are mainly used as literal quotations: *vančurovské „Tenhle způsob léta zdá se mi poněkud nešťastným“* ‘Vančura-esque This kind of summer I find a bit unfortunate’; *nezvalovské „Sbohem a šáteček“* ‘Nezval-esque Goodbye and a little scarf’; *krylovské „Bratříčku nevzlykej“* ‘Kryl-esque Don’t cry, little brother’. In journalistic texts, the examined adjectives are used as a means loaded with associations from the original context in which the utterance originated to, clarify a new, current situation.

A well-known quote set in a new context intensifies the ironic effect (*nerudovské kam s ním* ‘Neruda-esque where do I put it’ in the article about the use of electronic waste; *zemanovské kde máme popelníček, pane řediteli* ‘Zeman-esque where are our ashtrays, Mr. Director’ in an article about the inappropriate placement of garbage bins in public space). Knowledge of the older quoted statements provides a framework for understanding a new situation that shows a similarity or factual connection to the familiar situation referred to by the quote. Understanding adjectives requires contextual reading and activation of metaphorical-metonymic cognitive mechanisms.

3.2.4. Temporal semantics

In the confixal derivatives, the semantics of the adjectives under study are modified to the meaning of a temporal landmark, with prefixes being the bearers of

²⁰ *Tolkienian painter* ‘a painter who illustrates Tolkien’s books repeatedly’.

the temporal meanings. Some personalities represent such a significant value, cognitive, cultural or even civilizational change that adjectives with a proper noun as a motivating unit segment the development in a given area into a “before” and an “after” era not according to a temporal landmark, but by reference to a significant personality. The segmentation of time by temporal derivatives of adjectives with the prefix elements *before-*, *pre-*, *post-*, *after-* is more illustrative and accessible than an indication of a year or a century. The temporal landmark also represents a qualitative landmark, the beginning of a new era concerning society (*preddarwinovská* a *podarwinovská éra* ‘the pre-Darwinian and post-Darwinian era’), but also the life and work of the individual (*ponobelovská básnická zbierka S. J. Heaneyho* ‘the post-Nobel poetry collection of S. J. Heaney’ instead *zbierka vydaná po roku 1995* ‘the collection published after 1995’). The dominant spheres of occurrence of adjectives with temporal semantics are the sphere of politics (*predmečiarovský/postmečiarovský* ‘pre-Mečiarian/post-Mečiarian’), the sphere of science, discoveries (*predkolumbovský/postkolumbovský* ‘pre-Columbian/post-Columbian’) and philosophy (*predsokratovský/postsokratovský* ‘pre-Socratic/post-Socratic’). The adjectives with the prefix of the previous era (*pre-/before-*) and the following era (*post-/after-*) are present in the journalistic text with a ratio of 20% : 80%. This may be a consequence of the pressure on the topicality of the journalistic text. Topicality as “journalistic urgency to comment on the currently lived world” (Slančová et al. 2022, p. 173) is naturally compatible with temporal succession.

Deanthroponymic adjectives in the function of a temporal landmark are a manifestation of anthropocentrism and one of the proofs that language represents the world as a human sees it, i.e. the world structured from a human perspective. According to the principle of saliency (Dirven 1999, p. 65), humans perceive the world hierarchically: agent before experiencer, both roles before object and instrument, and all these roles before time. The hierarchy in saliency is depicted by Dirven’s formula: Agent < Experiencer < Object < Instrument < Area < Goal < Source < Essive < Location < Time.²¹

The formula shows that time is the least salient component in the hierarchy. The low saliency may explain that, in addition to direct temporal markers, texts use more “human” means to represent time than numerical data. Deanthroponymic adjectives are motivated by the name of the agent, which makes the least salient component (time) move to the most salient component – the agent. And, moreover, to the agents whose civilizational traces, or changes in the paradigm of thought, are fixed in the cultural memory of society.

²¹ Here the < indicates that the element on the left has a higher saliency and is perceived as more salient than the element on the right.

3.2.5. Deanthroponymic adjectives with a categorization function

Deanthroponymic adjectives not only have a temporal classificatory capacity, but also a broader categorization capacity. The categorization function is realized by two types of adjectives:

a) adjectives that categorize according to the author's approach (*kantovská etika/ aristotelovská etika* 'Kantian ethics/Aristotelian ethics', *nerudovský fejtón/ kritický fejtón* 'Neruda-like feuilleton/critical feuilleton', *christieovská detektívka/ ecovská detektívka* 'Christie-like detective story/Eco-like detective story');

b) adjectives that provide a frame orientation in a certain fragment of the world by classifying a given phenomenon into binary categories. This leads to a contradictory or even polarizing view of the world. The categorization function is performed by adjectival derivatives with prefixes/prefixoids²² *anti-/proti-* 'counter-', *pro-* 'pro-', *ne-* 'non-' and compounds beginning with *novo-/neo-* 'neo-', *svät-* 'saint-'.

The quantitative dominance of the journalistic text consists of derivatives with prefixes *anti-/proti-* 'counter-', *pro-* 'pro-'. The categorization function is realized through the studied adjectives as a binary schematic categorization according to the criterion 'against versus in favour of the one whose name is the motivating unit of the adjective'. This type of adjective is mainly associated with persons representing the sphere of politics. Substantives in the collocational paradigm denote:

(b1) the individual, group, and institution that opposes/supports the one whose name is the motivating unit of the adjective (*protiputinovský + aktivista, opozícia, médiá* 'anti-Putin + activist, opposition, media'; *proficovský + krídlo, denník, prezident, loby* 'pro-Fico + wing, newspaper, president, lobby');

(b2) activities, symbols, and spiritual expressions that oppose/support the one whose name is the motivating unit of the adjective (*protiputinovský + boj, ťaženie, vystúpenie, odpor, protest, happening* 'anti-Putin + struggle, campaign, speech, resistance, protest, happening'; *proputinovský + modlitby, heslá, piesne* 'pro-Putin + prayers, slogans, songs');

(b3) a mental and emotional disposition opposing/supporting the one whose name is the motivating unit of the adjective (*antibabišovský hundroš* 'anti-Babiš grouchy', *proradičovský nadšenec* 'pro-Radičová enthusiast', *prochirakovská show* 'pro-Chirac show').

²² For adjectives like *antiputinovský* 'anti-Putin', *proputinovský* 'pro-Putin' the question arises whether this is a prefixal motivation or a confixation. If one starts from the word-forming paraphrase 'directed against/for the benefit of the one whose name is the motivant of DA', one can think of a confixation in Slovak, e.g. *anti-putin-ovský, pro-putin-ovský*. The word-form paraphrase 'contradicting/supporting that which is named DA' can't be entirely ruled out. The binary opposition comes to the fore, e.g. *putinovská rétorika* 'Putin-like rhetoric' versus *proti-putinovská rétorika* 'anti-Putin rhetoric', *anti-putinovský aktivista* 'anti-Putin activist' versus *pro-putinovský aktivista* 'pro-Putin activist'. In this case, it is more of a prefixal motivation.

In the sphere of science, adjectives with the prefix *ne-* ‘non-’ are applied. The meaning of adjectives is actualized in the sense of “a fundamentally different perspective of cognition compared to that represented by a personality with a name as a motivating unit (*neeuclidovská geometria* ‘non-Euclidean geometry’, *nekeynesovský program* ‘non-Keynesian program’). This type of adjectives reinforces the perception of oppositions in cognitive approaches (non-Euclidean geometry is defined in opposition to Euclidean geometry²³).

The reference to the sacred sphere is represented by adjectives with the component *svät-* ‘saint-’. In the journalistic text, they mainly fulfil a condensing function, which is in line with the pressure on the economy of expression (*svätourbanovské vinohradnícke hody* ‘Saint Urban’s vineyard feast’). It functions in congruence with both plural semantics (*svätotarzíciovské preukazy* ‘Saint Tarsicius passes’) and similarity (*svätopatrikovská edícia futbalových dresov* ‘Saint Patrick’s edition football jerseys’²⁴). The categorization function consists in segmenting the named phenomena in terms of the criteria of sacredness (*Saint Urban*) and profaneness (*Urban*).

Categorization ranks among the key cognitive operations within cognitive linguistics. Deanthroponymic adjectives in a journalistic text represent the world both in the categories defined by the author’s approach and according to the binary oppositions of antipathy/sympathy, identity/difference, novelty/tradition, sacredness/profaneness. The categorization criterion in all types is the relation to the person whose name is the motivating unit of the adjective. This points to anthropocentrism in categorization.

3.2.6. Deanthroponymic adjectives with lexicalized semantics

Some multiword names with DAs became established as technical terms (*villonovská balada* ‘Villonian ballad’, *kantovský kategorický imperatív* ‘Kantian categorical imperative’), publicisms (*albrightovská čierna diera* ‘Albright-esque black hole’, *hamletovská dilema* ‘Hamletian dilemma’), or as names of precedent phenomena characterizing a certain stage in the development of society (*foglarovský bobrík mlčania* ‘Foglarian beaver of silence’²⁵). Stability of meaning can lead to lexicalization, to the gradual attenuation of the original purely relational meaning of the adjective and to the emergence of a new autonomous meaning that is also intelligible contextually and not directly derivable from the adjective’s word-

²³ However, the semantics of non-typicality (*nemadonnovský album* ‘non-Madonna-like album’), pointed out in section 3.2.1, needs to be distinguished from the classification function. In this case, it is more of a prefixal motivation.

²⁴ The source domain from the sacral sphere is transposed to the target domain sport (in the example above, the similarity is in the colour green).

²⁵ The beaver of silence is one of the rewards in Scouting for being able to not speak for 24 hours. The Czech writer Jaroslav Foglar worked on the issue of scouting in literature for young people.

formation structure (*gargantuovský + klientelizmus, lož, korupcia, mocenský apetit* ‘gargantuan + clientelism, lie, corruption, power appetite’ [phenomena of gigantic proportions], *danteovské peklo v utečeneckých táboroch* ‘Dantean hell in refugee camps’ [bringing suffering], *dickensovský + detské domovy, kapitalizmus* ‘Dickensian + orphanages, capitalism’ [related to scarcity, humiliation, injustice], *kopernikovsky obrat* ‘Copernican turn’ [subversive change].

In some adjectives the derivation of several meanings with a common meaning component can be observed (*robinsonovský oddych* ‘Robinsonian rest’ – alone, *robinsonovský typ* ‘Robinsonian type’ – independent, *robinsonovská pláž* ‘Robinsonian beach’ – depopulated). In lexicalized adjectives, the original relational meaning is modified into a qualifying one by the usual procedures of derivational polysemy based on a common semantic component of similarity or factual relatedness (cf. *Gargantuan – Robinsonian*). In cognitive linguistics, conceptual derivation is considered in this context “from the concept actualized by the basic noun. In the new concept, the properties that become the basis of metaphorization are made salient, they are profiled based on the new unaccustomed usage” (Vinogradova 2014, pp. 72 – 73). According to the cited author, the emergence of new meanings is the result of the process of metaphorization of the latent properties of the appellative from which the relational adjective arose. In the study, the evidence that conceptual derivation can also be spoken of in adjectives motivated by anthroponyms is provided. In DAs, new meanings are profiled based on unusual use in a context, which in cognitive linguistics is referred to as the cognitive context and which, in addition to the textual environment, also includes encyclopaedic knowledge, associations and connotations on the part of the creator/receiver of the text.

M. Hoey (2005) considers creative thought content to result from language users’ resistance to priming through selective overcoming. In the study, the use of DAs in lexicalized compounds and evaluation contexts to be a manifestation of liberation from priming is considered too. The *einsteinovský* ‘Einsteinian’ attribute has become established to ironize the mental abilities of an individual (*einsteinovské typy v parlamente* ‘Einsteinian types in parliament’). The source of the caricature as a botched imitation can be the anthroponymic motivating unit itself (*jamesblondovská celebrita* ‘James Blond celebrity’²⁶). The evaluative component of meaning is contextually determined.

4. CONCLUSION

The research questions outlined in Section 2 are revisited in the conclusions.

(1) The distribution of DAs is culturally conditioned in two senses.

²⁶ The adjective is inspired by the nickname *James Blond* for D. Craig, the first James Bond actor with blond hair. The change in hair colour and nickname is a source of irony for Bond fans.

First, it is determined by cultural realities, i.e. the sphere of action of the person whose name is the motivating unit of the adjective. Not every sphere of human activity is an equally productive source of proper motivating units but the sphere of politics (which is natural in a journalistic text) is one of the most dominant ones. The sphere of art and entertainment (especially literature and music) is much more differentiated and quantitatively richer in terms of the adjectives studied than the sphere of rational and exact representation of the world in the sphere of science, invention or education. Although topicality is expected from a journalistic text, anthroponyms related to history are also among the central motivating units of the adjectives studied. The data show that actors from history and the past experiences associated with them function as reference points with a high degree of cognitive salience and serve as a source of knowledge to which we turn for a deeper understanding of the present. In summary, DAs represent selective cultural codes and they are indicative as to the values perceived preferentially by Slovak users and put in the spotlight through specific linguistic means. Thanks to them, the author of the text imprints their priorities on the world, constructs their way of understanding the world and actualizes it in the minds of the percipients through the text. Through repetition, the selected cultural codes are kept in the memory of the speakers and become a component of their mental and axiological equipment.

Second, the distribution of DAs is also culturally contingent because it requires the actors on both sides of the communicative act to have an encyclopaedic knowledge of the context, the capacity for connotative dispersion, and the ability to decode the broad slice of reality condensed in the adjective. This may explain the modest share of DAs in journalistic texts (0.5% of adjectival lemmas in the subcorpus of journalistic texts). An overabundance of the studied adjectives is associated with the risk of interpretive voluntarism or even resignation to the text on the percipient's part, and with stylistic mannerism on the producer's part.

(2) In addition to the fact that DAs in Slovak journalistic texts function as condensed cultural codes, the relational semantics of adjectives in the text are modified in several ways (typicality, quantity, similitude, temporality, lexicalized semantics, and categorization function). The wide semantic-functional and connotational dispersion naturally requires the interaction of several cognitive mechanisms. Constructing the meaning of a DA is an active and creative process of forming a network of relations and integrating the information resulting from the attributive syntagm, which is embedded in the cognitive context of the utterance, the meaning of the text, and the cultural context. The semantics of typicality is the result of a cognitive mechanism referred to as conceptual integration. Similarity semantics requires an extra cognitive operation – noticing the resemblance existing between two phenomena. A Lakoff-Johnsonian interpretation using conceptual metaphor

seems adequate. The deanthroponymic adjective actualizes a past experience and functions as a source domain to understand a new (target) domain that is similar in some aspect to the source domain. The choice of source and target domains does not reflect the relationship given by reality. The similitive relation is constructed by humans based on the fiction that the source and target domains are equivalent in some respect. Therefore, one can also think in terms of fictional equivalence. A detailed analysis of the corpus documents has shown that the transfer of the source domain to the target domain is possible not only on a syllabic basis, but also based on substantive relations underlying metonymic relations (e.g. MEMBER OF A CATEGORY FOR THE CATEGORY, FORM FOR CONCEPT, PART FOR WHOLE, CONCRETE FOR ABSTRACT). The similitory semantics are thus the result of the interplay of metaphorical-metonymic cognitive mechanisms.

The temporal semantics of the studied adjectives are in turn a good example of anthropocentrism and provide evidence that in the case of abstract categories and categories with low salience, which include time, one reaches for more “human”, more sensually accessible means in language. Deanthroponymic adjectives may structure time from the perspective of agent, generally known for its cultural-cognitive contribution, into a period of “before and after agent”. The anthropocentric principle is also present in the categorization function of the adjectives studied. The categorization criterion is the relation to the person whose name is the motivating unit of the adjective. Finally, the data show that the studied adjectives can acquire a new autonomous meaning by transforming the originally relational meaning into a qualitative-evaluative one. From the perspective of cognitive linguistics, conceptual derivation is considered in this context.

Two conclusions correspond to two research goals derived from the baseline study (Divjak – Janda – Kochaňská 2007, pp. 1 – 18): to see the motivation of DAs from a broader perspective than language itself – in both sociocultural experience with the world and within the cognitive structure of the human being.

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Deantroponymické adjektíva so sufixom *-ovský* v kontexte kognitívnej lingvistiky

Resumé

Štúdia sa zaoberá problematikou deantroponymických adjektív s príponou *-ovský* (*baťovský*) v slovenských žurnalistických textoch. Výskumným materiálom je subkorpus žurnalistických textov prim-10.0-public-inf s veľkosťou takmer 932 miliónov slov. Na základe korpusového materiálu sa pozornosť venuje týmto otázkam: (a) distribúcia deantroponymických adjektív v závislosti od sféry pôsobenia osoby, ktorej meno je motivujúcou jednotkou adjektíva, (b) sémantické špecifikácie deantroponymických adjektív. Sociokultúrne významy adjektív sú interpretované na základe postulátov kognitívnej lingvistiky (konceptuálna metafora a metonymia, kategorizácia, simulácia, konceptuálna integrácia, antropocentrizmus, kontextuálna kompetencia).

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THE CONCEPTUALISATION OF QUANTITY IN CONTEMPORARY CZECH: COLLECTIVE CONSTRUCTIONS

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SAICOVÁ ŘÍMALOVÁ, L. (2025): The Conceptualization of Quantity in Contemporary Czech: Collective Constructions. In: *Slovenská reč*, 90/2, 74 – 92.

Abstract: The paper discusses ways of expressing large quantities in contemporary Czech, with a focus on constructions of the type *stádo koní* ‘a herd of horses’, that is, constructions which conceptualise large numbers of individuals not as simple sets of independent units but as groups. These constructions consist of a more general countable noun denoting the type of group (e.g., *stádo* ‘a herd’) plus a genitive plural form of a noun denoting the “grouped” entity (e.g., *koní* ‘horses-GEN.PL’). Such constructions are called “collective” and are viewed as an analytical way of conceptualising plurality. Using the theoretical background of the cognitive approach to language, and data retrieved from the corpus of contemporary written Czech, the paper discusses selected cases of this construction (i.e., *stádo* ‘a herd’, *hejno* ‘a flock’, *smečka* ‘a pack’ + a noun in genitive plural form), primarily with respect to animals, but also extended to other entities, including humans.

Keywords: Czech; quantity; plural; collective construction; cognitive linguistics.

Highlights:

- Contemporary Czech can construe plurality in several ways. The first, prototypical case is when the plurality is construed as plurality “neutral”, denoting simply more than one entity. But there are also linguistic means that signal a “group” or “collective” construal that sees the given number of entities as one whole, one unit.
- The so-called collective constructions of the type *stádo koní* ‘a herd of horses’ consist of a more general countable noun denoting the type of group (e.g., *stádo* ‘a herd’) and a genitive plural form of the noun denoting the “grouped” entity (e.g., *koní* ‘horses-GEN.PL’).
- The analysis of collective constructions containing the nouns *stádo* ‘a herd’, *hejno* ‘a flock’, and *smečka* ‘a pack’ reveals that each of the three constructions is specific for certain kinds of animal, a specific type of group organisation and/or behaviour, and the given type of group has relatively stable associations.
- The prototypical uses can be extended in several directions: to other kinds of animal, to inanimate entities, and to humans; to groups organised and behaving in a different way; to different evaluative meanings. The extension to those other than the typical group’s members can be accompanied by re-categorisation of the grouped entities. The extensions to groups of people are frequently accompanied by negative and pejorative associations. However, the corpus data reveal some “exceptions” as well.
- The way various types of quantity are expressed in the language is seen as part of a more general cognitive ability, i.e., of the numeric or mathematical cognition, and of the lay (folk, naïve) theory of mathematics.

1. INTRODUCTION

Quantity is one of the key aspects that people perceive, conceptualise, and express in their language. Although because of their similar perceptual and cognitive abilities it may seem that all people should perceive quantity in a similar way, languages differ in this respect (e.g., Corbett 2000; Beller – Bender 2008). In this study, I discuss the various ways of expressing quantity in contemporary Czech, a highly inflected West Slavic language. I analyse constructions that conceptualise higher numbers of individuals not as simple sets of independent units but as groups, as wholes. I call such constructions “collective” and view them as a particular way of conceptualising plurality, analogous to so-called singulative constructions used with uncountable nouns (see part 2). I will focus on three specific cases of this collective construction, each of which applies to counted entities in the genitive plural form: *stádo* ‘a herd’ + noun-GEN.PL, e.g., (1), *hejno* ‘a flock’ + noun-GEN.PL, e.g., (2), and *smečka* ‘a pack’ + noun-GEN.PL, e.g., (3):

- (1) *stádo* *krav*
herd-NOM.SG cow-GEN.PL
‘a herd of cows’
- (2) *hejno* *ptáků*
flock-NOM.SG bird-GEN.PL
‘a flock of birds’
- (3) *smečka* *vlků*
pack-NOM.SG wolf-GEN.PL
‘a pack of wolves’

These constructions are primarily used with respect to animals, but they can be extended to other entities, including humans.

Using the theoretical background of the cognitive approach to language, and data retrieved from the SYN2020 corpus of contemporary written Czech (Křen et al. 2020),¹ I ask the following questions:

- a) Which entities can be quantified using the selected constructions?
- b) In what ways can the prototypical uses be extended?
- c) What do these constructions tell us about the Czech “interpretation” of the world (the Czech image of the world or linguistic worldview; Bartmiński 2010) and the Czech conceptualisation of quantity?

I will begin by summarising the relevant theoretical background (part 2), before going on to present an analysis of the chosen constructions (part 3). Finally, I discuss the results from the perspective of a cognitive approach to language (part 4).

¹ The SYN2020 corpus of the Czech National Corpus (Křen et al. 2020) is a synchronic, representative, and referential corpus of written Czech. It contains approx. 100 million words split equally between fiction, non-fiction, and journalistic texts.^[1]

2. QUANTITY IN CONTEMPORARY CZECH

In contemporary Czech, quantity is expressed by many different linguistic means, such as the word class of numerals (with various subtypes, e.g., Karlík 2017), lexical units of other word classes that express quantity, selected syntactic means (such as repetitive constructions expressing quantity), and the grammatical category (grammatical meaning) of number. The latter is expressed in Czech nouns (see below), adjectives, verbs, and most types of numerals and pronouns. Quantity is also present in the semantics of some nouns (e.g., *hmyz* ‘insect-SG’, *národ* ‘nation-SG’; singularia tantum derived by word-formation means such as *-stvo* or *-í* and denoting groups of people or certain amount of “material”, e.g., *lidstvo* ‘humankind-SG’, *listí* ‘foliage-SG’) and verbs (verbs denoting repeated action, e.g., *dělat* ‘to do repeatedly and habitually’ (cf. Danaher 2003), or distributed action, e.g., *pozavírat* ‘to close one by one’).

Czech linguistic tradition sees the category of number in contemporary Czech nouns as a grammatical category that is based on the opposition “one” (expressed prototypically by the singular form, e.g., *pes* ‘a dog-SG’) versus “more than one” (expressed prototypically by the plural form, e.g., *psi* ‘dogs-PL’; e.g., Karlík – Večerka 2017). In the past, the opposition was more complex: “one” (singular) versus “two” (dual) versus “more” (plural). There are still some dual forms in contemporary Czech,² but they are interpreted as plural, i.e., expressing “more than one”. The system has been simplified during its historical development to an opposition with two values (“one” versus “more”; singular versus plural). According to the number hierarchy (Corbett 2000, p. 38), contemporary Czech has only the first two types of number (singular and plural) from the possible four types (singular – plural – dual – trial). Contrary to some other linguistic traditions, Czech linguistics does not usually use the category of countability (e.g., Dušková 1988, pp. 49 – 59) or the opposition “mass” versus “count”, even though it could also be applied to Czech material (e.g., Dočekal 2017; see below as well).

The prototypical examples of the category of number in nouns are represented by nouns that use the singular form to refer to one exemplar and the plural form to refer to more than one exemplar. This is typical of nouns that refer to countable entities that the speakers perceive and conceptualise as distinct, separate individuals, such as nouns denoting people, larger animals, larger inanimate objects, etc. “Larger” in this case refers to a size that corresponds to the human ability to perceive (what we are able to see as distinct, e.g., what is not too small) and conceptualise (what we consider as worth distinguishing as individual “units”). Some authors add that the conceptualisation related to the oppositions singular versus plural and mass versus count is also influenced by cultural experience. Wierzbicka (1988, pp. 499 – 560),

² E.g., some forms of nouns denoting body parts that appear in pairs, e.g., *oko* ‘an eye’, *ucho* ‘an ear’.

for example, has shown that the use of singular and plural forms in nouns denoting fruits and vegetables may be influenced by the way we manipulate and eat them.

Many Czech nouns behave in a less typical way with respect to grammatical number. For example, there are *singularia tantum* (e.g., abstracts or nouns denoting mass materials such as *voda* ‘water’ that tend to have the singular form only),³ *pluralia tantum* (e.g., nouns such as *dveře* ‘a door’ that have the plural form only and use it to refer to both one or more instances), and nouns that are used predominantly in one of the numbers (e.g., *vrásky* ‘wrinkles-PL’ tends to be used more frequently in the plural because there is usually more than one wrinkle; cf. Panevová – Ševčíková 2011; Jirsová 1981).

In contemporary Czech nouns, the grammatical category of number is expressed prototypically by inflectional morphemes (endings, e.g., *list* ‘a leaf-N.SG’, *listy* ‘leaves-N.PL’), but the opposition “one versus more” can also be expressed by other linguistic means (cf. the word formation type *-í* for *singularia tantum* such as *listí* ‘foliage’ mentioned above). Some authors (e.g., Dušková 1988) also note that there are specific constructions that enable the speakers to use mass nouns as countable, and consequently express “one unit of something” or the plurality (e.g., *bread* or *kindness* can be made countable by such constructions as *a loaf of bread*, *an act of kindness*, e.g., Dušková 1988, p. 58). This type of construction is sometimes called a singulative or partitive expression. The first noun in the construction denotes the amount, package, or measure (cf. terms such as a measure noun, a unit counter, a minimal unit noun, an individuating or partitive sense, summarised in Nurmio 2023; the more general term classifier is used as well, e.g., Allan 1977). The singulatives and similar constructions exist in various types in different languages, and they typically represent an example of an individuation strategy (cf. Nurmio 2023). The Czech “version” of the construction “a loaf of bread” would consist of a countable noun denoting the counted unit or measure + the mass noun in the genitive singular form, e.g.:

- | | | |
|-----|-----------------------|---------------|
| (4) | <i>bochnik</i> | <i>chleba</i> |
| | loaf-SG | bread-GEN.SG |
| | ‘a loaf of bread’ | |
| (5) | <i>dva bochníky</i> | <i>chleba</i> |
| | two loaf-PL | bread-GEN.SG |
| | ‘two loaves of bread’ | |

The countable noun denoting the counted unit or measure tends to be specific for each mass noun and is related to the extra-linguistic experience and to the way

³ If the plural form of these nouns occurs, the meaning is typically more concrete, e.g., it signals various kinds or portions (e.g., *minerální vody* ‘mineral-PL water-PL’ denoting, e.g., several different kinds or several bottles of mineral water).

people measure and manipulate the given entity (metonymic character of this relationship seems to be frequent, e.g., bread is produced in *loaves*, tea is served in *cups*, soup is served in *talíře* ‘plates-PL’). We can interpret such constructions as specific means that enable the speakers to linguistically “see” (construe) reality in a specific way. The existence of such constructions in a language provides speakers with a greater number of linguistic means by which they may construe reality.⁴

Here we should consider the contrastive situation of countable nouns and the construal of the situation where more than one entity is present. In what ways can the existence of more than one entity be linguistically expressed in contemporary Czech? If constructions exist that enable Czech speakers to treat mass *singularia tantum* as countable and talk about them in the plural, are there similar constructions that would offer the speakers different options for construing the plurality?

Several options exist for a Czech speaker to signal that a certain group of entities is not seen simply as a random set or as a set of unconnected or unorganised individuals (typically expressed by the plural form of nouns, e.g., *krávy* ‘cow-PL’), but that the entities are interpreted as a specific unit, a group, a whole. Scientific literature describes strategies of this type as, e.g., collectives that conceptualise the group as a whole, not as a set of individuals (e.g., Corbett 2000, pp. 117 – 120). In contemporary Czech, the “group” or “collective” construal of a set of multiple entities can be signalled, for example, by a word-formation suffix (e.g., in collectives denoting groups of people or other living creatures, e.g., *žactvo* ‘pupils-SG’, *čtenářstvo* ‘readers-SG’; nouns of this type are typically *singularia tantum*, see above as well), or several types of numeral that imply that the counted objects “belong together” in one group (e.g., *čtvero* ‘four, a group of four’, *pětice* ‘a group of five’).⁵ In objects that typically appear in pairs (e.g., shoes, skis, mittens), speakers can signal the plural (in fact, dual) conceptualisation using numerals that denote the number of sets (e.g., *dvoje boty* meaning ‘two sets of shoes’ versus *dvě boty* meaning ‘two individual shoes’; cf. Panevová – Ševčíková 2011).

The collective construal is also present in constructions such as *roj včel* (‘a swarm of bees’), which I will go on to analyse in more detail later. These constructions consist of a more general countable noun denoting the type of group (e.g., *roj* ‘a swarm’; the noun can be used in any case or number) and a genitive

⁴ It should be mentioned that the countable (singulative) noun in the construction can stand metonymically for the whole construction as well; the mass noun is then inferred from the context (e.g., *koupit dva bochníky* ‘to buy two loaves-ACC.PL’ usually implies buying two loaves of bread). The same situation can be construed using the plural form of the mass noun that implies portions or kinds as well (e.g., *koupit dva chleby* ‘to buy two breads-ACC.PL’; see above).

⁵ Numerals of the type *čtvero* are typically followed by a noun in the genitive form, which is similar to the analysed collective construction (see below the discussion about the so-called quantitative attribute as well).

plural form of the noun denoting the “grouped” entity (e.g., *včel* ‘bees-GEN.PL’ in (6); see examples (1), (2), (3) as well). If a plural form of the collective construction occurs, both the more general countable noun and the noun in the genitive form are in plural, e.g. (7):

- (6) *roj* *včel*
 swarm-SG bee-GEN.PL
 ‘a swarm of bees’
- (7) *dva* *roje* *včel*
 two swarm-PL bee-GEN.PL
 ‘two swarms of bees’

These constructions are formally similar to the above-described singulative/partitive constructions of the type *bochník chleba* (‘a loaf of bread’), but the nouns in the genitive are prototypically in the plural⁶ and the meaning of the construction is different: instead of individualising, it signals a group, a collective construal of a set of individuals. The noun denoting the type of group is sometimes called a classifier (e.g., Allan 1977, Lehrer 1986, see below).

The noun denoting the group (and its type) in the collective construction is specific for various types of grouped entity, in a similar way to the singulative construction. The repertoire of nouns that can function in this position in collective constructions is large in contemporary Czech (cf. Klégr 2007), and ranges from general expressions such as *skupina* (‘a group’), which combine with many different types of grouped entity, to more specific expressions such as *sousoší* (‘a set of related/typically physically connected sculptures’). For example, Klégr (2007) lists many tens of synonyms for groups denoting people in general, for various social groups, for large amounts of people, and for smaller groups related by mutual interests or activities.

At the end of this section, it is important to mention that the singulative and collective constructions are always embedded in the complex context of the given language and its grammar. While the so-called classifier languages use classifiers systematically, languages like English or Czech usually have “only” linguistic elements (e.g., constructions or words) that are functionally similar to classifiers in the classifier languages (e.g., Allan 1977; Lehrer 1986). These linguistic elements may vary from language to language. In case of English, the prototypical form of the singulative and collective construction is NOUN1 *of* NOUN2 (e.g., *a herd of cattle*; cf. Lehrer 1986). In case of Czech, the prototypical form of these constructions is NOUN1 NOUN2-GEN. The genitive form of the noun denoting the mass or the grouped entity situates the Czech singulative and collective constructions in the

⁶ The singular form of the noun in genitive is possible only in nouns such as *dobytek* ‘cattle-sg’ that denote groups of entities, i.e., that are “semantically plural” (see above and part 3 as well).

context of Czech genitive case and its meaning (especially the partitive genitive) as well as in the context of other NOUN1 NOUN2-GEN constructions that express quantity (e.g., constructions with numerals such as *pět knih* ‘five books-GEN.PL’, *několik knih* ‘several books-GEN.PL’). Many of these constructions have attracted scientific attention, because they seem to have asymmetrical relationship between meaning and form. – The noun in genitive is formally dependent on the noun denoting the quantity, even though it can be seen as the semantic head of the construction (cf. Kopečný 1953, 1956, 1957; Svoboda 1956a, 1956b; Poldauf 1957, and their discussion concerning the so-called quantitative attribute).

3. THE CONSTRUCTION *STÁDO* ‘A HERD’, *SMEČKA* ‘A PACK’, OR *HEJNO* ‘A FLOCK’ + A NOUN IN GENITIVE PLURAL FORM

In this paper, I focus on collective constructions (see Section 2) that consist of a noun denoting primarily a group of animals + a genitive plural form of a noun denoting the grouped entity (see example (6) above). I have limited my analysis to constructions with the nouns *stádo* ‘a herd’ (e.g., *stádo koní* ‘a herd of horses’, cf. example (1) above), *smečka* ‘a pack’ (e.g., *smečka vlků* ‘a pack of wolves’, cf. example (3) above), and *hejno* ‘a flock’ (e.g., *hejno ptáků* ‘a flock of birds’, cf. example (2) above). The nouns *stádo*, *smečka*, and *hejno* were chosen because they are commonly used, they represent three prominent types of organisation of animal groups as observed by people, and they can be extended to human groups. This allows me to study not only the use of the constructions with respect to animal groups, but also the semantic extensions to people. In the latter case, I expect to see the influence of anthropocentrism (e.g., Vaňková et al. 2005, pp. 59 – 66) and the emergence of evaluative meanings, probably negative.

According to the criteria proposed for collective nouns by Joosten et al. (2007), the nouns *stádo*, *smečka*, and *hejno* behave in a similar way as far as the conceptual profiling and the agreement with verbs and possessive, relative, and personal pronouns are concerned. When the singular form of the nouns *stádo*, *smečka*, and *hejno* is used, the verbal and pronominal agreement is also in singular form (e.g., *stádo krav běží* ‘a herd-SG of cows-GEN.PL is running-SG’). Phrases with attributes such as *velký* ‘big’ (e.g., *velké stádo* ‘a big herd’) profile the size of the group on “the collection” level (Joosten et al. 2007, p. 89) and phrases with attributes such as *mladý* ‘young’ (e.g., *mladé stádo* ‘a young herd’) profile the property of the members on “the member” level (Joosten et al. 2007, p. 89). Both the collection and the member level profiling are common in all three nouns, the nouns thus correspond to type 2 collective nouns delimited by Joosten et al. (2007, p. 93).⁷

⁷ In some cases, an alternative construction containing an adjective derived from the noun denoting the given grouped entity (grouped animals) is possible (e.g., *vlčí smečka* ‘a wolf-ADJ pack’). This

The data for the research were retrieved from the SYN2020 corpus (Křen et al. 2020; see part 1); only texts with Czech as the original language were used. In the analysed subcorpus, there were 1,117 instances of the noun *stádo* (ipm⁸ 7.69 in the given subcorpus), 608 instances of the noun *hejno* (ipm 7.69), and 447 instances of the noun *smečka* (ipm 6.03), but only some of them were relevant for my analysis. The data were supplemented by an analysis of semantically similar words (word embedding) using the tool SEMĚ of the Slovak National Corpus (Garabík 2020). This tool uses data from the Aranea corpora of texts from the Internet (Benko 2018).

3.1. STÁDO ‘A HERD’

The dictionary of contemporary Czech (SSČ 2012, p. 410) gives two meanings for the noun *stádo*: a large group of animals (especially ungulates) living together; masses of people who are unruly or who succumb *en masse* to various opinions or moods – meanings of this second type are marked as expressive, or even pejorative. According to the SEMĚ tool^[2], *stádo* is semantically similar to some other names for groups (*smečka*, *tlupa*, *hejno*), and to nouns denoting animals that typically live in or are bred in groups, especially domestic animals such as cattle (e.g., *kráva*, *koza*, *ovce*, *ovečka*, and the formally singular, but semantically plural noun *dobytek*), but also wild animals (*antilopa*). SEMĚ also lists wolves (*vlk*); words related to pasture and grazing are also present (e.g., *pastvina*, *pasoucí*, *spásat*, *pastevec*).

The analysis of the collective construction (i.e., *stádo* + a noun in the genitive plural form; example (1) above) in the SYN2020 data confirms that *stádo* typically refers to groups of larger herbivores with hooves, such as horses, cows, sheep or goats, but also to antelopes, lamas, and camels.⁹ *Stádo* can also be formed by pigs¹⁰ or elephants, hippos, and even prehistoric mammoths.¹¹ In some cases, *stádo* can consist of several types of animal, usually similar in some way (e.g., a herd of mixed domestic animals such as sheep and goats).¹² In several cases the use of the word *stádo* was unexpected, e.g., when referring to groups of monkeys (e.g., *stádo červených makaků* ‘a herd of red macaques’, *stáda divokých opic* ‘a herd of wild monkeys’), seals (*stádo modrošedých tuleňů* ‘a herd of blue-grey seals’), mammals

“adjectival” construction tends to profile the “collective” level, but only some nouns denoting the grouped entities can be used in it.

⁸ Instances per million.

⁹ More than twenty kinds of herbivorous animals with hoofs were extracted from the corpus data, e.g., *stádo* ‘a herd-SG’ / *stáda* ‘herds-PL’ *koni*, *krav*, *daňků*, *bizonů*, *jelenů*, *ovcí*, *koz*, *jaků*, *losů*, *srn*, *žiraf*, *zeber*, *antilop*, *přímorožců*, *sajg*, *vikuní*, *velbloudů*.

¹⁰ E.g., *stádo/stáda prasat*, *vepřů*, *divočáků*, *kanců*.

¹¹ E.g., *stádo/stáda slonů*, *chobotnaticů*, *hrochů*, *mamutů*.

¹² When the noun *stádo* is in the plural, it is difficult to decide whether each kind of animal has its own herd, or whether the herds consist of several kinds of animal (e.g., *pasoucí se stáda dobytka a koni* ‘grazing herds of cattle and horses’).

that live in water, such as dolphins (e.g., *stádo delfinů* ‘a herd of dolphins’, *stádo kostatek* ‘a herd of killer whales’), or even fish (*stádo hlistounů červenohřívých* ‘a herd of red-breasted nematodes’), birds (*stádo drůbeže* ‘a herd of poultry’, *stádo slepic* ‘a herd of hens’), and insects (*stádo nymf* ‘a herd of nymphs’, a developmental stage of bugs).

In the prototypical cases of herds of cattle, horses, etc., the collective construction with the noun *stádo* tends to refer to such groups that do not seem to be overtly structured and do not seem to act according to some purpose (e.g., to hunt) in an organised way. There may be a tendency to see the animals as having a relatively uniform look and to be doing the same thing together (e.g., grazing or running).¹³ There is also a certain limit to the minimum number of entities that can form a *stádo*: the examples from the SYN2020 corpus indicate that this number might be around six or seven (e.g., *stádo šesti slepic* ‘a herd of six hens’; *stádo sedmi koz a dvou ovcí* ‘a herd of seven goats and two sheep’).

When the noun *stádo* is extended to less typical cases (e.g., a group of dolphins), it can signal that the group is perceived to have features similar to a herd, e.g., not being led by somebody, not saliently organised, etc. In other atypical cases, such as herds of monkeys (*stádo opic*) or hens (*stádo slepic*), the construction can generate additional meanings: the groups of animals are evaluated negatively, e.g., because of their behaviour (monkeys), or the animals are re-classified and construed as domestic animals that are kept in herds (hens; this interpretation can be supported by the fact that hens usually do not fly well, i.e., they are less typical birds and they move on legs, as do the typical animals in herds).

Some collective constructions with *stádo* contained nouns denoting groups of inanimate objects, such as cars (*míříme ke stádu karavanů a dodávek v kamenném lomu* ‘we are heading towards a herd of caravans and vans in the stone quarry’) or clouds (*na dosah pŕlky měsíce jde stádo beránků* ‘a flock of small male sheep is going in reach of the half moon’). In the first example, “the herd of cars” suggests a large and disorganised group of vehicles. On the other hand, a “herd of clouds” represents an expression that is figuratively coherent: the clouds are referred to as small male sheep (*beránek*) and the typical name for a group of sheep is *stádo*, hence *stádo beránků*. (The expression *stádo beránků* can also refer to people. In such cases, it implies innocence or helplessness.)

Finally, *stádo* can refer to a group of people. The corpus data confirm that the collective construction *stádo* + genitive plural form of a noun denoting human beings tends to have expressive, typically negative connotations, as mentioned in the SSČ

¹³ We know that there are often leading animals and that the animals are not uniform in reality, but at first (lay) sight the herd may seem unorganised and the leading animals may not be saliently different from the others.

dictionary (see above). The connotations could be the following: uncivilised, aggressive behaviour, a lack of one's own opinion, a lack of free will, motion in an unorganised uniform group that does not care about the surrounding environment, etc. For example: *zároveň se do vlaku nahrnulo stádo dalších víceméně pochybných cestujících* 'at the same time, a herd of other more or less dubious passengers rushed into the train'; *stádo vzbouřenců se vrhlo v komnaty* 'a herd of rebels stormed the chambers'; *stádo bezhlavých otupených lidí* 'a herd of headless, numb people'; *stádo udýchaných běžců* 'a herd of breathless runners'. The negative evaluation can be attributed to the fact that the expression *stádo* has been extended from animals to humans. Such extensions are typically negatively evaluating and expressive, which is in accord with the finding that language tends to be anthropocentric and construes humans as being "better" than animals (cf. Vaňková et al. 2005 and above).

Several individual instances are worthy of comment. One case of the comparative construction with *jako* 'as, like' containing the collective construction with *stádo* was found and it compared the behaviour of people to that of apes (*jako stádo primátů* 'like a herd of primates').¹⁴ Another interesting case adapted the idiom *ani stádem volů* 'nor by a herd of oxen' (implying hard work) into the comparable construction *jako stádem bernardýnů* 'like a herd of Saint Bernard dogs' (*hledat ... rovnováhu bude těžké i se stádem bernardýnů* 'to seek ... the balance will be difficult even with a herd of Saint Bernard dogs'). In the following example, ants are personalised and keep insects as though they were herds of domestic animals, therefore the collective construction with *stádo* was used instead of the construction with *hejno* 'a flock' that is more typical for insects (see below): *starost o blahobyt a bezpečnost stád housenek se mravencům určitě vyplácí* 'the care for well-being and safety of the herds of caterpillars pays off for ants'. A case of blending (e.g., Turner 2015) that combines the mental space related to *stádo* with that related to slavery also appeared (*bez povědomí svobody není národ národem, to je stádo otroků* 'without the awareness of freedom, the nation is not a nation, it is a herd of slaves').

3.2. HEJNO 'A FLOCK'

The dictionary (SSČ 2012, p. 410) defines *hejno* as a larger group of animals, especially birds. According to the SEMĚ tool^[3], *hejno* is semantically close to various nouns denoting birds, above all to the general expression *pták* 'a bird' and to various kinds of bird (e.g., *dravec* 'a bird of prey', or specific bird species, such as *volavka* 'a heron', *racek* 'a seagull', *krkavec* 'a raven'). Two nouns denoting groups (*houf* and the diminutive *hejnko*) and one activity (*lovící* 'hunting') are also present.

¹⁴ The comparative construction can be seen as a precursor to a fully metaphorical use where a group of people is called "a herd of primates"; however, such an example did not appear in the analysed data.

The data from the SYN2020 corpus suggest that the collective construction (i.e., *hejno* + a noun in the genitive plural form; example (2) above) typically denotes not only larger groups of birds, but also larger groups of fish or insects. Some cases of groups of mammals, groups of inanimate objects, and some extensions to groups of people were also present.

Constructions with several tens of bird species were found in the context, including domestic birds such as hens, wild birds such as pigeons, parrots, and many kinds of water fowl, such as geese.¹⁵ The repertoires of fish and insect species were slightly smaller: the fish group contained various kinds of aquarium fish, but also piranhas;¹⁶ the insect group consisted mostly of flying insects such as mosquitoes, flies, and bees.¹⁷

The collective construction with *hejno* refers prototypically to a larger group that does not seem to have an apparent hierarchical organisation, does not often act as a well-organised unit, and whose members are not easily distinguishable from each other. The type of motion may also play a certain role: members of *hejno* typically do not “walk”, but rather fly, swim, crawl, or hop.

The notion of *hejno* can occasionally be extended to less typical animals (e.g., *hejno sviňuch* ‘a flock of porpoises’, *hejno mořských koniků* ‘a flock of seahorses’, *hejna nejroznějších saurů* ‘flocks of various (dino)saurs’), and to inanimate objects. One case related to mushrooms was found (*hejno lišek* ‘a flock of “liška” mushrooms’). “Flocks” of inanimate objects typically consist of small, independently moving and operating machines such as drones, robots, or satellites (e.g., *hejno malých robotů* ‘a flock of small robots’; *hejna dronů* ‘flocks of drones’). Groups of some other inanimate (potentially) moving objects can also be conceptualised as *hejno* (e.g., *hejno stíhaček* ‘a flock of fighter-planes’, *hejno spících plachetnic* ‘a flock of sleeping sailboats’, *hejno kol* ‘a flock of bicycles’). “Flocks” of cells, molecules, small planets (*hejno buněk* ‘a flock of cells’, *hejno malých molekul vůně* ‘a flock of small molecules of smell’, *s hejnem jejích exoplanet* ‘with a flock of its exo-planets’), or abstract entities such as ideas, looks, or words were also attested (*hejno závistivých pohledů* ‘a flock of envious looks’, *z hejna jejích slov* ‘from the flock of her words’, *hejno myšlenek* ‘a flock of ideas’).

¹⁵ Almost forty different kinds of birds were extracted from the corpus data, e.g., *hejno* ‘a flock-SG’ / *hejna* ‘flocks-PL’ *andulek*, *bažantů*, *holubů*, *labutí*, *hus*, *papoušků*, *drůbeže*, *vrbců*, *havranů*, *ibisů*, *kačen*, *kachen*, *kormoránů*, *koroptví*, *morčáků*, *racků*, *vlaštovek*, *slepíc*, *pávů*, *pelikánů*, *plameňáků*, *havranů*, *špačků*, *slavíků*, *snovačů*, *strak*, *supů*, *tetřevů*, *tetřívků*, *vlhvců*, *vran*.

¹⁶ Examples: *hejno* ‘a flock-SG’ / *hejna* ‘flocks-PL’ *piraní červených*, *piraň*, *akvarijních rybiček*, *barakud*, *bradáčů šupinoploutvých*, *cípalů*, *gavřinovitých*, *makrel*, *skalár*, *sardinek*, *sleďů*, *teter kosočtverečných*, *úhořů*.

¹⁷ Examples: *hejno* ‘a flock-SG’ / *hejna* ‘flocks-PL’ *baboček bodlákových*, *bělásků*, *hmyzu*, *motýlů*, *komárů*, *much*, *masaček*, *molů*, *kobylek*, *včel*, *sršňů*, *světlušek*, *vos*.

Personified inanimate entities such as angels can also form flocks (*hejno anděličků* ‘a flock of angels’). In most of these extended cases, the denoted groups labelled as *hejno* consist of entities that do not “walk”.

The extension to groups of people is also possible. In such cases, the associations tend to be negative, e.g., by associating a larger group of mutually indistinguishable members with some collective behaviour, evaluated as unimportant, vain, etc. For example: *hejno falešných idolů* ‘a flock of false idols’; *hejno podobných psavců 19. věku* ‘a flock of similar 19th-century writers’; *že ji psali čtyři pedagogové a celé hejno lektorů a redaktorů jejich práci kontrolovalo* ‘that it was written by four pedagogues and a whole flock of lecturers and redactors checked their work’; *hejno místních vykutů* ‘a flock of local scammers’. In the case of groups of women (e.g., *hejno mladých žen* ‘a flock of young women’), the derogatory associations are stressed by the fact that women in Czech can sometimes be pejoratively labelled as hens. In the case of *hejna tmavých trik* ‘flocks of dark T-shirts’, the low value ascribed to the given group of people is stressed by the metonymy T-shirt for the person that is wearing it.

However, some examples with neutral or positive associations were also found, and these typically denoted groups of children (see below), e.g., *hejno našich kluků a holčiček* ‘a flock of our boys and girls’.

3.3. SMEČKA ‘A PACK’

The dictionary (SSČ 2012, p. 396) states that *smečka* ‘a pack’ is usually a hunting group of dogs, wolves, etc., but that it can be extended to a pejorative expression for a group or gang of people. The corpus data reveal that the meaning is broader today (see below). According to the SEMĚ tool^[4], *smečka* is semantically similar to other names for groups (*tlupa, stádo, stádečko, klan, banda, rodinka*) and to nouns denoting animals that often form packs, such as wolves (*vlk, vlčice*), predatory animals in general (*šelma*), and dogs (*psisko, hafan, chlupáč, čokl*, most of these nouns have pejorative connotations) and their various kinds (e.g., *vlčák, borderka, pitbul*). Some activities or qualities of animals that form packs are also listed (e.g., *smečkový, uštěkaný, štekající*).

The collective construction (*smečka* + a noun in the genitive plural form; example (3) above) in the SYN2020 corpus typically refers to groups of predatory animals such as wolves, dogs, cats, lions, coyotes, or jackals.¹⁸ The less typical types of animal packs contained rats (*smečka vyděšených potkanů* ‘a pack of startled rats’), alligators (referred to as *smečka zubatých predátorů* ‘a pack of toothy predators’), and sharks (*smečka žraloků* ‘a pack of sharks’).

¹⁸ Examples: *smečka* ‘a pack-SG’ / *smečky* ‘packs-PL’ *vlků, psů, dingů, koček, kocourů, kojotů, lvů, šakalů*.

Some of the constructions with animal nouns denoted groups of animals (e.g., *spatřili smečku psů husky* ‘they spotted a pack of huskies’), but in some cases, the construction was incorporated into a more complex comparative construction starting with *jako* ‘as, like’ (*samopaly se rozštěkaly jako smečka zuřivých psů* ‘the machine guns started to bark like a pack of furious dogs’; see 3.1 as well). The comparative constructions typically built upon some recognisable features or behaviour of a pack of wild predatory animals (e.g., hunting, chasing, barking). The corpus data also reveal that the meaning of *smečka* is wider than the dictionary definition: not all packs of animals are conceptualised as hunting. In some cases, the noun refers to groups of animals that live together and seem to have been interconnected by various ties, i.e., they resemble a (human) family.

Some groups of inanimate objects such as robots, cars, or even electronic devices or programmes can be conceptualised as *smečka*, especially when the groups consist of larger numbers of these entities and the members are seen as acting together or as behaving aggressively as a mass. For example: *počkal jsem, až se převalí smečka aut* ‘I waited for the pack of cars to roll over’ (negative connotations); *farmář si pak takovou smečku robotů objedná* ‘the farmer will then order such a pack of robots’ (positive connotations); *smečka elektronických asistentů* ‘a pack of electronic assistants’. When abstract entities such as companies or fictive creatures are conceptualised as animals or persons, their groups can also be labelled as *smečka* (e.g., *do smečky těch stanic veřejnoprávních medií, která...* ‘into the pack of those public media that...’; *smečka přízraků* ‘a pack of ghosts’).

The noun *smečka* can also be extended to human groups, where it typically acquires a negative evaluation. A group labelled as *smečka* is typically engaged in an activity that resembles a hunting pack (*smečka pronásledovatelů* ‘a pack of pursuers’) or in some negatively evaluated activity (e.g., *smečky věrných psů diktátorských režimů* ‘packs of loyal dogs of dictatorial regimes’; *smečka prostitutek* ‘a pack of prostitutes’).

However, the data from the corpus (including other constructions with *smečka*, e.g., *vlčí smečka* ‘a wolf pack’ for a sports team) indicate that the noun is not always negatively evaluating. It can also refer to a family, a group of friends, or a group of people united by a mutual interest or engaged in a shared activity, such as a musical group or a sports team (e.g., *smečka českých jazzmanů* ‘a pack of Czech jazzmen’; *naše smečka vyhladovělých introvertů* ‘our pack of starving introverts’). In such cases, the label *smečka* suggests that the members have tight mutual or supportive relationships.

Several examples referred to larger groups of children (*smečka dětí* ‘a pack of children’). Some instances had negative connotations (*smečka fakanů s nudlemi u nosu* ‘a pack of brats with snotty noses’); some were positively evaluating (*je*

součástí vlčí smečky přes 120 dětí ve věku od čtyř do osmi let ‘he is a member of a wolf pack of more than 120 children aged four to eight years’).

The noun *smečka* can also be used for some mixed groups. The corpus contains examples of groups of children and domestic animals or several kinds of domestic animal (*smečka dětí a psů* ‘a pack of children and dogs’; *smečka čtyř až šesti psů s kocourem* ‘a pack of four to six dogs and a tomcat’; *zvířecí smečka k vám odjakživa patří, pamatuju si psy, kočky, papouška* ‘an animal pack has always been associated with you, I remember dogs, cats, a parrot’). One condition for a mixed group to be labelled *smečka* could be the quality of the mutual relationships between the members of the group.

4. DISCUSSION AND CONCLUSION

The category of number in Czech nouns is considered a grammatical category based on the distinction “one entity versus more than one entity” (e.g., Karlík – Večerka 2017). Various “exceptions” to this prototypical model have also been described (e.g., Panevová – Ševčíková 2011). Although the category of countability and the opposition “mass (uncountable) versus count (countable)” nouns is not usually applied to Czech material in the Czech linguistic tradition, the “mass versus count” opposition can also be observed in contemporary Czech. For example, the mass nouns tend to have the singular form only. When the plural form exists, it is accompanied by a semantic change (e.g., concretisation – it denotes kinds, portions etc.). There are also constructions, sometimes called singulative or partitive (e.g., Dušková 1988; Nurmio 2023), that enable the conceptualisation of mass nouns as countable: a noun denoting a countable unit and the genitive singular form of the mass noun (e.g., *bochník chleba* ‘a loaf of bread’; examples (4) and (5) above). The singulative construction is not grammaticalised and the nouns denoting the countable units are specific for the counted entities or for types of counted entities. Entities such as bread can thus be conceptualised in two basic ways in Czech: as a mass, or as countable units.

I posed the question whether there is any parallel or analogical phenomenon related to the count nouns: Is it also possible to construe the plural of countable entities in several ways? I argue that there are indeed several possibilities. The first, prototypical case is when the plurality is construed as plurality “neutral”, denoting simply more than one entity. This type of plurality is typically expressed by paradigmatic plural forms of nouns (e.g., *pes* ‘a dog-SG’, *psi* ‘dogs-PL’). But there are also linguistic means that can signal a “group” or “collective” construal that sees the given number of entities as one whole, one unit. This type of construal can be expressed by such means as specific types of numeral (*dvoje boty* ‘two pairs of shoes’), specific word-formation means (see 2), or constructions such as *stádo koní*

‘a herd of horses’, which I have focused on. I have labelled these “collective constructions”.

The collective construction of the type *stádo krav* ‘a herd of cows’ (example (1) above) is formally similar to the singulative construction of the type *bochnik chleba* ‘a loaf of bread’, except that the noun denoting the grouped entity is in the plural form. While the singulative construction enables speakers to construe mass nouns as countable (e.g., as “portions”), the collective construction enables speakers to construe a group of entities as a whole, as one entity. Like the singulative constructions, the collective constructions are not grammaticalised in contemporary Czech and the noun denoting the type of group is usually specific for the grouped entity or type of entity. (The most general expression might be *skupina* ‘a group’.) In this study, I have focused on three frequent nouns that prototypically denote groups of animals: *stádo* ‘a herd’, *hejno* ‘a flock’, and *smečka* ‘a pack’.

The analysis of the corpus data related to the corresponding collective constructions (e.g., *stádo krav* ‘a herd of cows’, *hejno ptáků* ‘a flock of birds’, *smečka vlků* ‘a pack of wolves’; examples (1), (2), and (3) above) offers the following answers to the research questions (see 1):

a) Each of the three constructions is specific not only for certain kinds of animal, but also for a specific type of group organisation and/or behaviour, and the given type of group has relatively stable associations. *Stádo* is thus primarily a large group of large herbivores with hooves that walk or run on longer legs, move or graze together, and do not seem to have a salient structured organisation with a saliently marked leader. *Hejno* consists typically of a larger number of animals that typically move together in a way other than by walking (they fly, swim, crawl, etc.). The organisation and behaviour of *hejno* seems similar to that of *stádo*. *Smečka*, on the other hand, consists typically of predatory carnivores and is conceptualised as a group behaving according to some intention – the members, e.g., chase somebody or hunt together. The group typically has a leader and some internal structure. Associations such as being dangerous and moving quickly (typically by running) may also appear.

b) The prototypical uses of the collective constructions can be extended in several directions: to other kinds of animal, to inanimate entities, and to humans; to groups organised and behaving in a different way (e.g., not all groups labelled as *smečka* in the corpus data refer to a hunting group, which is the dictionary definition); to different evaluative meanings.

The extension to those other than the typical group’s members can be accompanied by re-categorisation of the grouped entities. For example, an inanimate object (e.g., a robot) is conceptualised as an animal of a certain type (e.g., as a domestic animal such as a sheep or a horse, hence *stádo robotů* ‘a herd of robots’).

The extension from an animal to an inanimate thing is in accordance with the so-called Animacy Hierarchy (1st person > 2nd person > 3rd person > human > animate > inanimate; e.g., Corbett 2000, p. 90). The extension from animals to humans, on the other hand, seems to proceed in the opposite direction.

c) According to the theory of the linguistic image of the world (linguistic worldview; Bartmiński 2010), each language represents a certain interpretation of the world, including categorisation and evaluation of the world. This interpretation of the world can be reconstructed by analysing the language and its use.

The collective constructions analysed in this study reveal that contemporary Czech tends to group similar objects together, i.e., it prefers relatively homogeneous categories. The groups conceptualised by the collective constructions consist typically of one kind of entity. The collective construal of mixed groups is relatively restricted, e.g., to entities of a very similar kind (e.g., to relatively similar kinds of domestic animal) or to groups with certain features (e.g., certain types of relationship between members). *Smečka* seems to allow for slightly more heterogeneous groups than the other two types.

Some results of the analysis are also consistent with the general claim from cognitive linguistics (e.g., Vaňková et al. 2005, p. 62) that language tends to be anthropocentric and that the extension of the animal-specific expression to people is typically accompanied by evaluative associations that are negative. This is evident from the fact that although associations related to the given groups of animals can be (depending on the context) neutral or even positive, the extensions to groups of people are frequently accompanied by negative and pejorative associations.¹⁹ People conceptualised as groups of animals lose some part of their human character. Such associations as the lack of one's own will and the presence of crowd behaviour and negatively evaluated or dangerous behaviour arise.

However, the corpus data also reveal some "exceptions" to the above-described tendency for animal-specific expressions to gain negative associations when extended to people. Groups of people conceptualised as *smečka* 'a pack' can gain positive evaluative associations when the strength of relationships and mutual support among members of the group is foregrounded (profiled, e.g., Croft – Cruse 2004, pp. 15 – 16). Groups of children conceptualised as *hejno* 'a flock' can also gain positive associations. The possible reason is harder to come by in this case, but associations such as playfulness or the way children move and act when they are

¹⁹ Similar tendency is observable in many other contexts as well. For example, verbs denoting animal-specific action such as *štěkat* 'to bark' are neutral when used about dogs, but pejorative when extended to people. Metaphorical mapping from animals to people and comparing people to animals can have negative associations as well (e.g., *chovat se jako / hůř než zvířata* 'to behave like/worse than animals').

together could play a role. The general cultural belief that it is good to have children or to have many of them could also be important. Only the groups of people conceptualised as *stádo* ‘a herd’ seem always to have negative associations.

The way we express various types of quantity in our language, including whether we conceptualise something as countable or as mass, as individuals or as collectives, can also be seen as part of our more general cognitive ability to perceive and cognitively manipulate quantity, i.e., of our numeric or mathematical cognition (e.g., Wiese 2003; Beller – Bender 2008; Storch – Dimmendaal 2014, esp. pp. 1 – 32; Rohstein 2017). The way we talk (and think) about quantity in our everyday life is also part of the lay (folk, naïve) theory of mathematics, which is one part of a more general lay (folk) theory of the world. Mathematical cognition and lay theory of mathematics are both important topics that deserve further investigation (not only) in Czech.

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Konceptualizácia kvantity v súčasnej češtine: kolektívne konštrukcie

Resumé

Štúdia skúma rôzne spôsoby vyjadrenia kvantity v súčasnej češtine, s osobitným dôrazom na konštrukcie, ako je *stádo koní*, t. j. konštrukcie, ktoré konceptualizujú väčší počet entít nie ako súbor samostatných jednotiek, ale ako skupiny, celky. Dané konštrukcie pozostávajú zo všeobecnejšieho podstatného mena označujúceho typ skupiny (napr. *stádo*) a genitívu množného čísla podstatného mena označujúceho zoskupené entity (napr. *koní-GEN.PL*). Pre tieto konštrukcie sa navrhuje termín „kolektívne“ konštrukcie, ktoré sa interpretujú ako analytický spôsob konceptualizácie kvantity. S podporou teoretických východísk kognitívneho prístupu jazyka a s využitím dát z korpusu súčasnej písanej češtiny sa štúdia zaoberá vybranými zástupcami danej konštrukcie, ktoré sa primárne používajú o zvieratách (*stádo, hejno, smečka* + podstatné meno v genitíve množného čísla), ale ktoré možno rozšíriť aj na ďalšie entity vrátane človeka.

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REDUNDANCY AND RIVALRY IN LANGUAGE. A CASE STUDY OF RUSSIAN DIMINUTIVES

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Abstract: In the present study of Russian diminutive constructions, I follow Goldberg's idea about semantic or pragmatic differences that always accompany syntactic differences (Goldberg 1995, p. 67). My manually checked database comprises almost 1000 examples culled from the Russian National corpus (www.ruscorpora.ru) and includes three types of diminutive constructions: 1) morphological diminutives of the type *dom-ik* 'house_{DIM}', 2) analytical diminutives such as *malen'kij dom* 'small house' and *milyj dom* 'nice house' and 3) a mixed type where morphological diminutives occur with adjectives, such as *malen'kij dom-ik* 'small house_{DIM}'. My analysis reveals differences between morphological and analytical diminutives, which are not freely distributed across the examples. While morphological diminutives rarely refer to size only, adjectives are often used for further specification and in order to avoid ambiguity. The variation in Russian diminutives sheds light on an important theoretical question of redundancy and its role in language. The results of the present study indicate that redundancy is motivated, has a function and helps language users avoid ambiguity.

Keywords: synonymy, diminutives, redundancy, Russian.

Highlights:

- The study deals with three types of diminutive constructions in Russian, namely morphological, analytical and mixed types of diminutives.
- The study demonstrates that seemingly redundant elements in diminutive constructions are in fact playing an important role in reducing ambiguity.
- The study shows that, contrary to traditional understanding, diminutives are actually rarely referring to the size of an object.

1. INTRODUCTION

While diminutives¹ can “express a bewildering variety of meanings” (Jurafsky 1996, p. 534), it is clearly the reference to size that is prototypical for diminutives,

¹ Slavic languages in general and Russian in particular are famous for having a notoriously varied system of diminutives. Diminutives represent an exciting object of linguistic scrutiny, they can be expressed by a number of suffixes and suffixal combinations, can have positive and negative connotations and can introduce various pragmatic effects (e.g. *diminutivum modestum*, see Staverman 1953). The present study focuses only on one aspect of the use of diminutives. The reader is otherwise referred to the existing ample literature on diminutives (recent works on Russian diminutives include Fufaeva (2020), Voejkova (2020) and references therein).

and most speakers of Russian will agree that the diminutive *zaborčik*², where the diminutive suffix *-čik* is added to a non-diminutive noun *zabor* ‘fence’ in (1) refers to a small fence:

- (1) *On podnjaj vorotnik kurtki, kivnul Mire i, pereprygnuv čerez zaborčik, dvinul prjamo skvoz' golye kusty.* [Akunin 2003]³
 ‘He put up the collar of his jacket, nodded to Mira, and after having jumped over the fence_{DIM}, made his way through the leafless bushes.’

The fence in (1) is clearly small, since, as follows from the context, it is easy to jump over. Had it been a large fence, it would have been impossible for an ordinary human being to jump over it, and climbing up the fence would have been a more suitable lexical choice.

Ever since Wierzbicka’s 1984 analysis of diminutives, it has been common knowledge that diminutives are words that describe not only small, but also nice objects, so not only is the fence small, it is most likely also nice and looking at it triggers positive emotions⁴. The ‘small’ and ‘nice’ meanings are closely related: our affectionate attitude towards children who are small and cute at the same time motivates the CUTE IS SMALL metaphor. In addition to the metaphor, it is also possible to identify metonymy involved in diminutives, since objects and our attitudes towards these objects are related metonymically. In a nutshell, in the domain of size, diminutives refer to objects smaller than some standard, while in the domain of emotions, diminutives refer to entities that are nicer, more cute than usual (Makarova 2014). While all this seems uncontroversial, the use of diminutives is not completely unproblematic. The problem is that there are several ways to express the same meaning. Instead of *zaborčik* in (1), one could have simply used an analytical construction with an adjective meaning ‘small’ and said *malen'kij zabor* ‘small fence’. Such constructions are attested in the corpus, see (2):

- (2) *Za malen'kimi zaborami vidnelis' kloki travy, doedaemye telënkom [...]*
 [Uspenskij 1877]
 ‘Behind the small fences one could see patches of grass eaten by the calf.’

Why is it then that in some cases speakers use diminutives, while in other prefer analytical constructions? Is the expressed meaning identical? The situation is further

² Cyrillic script in the examples is romanized using the scientific standard.^[1]

³ All examples in the article come from the Russian National Corpus^[2], RNC. For literary texts, the author’s name and publication date are provided, for newspapers the name of the newspaper and the publication year. The database collected in the Spring 2017, is publicly available via TROLLing (Makarova 2025).

⁴ The reader is referred to a more recent analysis of diminutives in Taylor (2003, p. 172 ff.) where it is demonstrated how smallness is related to other meanings via metaphors and metonymies.

complicated by another possibility, namely a combination of diminutives with adjectives meaning ‘small’. Consider the analytical construction with a diminutive in (3):

- (3) *Žili dostatočno skromno, byli malen'kie zaborčiki mežu učastkami.*
[Ginzburg 2001]
‘We lived quite modestly, there were small fences_{DIM} between the pieces of land.’

Is it the case that *malen'kie zaborčiki* in (3) are smaller than just *zaborčiki* and adjectives meaning ‘small’ in such contexts express additional smallness of the already small entities referred to by diminutives? And are *zaborčik* and *malen'kij zabor* the same size? What is the semantic contribution of the adjective and the diminutive suffix, or are they simply redundant? In the following, I handle the three types of expressions as constructions:

- (4) A. morphological construction: noun with a diminutive suffix, as *zaborčik*;
B. analytical construction: non-diminutive noun and an adjective meaning ‘small’, as *malen'kij zabor*;
C. analytical construction with diminutive: noun with a diminutive suffix and an adjective meaning ‘small’, as *malen'kij zaborčik*.

The main question of the present study pertains to the relationship between the constructions in (4). Whether or not and to which extent are they synonymous? The answer to this question largely depends on the definition of synonymy. A note on terminology is in order here. The concept of synonymy is problematic, insofar as it covers phenomena ranging from close synonyms, i.e. expressions that are nearly the same in meaning, to partial synonyms, i.e. expressions that share their meaning only to some extent. While absolute synonyms⁵, i.e. expressions that vary in form, but not in meaning or environment they are attested in, probably do not exist, synonymy is a gradient phenomenon. Much in the spirit of Baayen et al. 2013, I prefer thinking of synonyms as rival forms. Rival forms have been discussed in the literature and various terms have been proposed, most of the researchers, however, agree that absolute synonymy does not exist (cf. Carstairs-McCarthy 1994, Clark 1993, Croft 2001, Haiman 1980, Laporte et al. 2021, and Leclercq and Morin 2023, Uhrig 2015). The diminutive constructions that are addressed in the present study, are clearly rival forms (or “seemingly synonymous”): they are close in meaning and occur in similar

⁵ In the case of absolute synonyms one can already consider to use the other term, namely (semantic) equivalence. In the present study, this is hardly a viable solution since, as will be shown, the constructions under scrutiny are clearly not equivalents.

environments. To which extent they are synonyms in the narrower sense of the term, is investigated in the present study. I take Goldberg (1995, p. 67)’s idea “[i]f two constructions are syntactically distinct, they must be semantically or pragmatically distinct” as my point of departure and investigate the seeming redundancy of Russian diminutives by looking at corpus data. The article is structured as follows. In section 2, I provide the overview of the data used in the study. Section 3 addresses the contrasts between the morphological and analytic diminutive constructions. In section 4, I discuss the role of the adjective meaning ‘small’ in diminutive constructions. Section 5 shortly describes the various adjectives meaning ‘small’ and touches upon the notion of semantic overlap. In section 6, I show that diminutives thrive in contexts with other diminutives. In section 7 I consider mass nouns and argue that diminutives are in fact almost never about size. The main findings of the study are summarized in section 8. While the study focuses on Russian diminutives, it is relevant for other Slavic languages and has implications for linguistics in general since it contributes to the discussion of redundancy and its role in language (see Janda & Reynolds 2019, Levshina 2020 and 2021, as well as Tal & Arnon 2022).

2. DATA

In order to shed light on the distribution of diminutives expressed solely by diminutive suffixes (morphological diminutive construction), analytical constructions with adjectives meaning ‘small’ and combinations of diminutives with adjectives meaning ‘small’, a quantitative and qualitative analysis of actual language data is required. A comprehensive analysis of all substantival diminutives in the corpus with all possible analytical synonymous constructions is not a feasible task; and before one can address a larger dataset, it is meaningful to have a case study of a manageable size that will enable a detailed qualitative analysis of examples. For such a case study the word *dom* ‘house’ was chosen. *Dom* is a concrete noun referring to a sizeable object of reality. As follows from the information in the RNC⁶, *dom* is a common word with ipm 865.893, it is well attested in both fiction and non-fiction texts, and has a stable distribution over the years without any significant peaks. For the study, a database with all attestations of *domik* ‘house_{DIM}’, *malen’kij dom* ‘small house’ and *malen’kij domik* ‘small house_{DIM}’ were culled from the RNC (a total of 2295 examples). In order to avoid personal preferences of the language users, only one example per author was included in the final database, leaving us with 978 examples. Each example in the dataset was tagged for the following properties: adjectives describing small size in the context (e.g. *malen’kij* ‘small’, *miniatjurnyj* ‘tiny as a miniature’, *krošečnyj* ‘tiny’), adjectives of affection in the context (e.g.

⁶ See “portrait of the word”^[3].

simpatičnyj ‘nice’), other diminutives in the context, whether or not the diminutive is part of a lexicalized unit (e.g. *kartočnyj domik* ‘house of cards’). Lexicalized units amount to 217 attestations (30% of examples). The distribution of the examples is presented in Table 1. Note that the numbers for *malen’kij domik* are not included in *domik*, but calculated separately.

Table 1: Overview of the data from the Russian national corpus. One example per author.

Diminutive construction	Number of examples
<i>domik</i>	745 (76%)
<i>‘malen’kij’ dom</i>	84 (9%)
<i>‘malen’kij’ domik</i>	149 (15%)
	978 (100%)

As we can see from the numbers in Table 1, all the three options are attested in the corpus, but not evenly distributed in the data. The diminutive *domik* is the most frequent diminutive construction with 76% of the examples. The redundant construction with both an adjective meaning ‘small’ and the diminutive *domik* covers 15% of the data, while the least represented option is the combination of the adjective meaning ‘small’ and the non-diminutive noun *dom* ‘house’ (9% of the data). The dataset is small enough to enable a detailed qualitative analysis and large enough to make basic generalizations.

3. DO DOMIK, MALEN’KIJ DOM AND MALEN’KIJ DOMIK ALL MEAN ‘SMALL HOUSE’?

In the present section, I provide an analysis of diminutives and analytical constructions with the adjectives meaning ‘small’ and diminutive and non-diminutive nouns, and argue that the three diminutive constructions, while they are characterized by some semantic proximity, are not close synonyms.

Diminutives refer to entities smaller than some standard. In this way, *domik* refers to a house smaller than a usual, normal, standard house. In order to pinpoint the possible semantic nuances between the constructions, I carry out a substitution test. If the diminutive *domik* and the analytical constructions with an adjective meaning ‘small’, such as *malen’kij dom*, are near-synonyms, one would expect them to be mutually interchangeable in the actual linguistic contexts without introducing any significant differences in meaning. Consider example (5):

- (5) *Sejčas vse vlastnye graždanskije struktury Čečni obitajut v četyrëxëtažnom domike s pristrojkoj i gostinicej dlja VIPov.* [Izvestija 2001]
‘Now all Chechen governmental structures live in a four-storey house_{DIM} with an annex and a hotel for VIPs.’

The use of the diminutive *domik* in (5) is ironic: a house with four floors that houses all the governmental institutions of a whole republic, as well as an annex and a hotel can hardly qualify as a small house, and substituting *domik* with *malen'kij dom* in (5) is infelicitous. The reason why the use of the diminutive *domik* is possible, lies in the ambiguous nature of diminutives. As pointed out in section 1, diminutives not only refer to the size, but also attitude. The analytical constructions with the adjectives of small size and non-diminutive nouns, on the contrary, only refer to the size and are, therefore, more restricted in their use. It is the morphological diminutives, but not analytical constructions as in (4B), that involve ambiguity and can introduce various pragmatic effects. It should be noted that the ironic attitude in (5) does not need to refer to object described by the diminutive, i.e. the house itself; rather, it refers to the whole message. Such a transfer of the ironic attitude can be captured in terms of part - whole metonymy: while the diminutive only marks part of the message (one word), it actually introduces a pragmatic effect to the message as a whole. Let us now consider the substitution of the diminutive *domik* in (5) with the third type of diminutive constructions, namely adjectives meaning 'small' and diminutive nouns. Interestingly, just adding an adjective meaning 'small' to the context in (5) is not impossible; however, it does contribute with additional pragmatic effects. Using *malen'kij domik* instead of just *domik* in (5) seems to enhance the ironic effect of the text.

As demonstrated above, substituting morphological diminutives with analytical diminutive constructions comes with semantic or pragmatic changes. How about the other way around, can we freely substitute analytical diminutive constructions with morphological diminutives?

- (6) *Lejla prišla v moj malen'kij dom s veščami i reběnkom.* [Sadulaev 2009]
 'Lejla came into my small house with her things and a child.'

In (6), the diminutive construction *malen'kij dom* should be understood literally, the person is referring to a small house, and it is the small size of the house that is important. We know from the wider context that the protagonist used to live alone in the house and suddenly the house became crowded when two more people with more things moved in. Substitution of *malen'kij dom* in (6) with *domik* is possible, however, we are running the risk of adding meanings that are not there. Since diminutives are ambiguous, using a diminutive in (6) would enable a different reading of the whole context where the focus would no longer be on the size of the house, but on the attitude towards the house. This risk is even bigger if we substitute *malen'kij dom* in (6) with *malen'kij domik*.

The substitution tests discussed above suggest that, while close in meaning, the three types of diminutive constructions are not mutually interchangeable. Substitution

tests demonstrate that replacing one type of diminutives with another comes with meaning differences. Analytical diminutive constructions focus primarily on size, while morphological diminutives open up for wider interpretations. While we see that the analytical constructions with adjectives meaning ‘small’ and diminutive nouns as in *malen’kij domik* is more similar to morphological diminutives than analytical constructions with non-diminutive nouns, the role of the adjectives meaning ‘small’ in combination with morphological diminutives calls for further investigation.

4. THE ROLE OF THE ADJECTIVE ‘SMALL’ IN ANALYTICAL CONSTRUCTIONS WITH DIMINUTIVES

What is the semantic contribution of the adjective in diminutive constructions with morphological diminutives and adjectives meaning ‘small’? If *domik* already means ‘small house’, why do we need to add an adjective meaning ‘small’? Is it the case that *malen’kij domik* is an even smaller house than just *domik*? In order to pinpoint the role of the adjectives in diminutive constructions with morphological diminutives, one would need to find diminutives that refer to size only, otherwise one could argue that the diminutive has the attitude reading while the adjective focuses on the size. Finding diminutives that only refer to size is far from a trivial task. With the dataset at hand, the only plausible solution is to analyze lexicalized diminutives that clearly refer to small entities, such as *kartočnyj domik* ‘house of cards’ or *prjaničnyj domik* ‘gingerbread house’; the houses in these two examples are undoubtedly smaller than standard houses where people live. If it is the case that adding adjectives meaning ‘small’ to such lexicalized uses of *domik* results in even smaller houses, we can conclude that adding ‘small’ adjectives to morphological diminutives is used to refer to even smaller entities than those described by diminutives only.

In the dataset, there are 217 examples of lexicalized uses of the diminutive *domik*, however, there are only two examples of such diminutives with an adjective meaning ‘small’. One of them is (7):

- (7) *Tut vam i dereven’ka iz kroxotnyx prjaničnyx domikov, i vetrjanaja mel’nička, gordo vozvyšajuščajasja nad zarosljami anjutinyx glazok...*
 ‘Here you have a village_{DIM} with tiny gingerbread houses_{DIM}, and a windmill_{DIM}, proudly overlooking the thicket of pansies’

Gingerbread houses are normally quite small and definitely smaller than usual houses, however, to which extent the adjective *kroxotnyj* ‘tiny’ modifies the size of the gingerbread house is unclear. It is likely that in (7), *kroxotnyj prjaničnyj domik* ‘tiny gingerbread house’ is smaller than *prjaničnyj domik* ‘gingerbread house’, but

we do not have enough data in order to claim that adding a ‘small’ adjective to diminutives always results in even smaller objects than those referred to by diminutives without ‘small’ adjectives. Note that the context in (7) is full of diminutives, *dereven’ka* ‘village_{DIM}’, *domik* ‘house_{DIM}’, *mel’nička* ‘windmill_{DIM}’, *glazki* ‘eyes_{DIM}’, an issue we will return to in section 6.

5. MALEN’KIJ VS. OTHER ‘SMALL’ ADJECTIVES. SEMANTIC OVERLAP

There are several adjectives in the database with the meaning ‘small’, *malen’kij* ‘small’ being by far the most frequent one (90 attestations). The other ‘small’ adjectives attested in the dataset are: *nebol’šoj* (39) ‘small, lit. non-big’, *krošečnyj/kroxotnyj* (16) ‘tiny’, *malyj* (2) ‘small’, and *miniatjurnyj* (2) ‘tiny as a miniature’. All these adjectives apart from *malen’kij* are clearly about physical size. The adjective *malen’kij* is special, since etymologically it is a diminutive itself. *Malen’kij* has practically replaced its non-diminutive base *malyj*, which is barely used in standard modern Russian. Being a diminutive, *malen’kij* is ambiguous per definition, and can either mean just ‘small’ or ‘small and/or nice’ (Rusakova 2012). Therefore, one can argue that in *malen’kij dom* we are dealing with a double reduplication: the small size is expressed twice, once in *malen’kij* and once in the diminutive *domik*, but also the positive attitude is expressed twice, both in the diminutive adjective and the diminutive noun. The other ‘small’ adjectives enable us to reduce the ambiguity somewhat. A case in point is *nebol’šoj domik* in (8):

- (8) *Vdova svjašennika Goljakova s det’mi živět v nebol’šom zelěnom domike rjadom s cerkov’ju.* [Sokolov-Dmitrič 2007]

‘The widow of the priest Goljakov with kids lives in a small green house_{DIM} next to the church.’

The smallness of the house is expressed twice, with the adjective *nebol’šoj* and the diminutive *domik*, the attitude, however, can only be expressed by the diminutive noun. We are therefore dealing with an overlap in reference to size, but no overlap in reference to attitude. While it is impossible in contexts with substantival diminutives to avoid ambiguity completely, it is indeed possible to reduce this ambiguity by selecting other adjectives meaning ‘small’ than *malen’kij*.

Semantic overlap is a well-attested phenomenon in language. More often than we might notice ourselves, we express the same meaning several times in one and the same utterance. The plural meaning in *many apples* is expressed both by the word *many* and the plural form *apples*. Semantic overlap in Russian diminutives is therefore only natural. As illustrated above, we find semantic overlap in phrases where diminutives are used along with adjectives meaning ‘small’ as in *malen’kij*

domik. Not surprisingly, the adjectives describing attitude can also combine with diminutives. We find examples like *simpatičnyj domik* ‘nice house_{DIM}’ where the attitude is expressed both in the adjective *simpatičnyj* ‘nice’ and in the diminutive noun. In cases of semantic overlap between the adjectives and the nouns, the adjectives focus on one of the properties expressed by the diminutives, in this way helping to adjust the relative strength of the semantic components in diminutives. The fairly high number of examples (149 out of 894, i.e. 17%) where the diminutive *domik* is used with an adjective meaning ‘small’ suggests that speakers relatively often feel the need to disambiguate the diminutives by using adjectives. Using diminutives alone would arguably not have enough focus on the size of the house.

6. DIMINUTIVE CHAIN REACTION

As follows from (7), diminutives can be used in contexts with other diminutives. In example (7), four out of five nouns in the sentence are diminutives. This is by no means an exception. Diminutives are typical for child-directed speech, as well as for speech about children. In other words, either the communication partner (child) triggers positive attitude and hence the use of diminutives, or the topic of communication (child) motivates the use of diminutives (cf. Jurafsky 1996, Gillis 1997, Stephany 1997, Voeykova 1998, Voejkova 2020, Makarova 2014). Although primarily associated with children, the use of diminutives is not limited to child-related contexts. The use of diminutives extends to other (primarily) informal settings, marks affection, politeness, irony, etc. Crucially, affectionate and otherwise emotional contexts are the natural sphere of use of diminutives. In such contexts, diminutives attract other diminutives in this way marking the affectionateness of the whole context. Diminutives thrive in contexts with other diminutives. In the database, we find that all the three types of diminutive constructions are attested in contexts with other diminutives, often several in one and the same sentence. The numbers are summarized in Table 2 below.

Table 2: The number of examples where other diminutives are attested with diminutive constructions.

Diminutive construction	Number of examples with other diminutives
<i>domik</i> (not lexicalized)	25%
<i>‘malen’kij’ dom</i>	14,3%
<i>‘malen’kij’ domik</i>	21%
	978 (100%)

We see from Table 2 that the lowest amount of other diminutives (14,3% of the contexts) has been attested in contexts with the analytical construction with the non-diminutive noun of the *malen’kij dom* type. More diminutives are attested in contexts

with diminutives and adjectives meaning ‘small’ (21% of cases), and most frequently (25% of the contexts) the other diminutives co-occur with diminutives without any adjectives. These numbers are in fact not unexpected and can be explained by semantic factors. *Malen’kij dom* is the diminutive construction where affection is barely expressed (on the adjective, if at all), and consequently it attracts the lowest number of other diminutives in the context. *Malen’kij domik* is clearly more affectionate, however, *malen’kij* can emphasize the size semantics and, consequently, does not attract as many other diminutives. It is *domik* that is at least as much about attitude as size (or even more so), and it is the overall affectionate context of *domik* that attracts other diminutives. Once again, we see that it is the other semantic components in diminutives than size that play a crucial role. A question then arises to what extent is size at all expressed in diminutives. This question is addressed in the following section.

7. ARE DIMINUTIVES ABOUT SIZE AT ALL? THE CASE OF MASS NOUNS

If diminutives are primarily about size, we should only expect to find diminutives that refer to physical objects that have measurable size, i.e. count nouns like *domik* ‘house_{DIM}’ or *sobačka* ‘dog_{DIM}’. However, as the analysis presented above suggests, the diminutives of count nouns do not always refer to size. While this is hardly any new idea, I would like to provide an additional illustration of the fact that diminutives do not need to refer to size at all. A case in point are Russian mass nouns, which also form diminutives, e.g. *pesoček* ‘sand_{DIM}’ or *vodička* ‘water_{DIM}’. Moreover, Russian abstract nouns allow the formation of diminutives, and we find examples like *pravdočka* ‘truth_{DIM}’ or *znan’ice* ‘knowledge_{DIM}’. In fact, diminutives are not limited to nouns and can be formed from adjectives, adverbs and even verbs, i.e. words that refer to entities that are not characterized by size at all (Makarova 2014, Makarova 2015). Diminutives from count nouns can refer to size and/or attitude. However, diminutives from other types of nouns as well as other word classes cannot refer to size since size is not available, instead, they serve expressive purposes and refer to metaphorically and metonymically related properties (as is well described in the literature, cf., for example, Jurafsky 1996, Taylor 2003, or, specifically for Russian, Makarova 2014). Taken to the extreme, one could suggest that diminutives do not need to refer to size at all. In order to get a better understanding of the use of diminutives, let us zoom in on mass nouns.

A typical mass noun is *voda* ‘water’. The diminutive *vodička* is attested 959 times in the RNC. In the database with only one example per author, which contains 323 diminutives, *vodička* is attested 63 times (20% of all attestations) with affectionate nouns and 189 times (59% of all examples) with other diminutives in the context, thus, showing a typical diminutive behavior. Example (9) illustrates the point:

- (9) *Sestrěnka, kofejku nam, vodički sladen 'koj!*
 'Sister_{DIM}, coffee_{DIM} for us, sweet_{DIM} water_{DIM} !'

The context in (9) is very informal, with notes of familiarity, and the overall attitude expressed is positive, both to the waitress, the anticipated coffee and the water. The use of the diminutive derived from a mass noun is by no means ungrammatical.

The important way in which mass nouns are different from count nouns, is that we do not find adjectives referring to size with mass nouns for a natural reason of mass nouns referring to entities without size. Thus, diminutives in such cases only mark the positive attitude ignoring the dimensions⁷.

If not very productive for mass nouns, mass nouns diminutives are definitely grammatically possible and attested in Russian. Simple searches in the RNC reveal that, for example, the noun *pesok* 'sand' is attested 25,993 times while the related diminutive *pesoček* has 628 attestations (2,3% of cases), *voda* 'water' is attested 219,775 times, and the diminutive *vodička* 959 (0,5% of cases). For comparison, the count noun *dom* 'house' is attested 337,257 times in the main corpus, while the diminutive *domik* has 19,235 attestations (5,4%). The three examples above suggest that diminutives might be more characteristic of count nouns than mass nouns, but they do not enable us to make any reliable generalizations. What is likely, however, is that diminutives are actually much more widespread for both count and mass nouns than what the numbers in the corpus suggest. As is well-known, diminutives are more associated with informal spontaneous communication, so the number of attestations in the RNC is probably lower than in the actual language use, since spontaneous informal communication is underrepresented in the RNC.

As shown above, mass nouns in Russian form diminutives and these diminutives are by no means marginal in the language. The fact that mass nouns refer to entities that lack size does not impede the formation and use of mass nouns diminutives indicating that size might not be as crucial for diminutives as both naïve language users and linguists tend to believe.

8. CONCLUSION

Based on an analysis of corpus examples from the Russian National Corpus, the present study addressed the distribution of three "rivals", three seemingly synonymous constructions: morphological diminutives (*domik* 'house_{DIM}'), analytical constructions with an adjective meaning 'small' and a non-diminutive noun (*malen'kij dom* 'small house'), and analytical constructions with an adjective

⁷ While it is possible that diminutive of mass nouns refer to small amounts, no such examples have been attested in the dataset. It should also be noted that attitude expressed by diminutives does not necessarily have to be positive. Diminutives can mark irony, and, via irony, even negative attitude. Such examples, however, have not been attested in our data.

meaning ‘small’ and a diminutive noun (*malen'kij domik* ‘small house_{DIM}’). The main results of the study can be summarized in five points.

First, the qualitative analysis of examples suggests that, while clearly close in meaning, the three constructions are not mutually interchangeable. Analytical diminutive constructions focus primarily on the size of the entity in question, while morphological diminutives open up for wider interpretations. It is the morphological diminutives that are ambiguous in that they refer to size and/or attitude; such diminutives can introduce ironic or other pragmatic effects, and these pragmatic effects are lost when morphological diminutives are substituted by analytical constructions with an adjective meaning ‘small’ and a non-diminutive noun. Substituting analytical constructions with an adjective meaning ‘small’ and a non-diminutive noun with diminutives, on the other hand, enables interpretations with various pragmatic effects that are not intended in the original context.

Second, the role of the seemingly redundant adjective in the constructions with morphological diminutives of the type *malen'kij domik* ‘small house_{DIM}’ has been investigated. While more data is needed in order to draw reliable conclusions, it is likely that adding an adjective meaning ‘small’ to a diminutive noun can refer to an even smaller object than the one described by the diminutive alone. Adding an adjective does not really result in redundancy, rather, adjectives adjust the relative strength of the semantic components of diminutives (size vs. affection).

Third, the adjectives meaning ‘small’ have been analyzed. It is the case that the most frequent ‘small’ adjective in Russian, *malen'kij*, is etymologically a diminutive itself and therefore carries a certain ambiguity. This ambiguity can be avoided if other ‘size’ adjectives are used instead of *malen'kij*. So, in order to avoid ambiguity of substantival diminutives, we need to use a ‘size’ adjective if we want to emphasize the small size of the object. Furthermore, this ‘size’ adjective should not be *malen'kij*.

Fourth, the analysis of corpus data suggests that diminutives thrive in context with other diminutives. The more affectionate the diminutive construction, the likelier it is to appear in context with other diminutives. The three types of diminutive constructions form a scale in terms of how much affection vs. how much size they are likely to express: *malen'kij dom* > *malen'kij domik* > *domik*, where *domik* is the most ambiguous one, arguably the most affectionate, and the one that is most frequently attested with other diminutives.

Taken together, these four points summarized above suggest that diminutives do not really need to pertain to the size at all. Mass nouns provide further support to this claim. Mass nouns describe entities without clear dimensions and nevertheless form diminutives in a completely unproblematic way. This is probably the major finding of the study. Contrary to what is believed about diminutives, namely that they refer to small objects, size is not at all central for diminutives.

While the present study is a small-scale, mostly qualitative, case study of one diminutive in Russian, and a larger study of more diminutives is required in order to make reliable generalizations, it does make its contribution both to our understanding of diminutives in Russian and beyond, as well as redundancy and competing forms in language in general. The present study suggests that there is no pure redundancy, and that seemingly synonymous expressions have semantic and/or pragmatic nuances.

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Redundancia a konkurencia v jazyku. Prípadová štúdia ruských deminutív

Resumé

Štúdia sa venuje analýze deminutív v ruštine, pričom z teoreticko-metodologického hľadiska nadväzuje na Goldbergovej myšlienku o sémantických alebo pragmatických rozdieloch, ktoré vždy sprevádzajú syntaktické rozdiely (Goldberg 1995, s. 67). Materiálovým východiskom analýzy je manuálne anotovaná databáza takmer 1000 jednotiek z Ruského národného korpusu (www.ruscorpora.ru). Predmetom analýzy sú tri typy deminutívnych konštrukcií: 1) morfológické zdrobneniny typu *dom-ik*, 2) analytické zdrobneniny typu *malen'kij dom* a *milij dom* a 3) zmiešaný typ, v ktorom sa morfológické zdrobneniny vyskytujú s adjektívami, napríklad *malen'kij dom-ik*. Analýza odhaľuje rozdiely medzi morfológickými a analytickými zdrobneninami. Kým morfológické zdrobneniny sa zriedkavo vzťahujú len na veľkosť, adjektíva sa často používajú na bližšiu špecifikáciu a s cieľom vyhnúť sa dvojznačnosti. Rozdiely v ruských deminutívach ilustrujú dôležitú teoretickú otázku redundancie a jej úlohy v jazyku. Výsledky tejto štúdie naznačujú, že redundancia je motivovaná, má svoju funkciu a pomáha používateľom jazyka vyhnúť sa dvojznačnosti.

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THE COLLOCATION *HOLUBIČÍ NÁROD* ‘DOVE-LIKE NATION’ AND *HOLUBIČIA POVAHA/NÁтура* ‘DOVE-LIKE NATURE’ IN CONTEMPORARY SLOVAK JOURNALISM

Milena Hebal-Jezierska

HEBAL-JEZIERSKA, M. (2025): The Collocation *holubičí národ* ‘Dove-Like Nation’ and *holubičia povaha/nátura* ‘dove-like nature’ in Contemporary Slovak Journalism. In: *Slovenská reč*, 90/2, 107 – 125.

Abstract: This article explores the linguistic expression *holubičí národ* (“dove-like nation”) and the related collocations *holubičia povaha/nátura* (“dove-like nature”). The research material was drawn from the Slovak language corpus *prim-10.0-public-sane* (journalistic subcorpus) as well as from general Slovak language dictionaries. Particular attention is given to semantic shifts in these expressions, their deviations from prototypical meanings, the functioning of modified meanings in specific contexts, and their axiological dimensions. To trace meanings and metaphors, the study examines the definitions of the analysed lexemes and their paradigmatic relations. The use of the collocations *holubičí národ* and *holubičia povaha/nátura* in Slovak journalism and public discourse reflects an ongoing, intense debate about the auto-stereotypical characterization of Slovaks encapsulated in the concept of a dove-like nation. This process is evident in the semantic shift of the term, which originally denoted a nation characterized by peacefulness, tolerance, and moral integrity. Over time, however, it has acquired negative connotations, suggesting cowardice, a lack of assertiveness, and an absence of significant achievements. These semantic transformations align with the metaphor of the non-warrior, which emerges from both corpus occurrences and an analysis of the definition and paradigmatic relations of the adjective *holubičí* as well as the collocations *holubičí národ* and *holubičia povaha/nátura*.

Keywords: Slovak language, dove-like nation, non-warrior metaphor, semantic analysis, stereotype.

Highlights:

- This article examines the linguistic expressions *holubičí národ* (“dove-like nation”) and related collocations *holubičia povaha/nátura* (“dove-like nature”).
- The study contributes to ongoing intense discussion about the autostereotypical characteristics of Slovaks, which is captured in the concept of *holubičí národ*.
- The selection of the dove as a symbol of this stereotype is driven by its positive symbolism, deeply rooted in both Slavic folklore and Christian tradition.
- The data from contemporary texts prove semantic shift of the term from its originally positive connotation (initially, it denoted a nation characterized by peacefulness, tolerance, and moral integrity) to negative connotations (implying cowardice, an inability to stand up for oneself, and a lack of significant achievements).

1. INTRODUCTION

This article examines the linguistic expression *holubičí národ* ‘dove-like nation’ and, additionally, the collocation *holubičia povaha/nátura* ‘dove-like nature’ provided it is used in the same sense as the phrase *holubičí národ*¹. The material for the analysis was drawn from the Slovak language corpus *prim-10.0-public-sane* (journalistic subcorpus) as well as from general dictionaries of Slovak language and a dictionary of synonyms. In the introductory section, which is dedicated to the historical background and scholarly discussion of the analysed expressions, examples from the subcorpus of academic and popular science texts, as well as other sources from the relevant literature, are also considered.

The selected examples were analysed in terms of the meanings of the expressions *holubičí národ*, *holubičia povaha/nátura*. Particular attention was given to semantic shifts in these expressions, the ways in which they deviate from their prototypical meanings, the functioning of modified meanings in specific contexts, and their axiological dimensions (Puzynina 1992). Cognitive metaphors (cf. Lakoff – Johnson 2010) identified in the analysed examples were also discussed. To trace meanings and metaphors, the definitions of the studied lexemes and their paradigmatic relations — such as their synonyms, antonyms, hypernyms were explored.

2. THE CONCEPT OF *HOLUBIČÍ NÁROD* – GENERAL OVERVIEW

The expressions *holubičí národ* ‘dove-like nation’, *holubičia povaha/nátura* ‘dove-like nature’ are employed to describe the Slovak national character. The origins of these expressions can be traced back to the works of authors from the Romantic era. This collocation was frequently used by Ján Kollár in his poem *Slávy dcera*, where he depicted the Slavs as a peaceful people, linguistically articulating this notion as *náš národ holubičí* ‘our dove-like nation’. Juraj Palkovič is also regarded as one of the first to introduce the image of the dove-like character into Slovak culture (Škvarna – Šoltéz 2008).

The selection of the dove as a symbol of this stereotype was driven by its positive symbolism, deeply rooted in both Slavic folklore and Christian tradition. The dove is perceived as a pure and sacred bird, and it serves as one of the most representative symbols of the soul. It is also associated with the Holy Spirit (Masłowska 2022, p. 184). Stereotypical attributes ascribed to doves include gentleness, kindness, and a monogamous lifestyle, which is linked to loyal love (Masłowska 2022, p. 185). Furthermore, the dove is an international symbol of peace.

¹ In the article, I do not analyze other expressions whose original meaning refers to pacifistic attitude, e.g. *holubičia duša*.

In contrast to other Slavic nations, among Slovaks², the motif of the dove-like nation gained significant popularity and became one of their self-stereotypical traits. According to ethnologist Eva Krekovičová, the myth of the dove-like nation, portraying Slovaks as a “better, kind, polite” people, is typical of nations occupying a non-dominant position (Gális 2005). Politicians frequently draw on the myth of the “dove-like nation” (Zenderowski 2022, p. 27), and its disregard – like the neglect of other national myths and stereotypes – may result in the loss of political support or even the collapse of entire political movements. Krekovičová (Gális 2005) asserts that one of the reasons for the decline of the Slovak political movement *Verejnost' proti násiliu* ‘Public Against Violence’ was precisely its failure to acknowledge this fact. On the international stage, the Slovak MEP Miroslav Radačovský’s peace appeal during a session of the European Parliament, where he released a dove, attracted significant attention.

The motif of the dove-like nation also appears in literature, theatre, and other forms of artistic expression. As Pekarovičová (2020, p. 155) observes, “It becomes the basis for literary representation with a full range of portrayals, from sympathetic tolerance to its parody.” One of the most popular Slovak songs is *My sme národ holubičí* ‘We are the dove-like nation’, performed by Richard Müller and written by Milan Lasica and Jaroslav Filip. However, criticism of the dove-like nation is expressed in Peter Krištúfek’s novel *Dom hluchého* ‘The House of the Deaf Man’, where dove-like does not denote peacefulness but cowardice.

- (1) *Kedže sme **holubičím národom** – s perím a jemnými zobákmi, s pazúrikmi len tak akurát, hrkútame ako hrdličky – po svojom sme sa pustili do boja. Nie tak naozaj, len takým tým holubičím spôsobom, prostredníctvom symbolov. Aktom odporu bolo všetko, aj to, keď ste išli ráno na záchod. Čo z toho, že vás nikto nevidel.*

‘Since we are a **dove-like nation** – with feathers and delicate beaks, with claws just enough, cooing like turtle doves – we entered the fight in our own way. Not for real, just in that dove-like manner, through symbols. Everything was an act of resistance, even going to the bathroom in the morning. What did it matter if no one saw you.’

Today, Slovak stereotypes and myths are subject to intense analysis and increasing criticism. Some intellectuals call for overcoming romantic myths, including the myth of the dove-like nation. In his essay *O slovenskej eseji*, Rudolf Chmel writes: “The Hlasist words about the need to overcome romantic notions and

² In Vajtauer’s book *Český mythus. Co nám lhaly dějiny* ‘The Czech Myth: What History Lied to Us About’, the author also mentions the myth of the *dove-like nation*; however, it is not as widespread among Czechs as it is among Slovaks.

legends regarding the ideal **dove-like nature** of the ‘humble Slovak child of God’, the ‘martyrdom struggle of the Slovaks’ in the past century, and so on, still do not seem to resonate much.”³

The discussion on the national feature of the dove-like nation is also evident in journalism and the press. This is reflected in various semantic shifts within the collocations *holubičí národ* and *holubičia povaha*, which will be analysed in the subsequent parts of the article.

3. THE LEXICOGRAPHICAL MEANINGS OF THE ADJECTIVE *HOLUBIČÍ* AND THE COLLOCATIONS *HOLUBIČÍ NÁROD*, *HOLUBIČIA POVAHA/NÁтура*

Slovak dictionaries distinguish two fundamental definitions of the adjective *holubičí*. The first one refers to the direct meaning. In this sense, the adjective *holubičí* denotes *vzťahujúci sa na holubicu* – ‘relating to a dove’, *patriaci, vlastný holubici* – ‘belonging to a dove’. Examples illustrating this meaning include *holubičie hniezdo* ‘dove’s nest’ and *holubičie pierko* ‘dove’s feather’ (SSSJ 2011).

However, the meaning of interest here is the figurative one, which derives from the symbolic association of the dove as a bird of peace. In this context, *holubičí* is defined as *mierny* ‘moderate’, *tichý* ‘quiet’, *nebojovný* ‘non-combative, non-fighter-like’, and *mierumilovný* ‘peaceful’ (SSS). The phrase *holubičí národ* is further described as *národ, ktorý nie je výbojný, mierumilovný, znášanlivý národ* – ‘a nation that is not conquering, expansionist, aggressive, a nation that is peaceful, and tolerant.’ Similarly, expressions such as *holubičia povaha* and *holubičia náтура* are defined as *mierna* ‘moderate’, *nevýbojná* (‘not conquering, expansionist, or aggressive’), and *zmierlivá povaha* ‘conciliatory nature’; SSSJ 2011).

The dictionary definitions point to a national character associated with qualities widely regarded as positive in moral terms. However, the words used in these definitions, particularly in the phrases *holubičí národ*, *holubičí povaha/náтура*, are inherently polysemous. Depending on the context, they can modify not only the meaning of the entire phrase but also its evaluative interpretation, which may range from positive to negative.

An illustrative example is the lexeme *mierny*, listed in the *Synonymický slovník slovenčiny* as one of the synonyms of *holubičí*. In its primary sense, *mierny* is defined as *ktorý zachováva mieru v prejavovaní citov, nálad* – ‘the one who maintains moderation in expressing emotions and moods’, or *jemný – vyznačujúci sa jemnosťou; op. drsný* ‘gentle, delicate, as opposed to rough’ (SSSJ 2011, 2015). However, the

³ Org.: Ešte stále akoby dosť nerezonovali hlasistické slová o potrebe prekonávania romantických názorov a legiend o ideálnej holubičej povahe, pokorného slovenského dieťaťa božieho, o ‘mučeníckom boji Slovače’ v minulom storočí atď.

word *mierny* can also be interpreted negatively, as evidenced by its synonym *nebojovný*. This term may be perceived in two ways: either as someone who refrains from fighting due to moral reasons or as someone who is afraid to fight or lacks the ability to do so. Such interpretations carry negative connotations, suggesting cowardice or weakness.

The lexeme *mierny* also allows for alternative interpretations through its additional meanings, which may not always be viewed positively. For instance, *mierny* can mean *ktorý nepresahuje strednú mieru, hodnotu, intenzitu* – ‘the one who does not exceed the average measure, value, or intensity’ (SSSJ 2015). This can evoke associations with mediocrity or a lack of ambition.

Similar ambiguities arise with the adjective *tichý*, which can also be evaluated positively or negatively depending on the context. According to KSSJ, *tichý* is defined as *kt. má miernu povahu, málovravný* – ‘the one who has a moderate nature, is reserved, and speaks little’; *t., skromný človek* – ‘a modest, humble person’; but also, in a colloquial sense, *t. blázon – neškodný* – ‘a harmless fool’. In some contexts, *tichý* may evoke negative connotations, such as describing someone who is unable to stand up for themselves or react appropriately, linking to ideas of cowardice. It may also suggest unpredictability, as in the saying *tichá voda brehy podmýva/ myje* – ‘still waters run deep (literally: quiet water washes away the shores)’.

Particular attention should be given to the words used in the definitions that refer to combat – or rather, the lack of combat (*nebojovný* ‘non-combative, non-fighter-like’, and *mierumilovný*⁴ ‘peaceful’, *nevýbojný* ‘not conquering, expansionist, aggressive’). From these, the metaphor of the *non-warrior* (the *dove-like nation* – a nation that does not fight) reveals. Depending on its framing, this concept can carry both positive and negative connotations. The meanings of the collocations *holubičí národ*, *holubičia povaha/nátura* may evolve along a spectrum: on one end, the nation is perceived positively (it does not fight because it chooses not to, as it is non-aggressive, peace-oriented, and virtuous); on the other, it is viewed negatively, categorized as cowardly (it does not fight because it is afraid) or as incompetent and weak (it does not fight because it lacks the necessary skills or resources).

In summary, based on dictionary definitions and paradigmatic lexical relations, the adjective *holubičí*, whether in phrases like *holubičí národ*, *holubičia povaha/nátura*, can shift in meaning. Furthermore, the evaluative interpretation of these expressions oscillates between positive and negative connotations, creating a space for diverse interpretations.

⁴ The lexeme *mier/pokoj*, which means ‘a state without war’, is one of the word-formation bases of the word *mierumilovný* or *pokojamilovný* (‘peaceful’).

4. THE COLLOCATIONS *HOLUBIČÍ NÁROD* AND *HOLUBIČIA POVAHA/NÁтура* IN CONTEMPORARY SLOVAK JOURNALISM AND PRESS BASED ON CORPUS EVIDENCE

The study of press and journalistic texts was conducted based on the material collected in the National Corpus of the Slovak Language.

In the corpus, the collocations *holubičí národ*, *holubičia povaha/nátura* were identified based on the extraction of collocates of the adjective *holubičí*. Their overall frequency is not high (cf. Table 1). The highest frequency was recorded for the collocation *holubičí národ*, followed by *holubičia povaha*, while *holubičia nátura* has only a few occurrences. These collocations occur in journalism, specialized literature, and fiction, with journalism being the dominant genre. It should be added that not all occurrences of *holubičia povaha* and *holubičia nátura* refer to the Slovak nation.

Table 1: The frequency of the collocates *holubičí národ*, *holubičia povaha/nátura* in genres⁵

The collocate	Journalism	Specialized literature	Fiction	All prim-10.0-public-sane
<i>holubičí národ</i>	0,13 ipm. (215)	0,03 ipm. (42)	0,03 ipm. (47)	0,19 ipm. (315)
<i>holubičia povaha</i>	0,03 ipm. (48)	0,01 ipm. (16)	0,01 ipm. (12)	0,05 ipm. (77)
<i>holubičia nátura</i>	0 ipm. (4)	0 ipm. (0)	0 ipm. (4)	0 ipm. (8)

The textual profile of the phrases we are interested in demonstrates the familiarity and rootedness of the studied collocations: they appear in all types of texts, ranging from fictional to scientific and journalistic and the vast majority of texts containing these phrases are written in Slovak.

5. GENERAL OVERVIEW OF CORPUS OCCURRENCES OF COLLOCATES *HOLUBIČÍ NÁROD* AND *HOLUBIČIA POVAHA/NÁтура*

The meanings of the collocations *holubičí národ* and *holubičí povaha/nátura* extracted from the subcorpus of journalistic and press texts of the Slovak National Corpus correlate with the meanings identified based on the above-conducted lexicographic analysis. Therefore, the fundamental metaphor emerging from the occurrences should be recognized as the **non-warrior** metaphor, which we will paraphrase here as **a nation that does not fight**.

Depending on the type of evaluation (positive or negative), the narrowing or broadening of meaning, and the profiling⁶ of a specific characteristic contained

⁵ ipm. – instances per million; values in brackets – absolute frequency.

⁶ By *profiling*, Bartmiński – Niebrzegowska (1998, p. 212) refer to a subjective (i.e., having a subject) linguistic-conceptual operation that consists in shaping the image of an object in a specific

within the meaning, we derive the following meanings of the collocations *holubičí národ* and *holubičia povaha/nátura*:

- a. a nation that does not fight because its members are peaceful, in a broader sense, are **good** (with goodness understood in moral terms) – evaluated positively;
- b. a nation/people who do not fight because they are not conquering, expansionist, aggressive – they become **victims of others** – evaluated either negatively or positively depending on the context;
- c. a nation that is **not good** (with goodness understood in moral terms) – evaluated negatively;
- d. a nation that does not fight because it is afraid. Its members are **cowards** – evaluated negatively.

From the above meanings, the following meanings are derived:

- e. A nation that **does not resist**, is excessively humble – evaluated negatively;
- f. A nation that **does not fight for its rights** and cannot showcase its skills – evaluated negatively;
- g. A nation that does not fight because it has nothing to fight with and lacks achievements to present is considered **a failure** – evaluated negatively.

Other metaphors evident in occurrences containing the collocations of interest include **spatial metaphors** such as *non-front* (standing still or moving backward) and *down*, which carry negative connotations (cf. Lakoff & Johnson 2010, p. 41) and are associated with lack of success, backwardness, weakness, and illness.

5.1. *HOLUBIČÍ NÁROD, HOLUBIČIA POVAHA/NÁTURA* – A NATION THAT DOES NOT FIGHT BECAUSE ITS MEMBERS ARE PEACEFUL, IN A BROADER SENSE, ARE GOOD (WITH GOODNESS UNDERSTOOD IN MORAL TERMS).

Although the dictionary meaning of the collocations *holubičí národ* and *holubičia povaha/nátura* is limited to describing a nation that is *not conquering, expansionist, or aggressive* (it means also it does not fight), but rather *peaceful and tolerant*, occurred usages reveal an expanded meaning, encompassing the broader moral category of *goodness*. These collocations, therefore, refer to a nation characterized by high moral values, drawing on the positive connotations associated with the dove as a symbol. Thus, in occurrences containing the collocations *holubičí národ* and *holubičia povaha/nátura*, lexemes related to kindness and love stand out.

way by presenting it in certain aspects (subcategories, facets), such as origin, characteristics, appearance, functions, events, experiences, etc., within a particular type of knowledge and in accordance with the requirements of a specific point of view.

The discourse includes words that continue the Proto-Slavic roots *milъ* and *dobrъ*, which denote goodness, benevolence, and compassion⁷, and in some cases, even courage⁸. Examples include *dobrosrdečnosť* ‘kind-heartedness,’ (literally ‘good-heartedness’), *dobré srdce* ‘good heart’, *milosrdenstvo* ‘compassion’, and *dobrý ľud* ‘good people’.

Other positive attributes, such as diligence and humility, also fall within this semantic field. In selected occurrences, the ideas of Pan-Slavism and mythological narratives regarding the origins of the state reemerge as well.

- (2) *Slovania sa vyznačovali holubičou povahou, dobrosrdečnosťou. Z toho ešte stále čosi v nás pretrváva. To je istý dar vkladu do pokladnice Európskej únie, pretože národov, ktoré majú široké a dobré srdce ako Slováci, Slovania.* (MY Liptovské noviny 2007/14)

‘The Slavs were characterized by a **dove-like nature** and **kind-heartedness** (literally: **good-heartedness**). Some of that still persists within us today. This is a certain contribution to the treasure trove of the European Union because there are few nations with as broad and **good a heart as the Slovaks**, the Slavs.’

- (3) *Moje aktivity chcú byť akýmsi zrkadlom skutkov mnohých ľudí, ktorí nezištne pomáhajú iným. Som osobne rád, že so Slovákmi a slovenským národom sa často spájajú slová o milosrdenstve a holubičej povahe našich ľudí a že tieto vlastnosti sa nevytratili ani v súčasnosti. Na odkaze princípov vzájomnej lásky a milosrdenstva sme založili štátnosť, tak prečo by sme podľa nich nemali aj žiť?* (MY Turčianske noviny 2005/33)

‘My activities aim to serve as a kind of mirror reflecting the deeds of many people who selflessly help others. I am personally pleased that Slovaks and the Slovak nation are often associated with words such as **mercy** and the **dove-like nature** of our people, and that these qualities have not disappeared even today. We founded our statehood on the legacy of the principles of **mutual love and mercy**, so why shouldn’t we also live according to them?’

In certain instances, the collocations *holubičí národ* and *holubičia povaha/nátura* appear as a nation that does not fight because its members are not conquering,

⁷ In Slavic languages, the meaning of the word *milý* ‘dear, kind’ has been original since ancient times; however, in certain contexts, it has acquired a nuance of loving compassion toward someone poor or sinful. This is precisely what differentiates it from *ľub* or *libý* ‘pleasant’, and *ľubiti* ‘to love’, where this nuance is absent. (ESCS 1957, p. 296).

⁸ Compare with the word *dobrodruh* – *pův. odvážný, statečný druh*, originally meaning ‘brave, courageous companion’ (ESCS 1957, p. 90).

expansionist, aggressive, so they become victims of others. In this context the Slovak nation is portrayed as a victim of violence, an oppressed and defenceless community. In this way, they contribute to another component of the Slovak self-stereotype: Slovak as a victim (cf. Krekovič – Mannová – Krekovičová 2005, pp. 77 – 79), especially of Hungarian and Czechs. Depending on the context, the myth is either reinforced or challenged.

- (4) *Dinka pristupuje k problému na základe osvedčenej schémy holubičieho národa (a jeho najväčšieho bohatstva - jazyka), proti ktorému stoja neprajníci, ktorých jediným cieľom je tento národ a jeho reč zničiť. Slovenčina v Dinkovom podaní bola tisíc rokov gniavená, potláčaná, čelila „presile klamstiev a cielených dezinformácií“ a až v roku 1995 „prijatím zákona o štátnom jazyku vyhrala... svoju rozhodujúcu bitku. (Týždeň 2010/15)*

‘Dinka approaches the issue based on the **established narrative of a dove-like nation** (and its greatest treasure – its language), opposed by adversaries whose sole aim is to destroy this nation and its speech. In Dinka’s interpretation, the Slovak language was oppressed and suppressed for a thousand years, facing an “overpowering force of lies and deliberate disinformation,” and only in 1995, with the adoption of the State Language Act, did it “win... its decisive battle.”’

- (5) *Často sa o nás Slovákoch hovorí, že sme nejaký ubitý holubičí národ. Ja sa tak necítim a nikdy som tak nebol vychovávaný. (Týždeň 2012/39)*

‘It is often said about us Slovaks that we are a **beaten, dove-like nation**. I don’t feel that way, and I was never raised to think so. (Týždeň 2012/39)

There is no shortage of references to historical events, among which the contrast between the gentle dove, symbolizing the Slovaks, and the predatory mythical bird Turul – the emblem of the Hungarians, stereotypically perceived as the eternal enemies of the Slovaks – is particularly intriguing.

- (6) *Napriek bedákaniu nad stáročiami, ktoré holubičí národ prežil pod krídlami vtáka Turula, bolo to až rakúsko-maďarské vyrovnanie z roku 1867, ktorým sa začalo skutočné delenie obyvateľstva a násilná maďarizácia. (Hospodárske noviny 2006/09)*

‘Despite lamenting the centuries that **the dove-like nation** spent under the wings of the **Turul** bird, it was the Austro-Hungarian Compromise of 1867 that initiated the real division of the population and forced Magyarization.’

In contemporary Slovak press and journalism, occurrences portraying Slovaks as a *holubičí národ* in a positive sense are relatively scarce. More frequently, there is an observable distancing from or outright rejection of this term as a component of

the Slovak autostereotype. This distancing manifests in several ways. Firstly, the expressions *holubičí národ* and *holubičia povaha/nátura* are often deemed untrue and are juxtaposed with lexemes such as *mýtus*⁹ ‘myth’ or *kecy*¹⁰ ‘nonsense’.

- (7) *Reči o holubičom národe sú obyčajné kecy.* (SME 1999/07)
 ‘Talk of a **dove-like nation** is nothing but **nonsense**.’
- (8) (...) *pre Slovákov, ktorí sa síce držia romantického mýtu o holubičom národe, ale keď ide o Maďarov, sú ochotní hnať ich ešte aj po tisícsto rokoch za Dunaj.* (Domino Fórum 1999/37)
 ‘(...) for Slovaks who, while clinging to the **romantic myth** of being a **dove-like nation**, are still willing to push the Hungarians back across the Danube even after eleven hundred years.’

Another form of negating this autostereotype involves rhetorical questions such as “Kde je ten národ holubičí?” (“Where is that dove-like nation?”) or statements that, through negation, challenge the historical existence of this trait in the Slovak people. In certain instances, Slovaks are even depicted in opposition to the values conveyed by the collocation *holubičí národ* – as aggressive, prone to violence, or even criminal.

- (9) *Kde je ten národ holubičí, ktorý nikomu neublíži? Ved’ tento národ má na čele ľudí schopných všetkého – podľa slov pána ministra – aj rozpútať bratovražedný boj.* (SME 1993/3)
 ‘**Where is that dove-like nation that harms no one?** After all, according to the minister, this nation is led by people capable of anything – even inciting fratricidal conflict.’
- (10) *Z bájneho holubičieho a nepriebojného národa nezostalo takmer nič.* (Hospodárske noviny 2003/11)
 ‘Almost nothing remains of the mythical **dove-like** and **non-fighter-like nation**.’

In some occurrences, the collocation *holubičí národ* is used to highlight increasing aggression within society:

- (11) *„Tento svet a žiaľ, aj náš národ potichu a nenápadne prerastá agresivitou, až ma to desí. Nie sme ani zďaleka ‘holubičí národ’. Kriminalita začína klíčiť už vo veľmi mladom veku.“* (MY Turčianske noviny 2008/46)

⁹ 1. tradíciou prenášaná predstava ľudí o vzniku sveta ‘a traditionally transmitted idea of people about the creation of the world’ 2. *expr.* výmysel podávaný ako pravda ‘*expr.*, a fabrication presented as truth’ (KSSJ 2003).

¹⁰ *Kecy*: prázdne, neužitočné reči, táraniny, hlúposti ‘empty, useless talk, babble, foolishness’ (SSSJ 2011).

‘This world, and unfortunately, also our nation, is quietly and inconspicuously growing in **aggression**, which frightens me. **We are far from being a ‘dove-like’ nation. Criminality** begins to sprout at a very young age.’

In summary, the collocations *holubičí národ* and *holubičia povaha/nátura* in Slovak press and public discourse refer to the trait of Slovaks, sometimes to Slavs. While their original positive meaning encompasses a broad category of goodness, in most contemporary texts, there is a noticeable distance from or negation of this self-stereotype.

5.2. *HOLUBIČÍ NÁROD, HOLUBIČIA POVAHA/NÁTURA* – A NATION IS NOT GOOD (WITH GOODNESS UNDERSTOOD IN MORAL TERMS) – EVALUATED NEGATIVELY

A distinct type of occurrences involves the ironic use of the collocations *holubičí národ* and *holubičia povaha/nátura*. In such cases, the originally positive connotation of these expressions undergoes a shift toward negative evaluation. Consequently, the entire statement portrays Slovaks in a pejorative manner, depicting them as people filled with hatred and envy.

- (12) *Musíte do toho všetkého primiešať trochu stredoeurópskej komótnosti, kvapku slovenského zápečníctva a ozdobiť to holubičou povahou s veľkou porciou závistlivosti.* (SME 1999/09)

‘You must mix in a bit of Central European narrow-mindedness, add a drop of Slovak **provincialism**, and garnish it with **a dove-like nature** enriched with a generous portion of **envy**.’

- (13) *Aj Tiso by povedal, že on nebol strojom holokaustu, Židov sa chcel náš holubičí národ zbaviť sám, a keď z Nemecka prišla ponuka, ktorá sa neodmieta, dal tomu len voľný priebeh.* (SME 2018/06)

‘Even Tiso would say that he was not the architect of the Holocaust; **our dove-like nation wanted to rid itself of the Jews on its own**, and when an offer came from Germany – one that could not be refused – he simply allowed it to proceed.’

In some occurrences, the metaphor of a warrior is present, but it is not evaluated positively. Slovaks are depicted as an aggressive nation, fighting among themselves. These occurrences draw a comparison to the aggressive behaviour of doves, which can be observed, for example, when they fight over food.

- (14) *História nás učí, že pravý opak je pravda – my sme boli celé stáročia diskriminovaní. Samozrejme, že to nie je pravda, ako to dosvedčujú historici, ktorí popisujú vcelku pokojný rozvoj slovenského etnika do polovice 19. storočia. Podobne padá aj slovný výraz o holubičom národe, čo dosvedčia*

zasa etológovia, ktorí popisujú holuby ako značne agresívne vtáky v bitke o potravu. (SME 2002/08)

‘History teaches us that the exact opposite is true – we were discriminated against for centuries. Of course, this is not true, as historians testify, describing the relatively peaceful development of the Slovak ethnic group until the mid-19th century. Similarly, the phrase about the dove-like nation collapses, as ethologists confirm that pigeons are actually quite aggressive birds when fighting over food.’

In the above occurrences, we can observe that the collocations *holubičí národ*, *holubičia povaha/nátura* take on meanings opposite to their original sense. They thus contribute to the reassessment of the self-stereotype of the dove-like nation.

5.3. *HOLUBIČÍ NÁROD, HOLUBIČÍ POVAHA/NÁTURA* – A NATION THAT DOES NOT FIGHT BECAUSE IT IS AFRAID. ITS MEMBERS ARE COWARDS

The adjective *holubičí*, in the expressions *holubičí národ* and *holubičia povaha/nátura*, appears with a meaning that can be paraphrased as “one who does not fight out of fear”. This meaning is often evaluated negatively, as it implies a lack of courage, cowardice, and an inability to engage in combat.

At the linguistic level, this meaning is expressed both lexically and grammatically. There is a negation of the phrases *holubičí národ* and *holubičia povaha/nátura* as attributes referring to Slovaks or their ancestors. Frequently, the syntactic structure involves compound sentences with adversative coordination, most commonly using the conjunction *ale* ‘but’, which is recognized in linguistic literature as a typical structure for the so-called *but-test* (cf. Bartmiński 2012).

At the lexical level, this meaning is conveyed through words associated with wars, battles, and particularly with warriors, victories, and specific historical events. Many of these lexical items carry positive connotations related to warrior-like qualities. The following example illustrates a sentence in which the collocation *holubičí národ* is contrasted with lexemes referring to Slovak ancestors (*naši predkovia*), further characterized as brave warriors and victors: *tvrdí bojovníci, víťazi*. The syntax of this utterance is also notable, featuring negation and adversative coordination.

- (15) *Ťažko sa orientovať v kapitolkách o bojoch Slovanov s Avarmi, jednoznačné je však vyhlásenie D. Hudeca, že naši predkovia neboli nijakým holubičím národom, ale „tvrdí bojovníci, víťazi, ktorí celú túto oblasť dobyli, kolonizovali a plných 1500 rokov prežili všetkých agresorov, všetky vojny... a sedia tu pevne dodnes...”* (SME 1996/05)

‘It is difficult to navigate the chapters about the battles between the Slavs and the Avars, but one statement by D. Hudec is clear: **our ancestors were by no means a dove-like nation** but rather “**tough warriors, victors** who conquered and colonized this entire region, survived all aggressors and all wars for a full 1,500 years... and remain firmly seated here to this day...”’

A similar effect is observed in constructions where the negation of *holubičí národ* or *holubičí povaha/nátura* appears in the context of words referring to liberation (*oslobodenie*) and national pride (*hrdost*). The selection of historical events used as arguments is crucial in this regard. The Slovak National Uprising (*Slovenské národné povstanie*) is frequently cited in this context.

- (16) (...) *Povedal, že v SNP Slováci ukázali svoju hrdosť a to, že **nie sú holubičím národom***. (Hospodárske noviny 2008/08)

‘He stated that during the **Slovak National Uprising** (SNP), Slovaks demonstrated their pride and proved that they are **not a dove-like nation**.’

- (17) *A keď už siahame k historickým príkladom: Slovenské národné povstanie v roku 1944 tiež **nebolo dielom holubičích pováh**. V tej historickej situácii však nádej na oslobodenie nebola ilúziou*. (SME 2010/09)

‘And when we look at historical examples: **the Slovak National Uprising** in 1944 was also **not the work of dove-like characters**. In that historical context, however, the hope for liberation was not an illusion.’

The negation of the characteristic verbalized as *holubičí* can also occur lexically without syntactic negation, through words implying falsehood, such as *kecy* ‘nonsense’, *vymyslieť* ‘to invent’, or *mýtus* ‘myth’, while simultaneously providing arguments based on historical events that depict Slovaks as a nation of warriors (*vedeli sme bojovať*, *bojovník*).

- (18) *Spojenie **holubičí národ** vymysleli naši romantici. Vedeli sme bojovať tak ako iné národy so všetkými krutosťami vtedajšej doby, mali sme **operatívnu, pohyblivú armádu bojovníkov** so širokými opaskami*. (Extra plus 2008/06)

‘The phrase **dove-like nation** was coined by our romantics. We were capable of fighting, just like other nations, against all the cruelties of that era. We had a **nimble, mobile army of warriors** with wide belts.’

The meaning of the phrases *holubičí národ* and *holubičia povaha/nátura* has evolved from a non-fighting nation to a cowardly nation and has been rejected by part of Slovak society. They also fit into the historical debate, in which historians are also involved.

5.4. HOLUBIČÍ NÁROD, HOLUBIČIA POVAHA/NÁTURA – A NATION THAT DOES NOT RESIST, IS EXCESSIVELY HUMBLE

Another meaning of the adjective *holubičí*, within the context of describing a nation or members of Slovak society who do not engage in struggle, can be paraphrased as “one who is incapable of opposing or resisting”. In this context, the expressions *holubičí národ* and *holubičia povaha/nátura* frequently co-occur with terms suggesting profound humility and passive submission to fate.

In the following statements, particular occurrence is drawn to the expressions *drevo rúbať*¹¹, *aj na ňom rúbe, piluje, vrta*, which convey the idea of enduring everything with humility, struggling to form one’s own opinion, failing to take a stance, and being unable to stand against something.

- (19) *Slovensko navyše zdanlivo chráni akási povest’ holubičieho národa. Zrejme je štatisticky dokázané, a ukazuje to aj každodenná politická prax, že na priemernom Slovákovi možno i drevo rúbať. A tak sa aj na ňom rúbe, piluje, vrta... Ale pozor! Nie každý z nás je priemerný Slovák.* (Hospodárske noviny 2003/09)

‘Slovakia is additionally seemingly protected by the reputation of being **a dove-like nation**. It is probably statistically proven, and daily political practice also shows, that the **average Slovak can tolerate almost anything (literally: The average Slovak can even have wood chopped on them)**. And so, **they endure (literally: being chopped, sawed, drilled)**... But beware! Not every one of us is an average Slovak.’

- (20) *Náš holubičí národ má však odveký problém vytvoriť si vlastný názor, zaujať postoj, postaviť sa proti niečomu.* (SME 2008/02)

‘Our **dove-like nation**, however, has an age-old **problem of forming its own opinion, taking a stance, or standing up against something**.’

In the political context, occurrences of the term refer to stereotypically recognized adversaries of Slovaks: Czechs and Hungarians.

- (21) *Ale národ holubičí a veruže aj bratov Čechov, sa zblbnúť nechal. Opäť sme raz boli československy za jedno.* (KOR2001/05)

‘But the **dove-like nation**, as well as **our brothers, the Czechs, indeed allowed themselves to be deceived**. Once again, we stood united in the Czechoslovak spirit.’

¹¹ Definitions of the *drevo rúbať*: pokorne znášať všetko ‘humbly endure everything’. (KSSJ)

5.5. HOLUBIČÍ NÁROD, HOLUBIČIA POVAHA/NÁTURA – A NATION THAT DOES NOT FIGHT FOR ITS RIGHTS AND CANNOT SHOWCASE ITS SKILLS

The adjective *holubičí* refers to a nation that is unable to fight in metaphorical meaning: a nation that is unable to effectively fight for its own interests. It refers also to a nation lacks the ability to present its potential in a way that leads to success.

The members of the nation characterized as *holubičí* are not fighter-like, fighter-driven. They struggle to assert themselves, to break through with their ideas/get their ideas across successfully. In a broader sense, the term may also imply a general absence of ambition.

The adjective *holubičí* is commonly contrasted with the Slovak terms *priebojný* ‘fighter-like, fighter-driven, assertive, go-getting’ and *ctížiadostivý* or *dravý* ‘ambitious, predatory’. Notably, it stands in opposition to the metaphor of the warrior inherent in the word *priebojný*¹² or the image of a predatory animal suggested by the word *dravý*¹³. Whereas these latter terms connote an individual who is combative, energetic, and determined to achieve their goals at any cost, the adjective *holubičí* implies an inability to fight – not in a literal sense, but rather as a metaphorical incapacity to break through obstacles and attain success.

Furthermore, an interesting semantic contrast arises between lexeme *holubičí* and its antonyms in terms of spatial orientation metaphors (cf. Lakoff & Johnson 2010, p. 41). Unlike the aforementioned antonyms, which are metaphorically associated with forward movement¹⁴ – linked to progress and success – *holubičí* lacks this directional connotation. Instead, it may suggest stagnation or even a backward orientation, symbolizing withdrawal, lack of development, or failure to achieve success.

In this context, the term *holubičí* frequently appears in discourse among individuals who have achieved success, often highlighting perceived differences between the Slovak mentality and the career-driven approach prevalent in Western societies.

¹² The lexeme *priebojný* contains the morpheme *boj* referring to the ‘battle’, ‘to fight’. Moreover, its definitions include a participle derived from the verb *bojovať* ‘fight’, e.g., *bojujúci za nové myšlienky, smery* ‘fighting for new ideas, trends’ (SSS), *prebojujúci nové myšlienky, smery, metódy* ‘breaking through with (literally: fighting for) new ideas, trends, methods’.

¹³ The adjective *dravý* in Slovak language dictionaries originally refers to animals: 1. (*o zvieratách*) kt. získava potravu napádaním iných zvierat ‘one that obtains food by attacking other animals’: *d. vták* dravec; *d-á ryba*, e.g., *dravý vták* ‘predatory bird’, *dravá ryba* ‘predatory fish’ (KSSJ). It is also used metaphorically in reference to humans: (*o človeku*) (*bezohľadne*) derúci sa dopredu, tvrdo sledujúci svoj cieľ ‘(ruthlessly) pushing forward, relentlessly pursuing one’s goal’, e.g., *dravé podnikateľské kruhy* ‘ruthless business circles’, *dravý hráč* ‘aggressive player’. The adjective *priebojný* is listed as a synonym.

¹⁴ The word *priebojný* is also paraphrased as *idúci dopredu* ‘moving forward’ (SSS). The definition of the word *dravý* (regarding a person) is ‘(bezohľadne) derúci sa dopredu’ ‘(ruthlessly) pushing forward’ (KSSJ).

(22) [...] *Aký je jeho recept na úspech? „Pravdaže, s povahou holubičieho národa naši mladí ďaleko nezájdu. V Amerike musia byť **priebojní**, vedieť sa primerane predať a vytvoriť si dobré zázemie z ľudí, ktorí ich môžu odporučiť.* (Hospodárske noviny 2011/10)

‘What is his recipe for success? “Of course, with the **nature of a dove-like nation**, our young people won’t get far. In America, they must be **fighters-like**, know how to present themselves appropriately, and build a strong network of people who can recommend them.’

(23) *Slováci by sa mali zbaviť povesti **holubičieho národa**, ak chcú niečo vo svete dokázať. „Aby sa človek presadil, musí byť **dravec, predátor**,“ tvrdí Karol Piovarcsy.* (Hospodárske noviny 2009/07)

‘Slovaks should rid themselves of the reputation of being a **dove-like nation** if they want to achieve something in the world. ‘To succeed, one must be a **predator**,’ says Karol Piovarcsy.’

In summary, in these occurrences, the adjective *holubičí* represents the antithesis of fighting for one’s ideas, of strength, and of the energy associated with a warrior or a predatory animal. Consequently, it is not only associated with an inability to break through with one’s skills but also conveys connotations of weakness, lack of energy, and being left behind.

5.6. *HOLUBIČÍ NÁROD, HOLUBIČÍ POVAHA/NÁTURA* – A NATION THAT DOES NOT FIGHT BECAUSE IT HAS NOTHING TO FIGHT WITH AND LACKS ACHIEVEMENTS TO PRESENT IS CONSIDERED A FAILURE

The inability to achieve success leads to an additional association: the one who fails to succeed is not only someone incapable of effectively presenting their accomplishments but also someone who has no achievements to present – an individual with poor results. This interpretation is supported by a lexical analysis of the adjective *holubičí*, based on its synonyms and antonyms. The term *holubičí* stands in direct opposition to the word *priebojný* ‘assertive, go-getting’ and the word *ambiciózny* ‘ambitious’, suggesting not only a lack of assertiveness and ambition but also weakness and a deficiency of energy.

This connotation becomes particularly evident when *holubičí* is used in conjunction with the adjective *úbohý*, as in the phrase *úbohý holubičí národ* ‘a pitiable, weak-spirited nation’. The word *úbohý*, beyond its meaning *poľutovaniahodný* ‘worthy of pity’, also signifies *nedostatočný, slabý, mizerný* ‘insufficient, weak, miserable’, as seen in phrases like *úbohé oblečenie* ‘poor clothing’ or *úbohý výsledok* ‘poor result’, according to the dictionary KSSJ. In this

context, *úbohý* further reinforces the aspect of weakness inherently embedded in the meaning of the adjective *holubičí*.

- (24) *Patrím k pokoleniu, ktoré už čosi zažilo! Ste úbohý holubičí národ! Vždy ste boli, a ja vám to budem opakovať až do mojej smrti! Všetci vaši národní hrdinovia boli niktoši, Jánošík bol zlodej, viem to, aj keď som vtedy ešte nežil, mýtus o tisícročnom útlaku a utrpení Slovákov, sa nedá doložiť.* (SME blog 2005)

‘I belong to a generation that has experienced quite a bit! You are a **pathetic/miserable, dove-like nation**! You always have been, and I will keep repeating it until the day I die! **All your national heroes were nobodies** – Jánošík was a thief, I know it, even though I wasn’t alive back then. The myth of a thousand years of oppression and suffering of Slovaks cannot be substantiated.’

The above examples, like most of those cited in this article, contribute to the reassessment of the self-stereotype of *holubičí národ* in its original meaning.

6. CONCLUSION

The use of the collocations *holubičí národ* and *holubičí povaha/nátura* in Slovak journalism and public discourse indicates an ongoing intense debate concerning the auto-stereotypical characteristic of Slovaks, encapsulated in the concept of *holubičí národ*. Instances in which Slovaks are explicitly referred to as a dove-like nation in its original sense are relatively rare; instead, the predominant contexts involve a critical reassessment of this characteristic or even its deconstruction as a national myth.

This process is evident in the semantic shift of the term from its originally positive connotation. Initially, it denoted a nation characterized by peacefulness, tolerance, and moral integrity. Over time, however, it has acquired negative connotations, implying cowardice, an inability to stand up for oneself, and a lack of significant achievements. These semantic transformations align with the metaphor of the “non-warrior,” which emerges both from corpora occurrences and from an analysis of the definition and paradigmatic relations of the adjective *holubičí*, as well as the collocations *holubičí národ* and *holubičia povaha/nátura*.

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Kolokácia *holubičí národ* a *holubičia povaha/nátura* v súčasnej slovenskej žurnalistike

Resumé

Štúdia skúma jazykový výraz *holubičí národ* a súvisiace kolokácie *holubičia povaha/nátura*. Výskumný materiál pochádza zo Slovenského národného korpusu, *prim-10.0-public-sane* (publicistický subkorpus), ako aj zo všeobecných slovníkov slovenského jazyka. Používanie kolokácií *holubičí národ* a *holubičia povaha/nátura* v slovenskej žurnalistike a verejnom diskurze poukazuje na prebiehajúcu intenzívnu diskusiu o autostereotypnej charakteristike Slovákov, ktorá je zachytená v koncepte *holubičí národ*. Prípady, keď sú Slováci výslovne označovaní ako *holubičí národ* v pôvodnom zmysle tohto spojenia, sú pomerne zriedkavé; namiesto toho prevažujú kontexty, ktoré zahŕňajú kritické prehodnocovanie tejto charakteristiky alebo dokonca jej dekonštrukciu ako národného mýtu. Tento proces je evidentný v sémantickom posune tohto termínu od jeho pôvodne pozitívnej konotácie. Spočiatku označoval národ charakterizovaný mierumilovnosťou, tolerantnosťou a morálnou integritou. Postupom času však nadobudol negatívne konotácie, naznačujúce zbabelosť, neschopnosť postaviť sa za seba a nedostatok významných úspechov. Tieto sémantické transformácie korešpondujú s metaforou „nebojovníka“, ktorá sa vynára tak z výskytu v jazykových korpusoch, ako aj z analýzy definície a paradigmatických vzťahov adjektíva *holubičí* a kolokácií *holubičí národ* a *holubičia povaha/nátura*.

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WHEN ONE IS NOT ENOUGH. COERCING DISTRIBUTIVE READING THROUGH METONYMY

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Abstract: The aim of this paper is to analyse distributive verbs in Slovak formed by means of the distributive prefix *po-*. Distributive semantics of the verb imposes constraints on its arguments, profiling the distribution of an action over every member of a plural object or subject. The study brings evidence on sentence structures in which the argument of the distributive verb is used in the singular form. In such structures, there is a mismatch between the semantic properties of the distributive verb with the role of a selector and the grammatical properties of its argument with the role of a selected element. The grammatical context thus causes the language user to reinterpret the semantic features of the argument. The use of the singular form of an argument in such structures can be understood as the result of an operation that changes the semantics of the argument on the basis of metonymic transfer. Metonymic operations providing the target plural interpretation can be analysed in terms of various metonymic models, corresponding to particular idealized cognitive models. Three values of distributivity are analysed: participant distributivity (also labelled as *external*), temporal distributivity, and spatial distributivity (also labelled as *internal*). The analysis shows how different interpretations of distributivity arise depending on the metonymic interpretation of nominal arguments.

Keywords: distributivity, metonymy, coercion, external distributivity, internal distributivity.

Highlights:

- In this article, Slovak distributive prefixal verbs are addressed from a cognitive perspective.
- Metonymic mappings taking place in constructions with distributive verbs are analysed as coercion mechanisms operating on the arguments of distributive verbs.
- It is shown how conceptual mismatch between the distributive construction and the singular form of verb argument coerces the plural interpretation of the argument.
- Various types of metonymies adhering to different ICMs which are at play are revealed as mechanisms ensuring semantically adequate interpretation of the argument of distributive verb.

1. INTRODUCTION

In Slavic languages, including Slovak, verbal prefixes can express immense diversity of semantic characteristics, contributing spatial, temporal, quantificational, and aspectual meanings. Prefixal derivation of verbs is highly productive in Slovak (see Ološiak 2015; Ološiak – Ivanová 2021) and plays a central role in the Slovak word formation system.

The present paper looks at those verbs derived using the distributive prefix *po-* and investigates constraints imposed on their arguments by the distributive semantics of these verbs as well as mechanisms enabling the saturation of these constraints.

In theoretical studies, distributivity is described as a result of universal quantification, i.e., the whole set of participants is involved in the event (Scha 1981) and the sub-events within the event, expressed by the verb with the distributive prefix, happen one after another, affecting single participants or groups of participants one by one at temporal subintervals within the event, e.g., *prekladat*^{PFV} ‘translate’ → *po-prekladat*^{PFV} ‘translate one by one’:

- (1) *Za noc po-preklada-l do slovenčin-y*
 over night-ACC.SG DISTR-translate-PST-SG.MASC into Slovak-GEN.SG
rôzne leták-y.
 various leaflet-ACC.PL
 ‘Overnight, he translated various leaflets into Slovak (one by one).’

Po- in example (1) requires that there be a number of several separate translating acts each of which involves a single leaflet being translated and also strongly suggests that the leaflets were translated during successive translating events.

Universal quantification imposes constraints on the grammatical characteristics of arguments selected by distributive verbs. Participant distributivity requires plurality of one of the participants in the sentence structure – either expressed by a plural subject and/or a plural object or by argument with plurality semantics (typically, a collective noun).

However, there are examples in the corpus data which bring evidence of arguments of distributive verbs expressed by singular noun forms, e.g.,

- (2) *Mam-a po-bali-l-a syn-a.*
 mother-NOM.SG DISTR-pack-PST-SG.FEM son-ACC.SG
 ‘The mother has packed (= one by one) her son.’

Such structures can be described as examples of a ‘clash’ between two grammatical values: requirements of the distributive verb on the plurality of one of its arguments (either coded by a morphological plural form or a semantically plural noun) and the singular form of this argument expressed by a countable noun. Such violations often call for some kind of ‘reconciliation mechanism’ which would solve the incongruity. In similar cases, the term ‘coercion’ is often used in theoretical studies¹. Coercion occurs when the basic (standard) interpretation of a construction

¹ The phenomenon of coercion has always been of great interest to researchers from different theoretical approaches. It is used in generative semantics, pragmatics studies, as well as construction grammar approaches. Some researchers argue that the notions of coercion and metonymy overlap, and

yields an improbable or impossible conceptual representation, due to an incompatibility of its constituents, e.g., *Pustila sa do knihy*. ‘She began the book.’ (= *pustila sa do čítania knihy* ‘she began reading the book.’), cf. Ivanová (2023).

In this paper, it is argued that the coerced plural reading of the argument is realized through metonymic mappings. Example (2) provides an instance of ‘complement coercion’, in which the predicate denoted by the distributive verb licenses plurality interpretation of its object argument. However, the verb’s complement, the noun phrase *syn* ‘son’, is used in its singular form. This is consolidated by the introduction of a ‘plurality’ concept that maps argument onto plurality reading which is enabled by the metonymic transfer of this argument (*syn* ‘son’ = *synove veci* ‘son’s stuff’).

The structure of this study is as follows: Section 2 outlines a general overview of distributivity, including the division between various subtypes of distributivity. Section 3 brings important findings on the conceptual nature of metonymy and examines in some detail the phenomenon of coercion (Michaelis 2005; González-García 2011, 2020). Section 4 examines the relevance of metonymy in the process of coercion of arguments selected by distributive verbs under scrutiny and provides a fine-grained analysis of the types of metonymies that can be posited within constructions with distributive verbs in present-day Slovak. Finally, Section 5 summarizes the main findings and singles out some areas ripe for further future research.

2. DISTRIBUTIVITY

In theoretical studies, distributivity is understood as the distribution of a predicate over plural subjects or objects so that the verbal predicate holds for each individual in the denotation of the participant noun² (for details, see Champollion 2019).

Distributive interpretations can be enforced by adding overt distributive markers or it can be inferred from the context.

Sentences (a) – (e) illustrate different coding strategies of distributive meaning in Slovak:

- a. *Žiaci dostali melón.*
‘[the] pupils got a watermelon.’
i) = pupil 1 got a watermelon 1, pupil 2 got a watermelon 2, etc. = distributive reading (participant distributivity), ii) = all pupils got one watermelon = collective reading

metonymy is labelled as a kind of “semantic coercion”. In her study, Ziegeler (2007) rejects the notion of coercion as superfluous due to the fact that it can be accounted for in light of metaphoric and metonymic extension processes in general. However, this claim was challenged by González García (2011).

² In accordance with theories of (semantic) valency, obligatory complements in the meaning of the lexical units are labelled as participants (actants) as opposed to free modifications. This division roughly corresponds to the argument/adjunct dichotomy, see Panevová (1994).

- b. *Každý žiak dostal melón.*
 ‘Each pupil got a watermelon.’
 i) = pupil 1 got a watermelon 1, pupil 2 got a watermelon 2, etc. = distributive reading (participant distributivity)
- c. *Žiaci dostali po melóne.*
 ‘[the] Pupils got a watermelon apiece.’
 i) = pupil 1 got a watermelon 1, pupil 2 got a watermelon 2, etc. = distributive reading (participant distributivity)
- d. *Žiaci podostávali melón/melóny.*
 ‘Pupils one by one got a watermelon/watermelons.’
 i) = each pupil one by one got a watermelon. i.e. pupil 1 got a watermelon 1, pupil 2 got a watermelon 2, etc. = distributive reading (participant + temporal distributivity)
- e. *Žiaci jeden po druhom dostali melón.*
 ‘All pupils, one by one, got a watermelon.’
 i) = pupil 1 got a watermelon 1, pupil 2 got a watermelon 2, etc. = distributive reading (participant + temporal distributivity)

Sentence (a) can have both distributive and non-distributive meaning, the verb belongs to the group of so called “mixed” predicates, allowing both collective and distributive readings (Henderson 2019, p. 15). On the collective or referential reading, the pupils as a group got a watermelon. On the distributive or quantificational reading, each individual pupil got a watermelon.

On the other hand, the distributive quantifier *každý* ‘each’ in sentence (b) and the distributive phrase with the word *po* (*melóne*) ‘after (watermelon)’³ in sentence (c) license a sentence-internal different meaning, i.e., a reading to the effect that, for any two pupils A and B, the watermelon given to pupil A is different from the watermelon given to pupil B. In these cases, the distributive reading is enforced by using quantificational noun phrases headed by determiners like *every* or *each* (Scha 1981) or a distributive numeral which is formed from a cardinal numeral and the preceding word *po*, e.g., *po (jednom) jablku* from *jeden* ‘one’ (if the cardinal number is one, the numeral itself is often not expressed and the quantity is implied by the singular form of a noun).

However, only the distributive prefix *po-* in sentence (d) constrains that the events of giving proceeded one by one in time as opposed to sentences (b) and (c) which can also have a simultaneous interpretation.

The same distributive interpretation as in (d) arises in the sentence (e) when the modifier *jeden po druhom* ‘one by one’ is used. Whereas the expression *každý* ‘each’

³ In Slovak, it is often classified as particle.

only requires each individual in the cover to be instantiated, *jeden po druhom* ‘one by one’ adds the meaning of temporal concatenation of events of giving. It can be proved by the fact that *jeden po druhom* is able to target nominals headed by *každý* ‘each’ in Slovak:

- (3) *Dnes každý žiak jeden po druhom dosta-l*
 today each pupil-ACC.SG one by one get-PST-SG.MASC
melón.
 watermelon-ACC.SG
 ‘Today each pupil, one by one, got a watermelon.’⁴

Jeden po druhom can be described as an event modifier that targets a plural participant in the event and breaks the event down into temporally sequenced sub-events and distributes the plural participant over these sub-events (Brasoveanu – Henderson 2009).

In example (d), object argument can be realized either in singular (*melón*) or plural form (*melóny*). The distributive prefix coerces the plurality interpretation of the object argument in spite of the singular form: as a distributive marker, it coerces the interpretation that many watermelons were distributed, each to every pupil.

On the other hand, the plural form of the object argument is ambiguous as it allows for two possible interpretations: (i) each pupil got one watermelon, (ii) each pupil got more than one watermelon. Example (d) demonstrates that the argument of the verb prefixed with the distributive *po-* cannot be a singular noun, either the subject or object argument must be coded by the plural form of the noun (either *žiaci podostávali melón* ‘pupils one by one got a watermelon’ or *žiak podostával melóny* ‘the pupil got watermelons one by one’).

Distributive prefixes can be considered more complex distributive operators than distributive numeral. Whereas the distributive numeral encodes the multiplicity of actions distributed over plural participants, the distributive prefix also adds the meaning of seriality of actions. As we see in (4’), the distributive verb *podostávať* ‘get one by one’ is odd when used with the temporal adverbial *naraz* ‘all at once’, excluding the complete temporal overlap of all the sub-events, whereas in the sentence (4) with a distributive numeral, the usage of the temporal adverbial *naraz* is possible.

- (4) *Naraz dosta-l-i po šesť vzoriek piv-a.*
 at once get-PST-PL DIST six sample-GEN.PL beer-GEN.SG
 ‘They each got six samples of beer at once.’

⁴ This possibility contradicts the assumption made by Beck – von Stechow (2007) who predict that *one by one* should not be able to target nominals headed by *each*, e.g., **One by one, each student left*.

(4') *Naraz po-dostáva-l-i šest' vzoriek piv-a.
 at once DISTR-get-PST-PL six sample-GEN.PL beer-GEN.SG
 'They each got six samples of beer at once.'

In the following sections, different type of structures with singular forms of arguments selected by distributive verbs will be examined.

For the sake of the analysis, a list of distributive verbs has been extracted from the *Slovník koreňových morférov slovenčiny* (2012)⁵ and a prepared fifth volume of the *Slovník súčasného slovenského jazyka*⁶. On the whole, 421 verbs were classified according to following parameters:

- (i) transitivity of the base verb: transitive (T) vs. intransitive (I);
- (ii) morphematic status of the base verb: unprefix base verb (D) vs. prefixed base verb (Dp);
- (iii) prefix element in the case of Dp, e.g., *do-*, *na-*, *pri-*, *vy-*, etc.;
- (iv) character of base verb: domestic base verbs (0) vs. adopted base verbs (2);
- (v) affiliation of verbs to semantically specified groups: cognition (cog), communication (comm), contact (cont), creation (crea), dandi and recipiendi (dr), inchoative (inchoat), manipulation (man), modification (mod), reciprocity (recip), physiological process (phys).

The entire database is published online in Kyseľová – Ivanová (2024) and is freely accessible.

Examples on the singular form of arguments selected by distributive verbs were taken from the corpus Omnia Slovaca IV Maior Beta, using the query [lemma="distributive verb"]{0,2}[tag="S.*s."].

3. METONYMY

While conceptual metaphor has been a central concept in cognitive linguistics since the publication of *Metaphors We Live By* (Lakoff – Johnson 1980), metonymy received more or less only marginal attention in cognitive linguistic research until the late 1990s. The turning point came with the publication of Kövecses and Radden's *Metonymy: Developing a cognitive linguistic view* (1998) and the edited collection *Metonymy in Language and Thought* (Panther – Radden 1999). Since then, extensive

⁵ *Slovník koreňových morférov slovenčiny* (2012) investigates the interaction between word formation and morphemics/morphophonemics in Slovak on the basis of approximately 66 000 units. It is of both derivational and morphemic character. For the first time, it offers a systemic analysis of word-formation relations in word-formation nests (a metaphorical term used in Slavic word-formation in the meaning of 'word-family'). It currently substitutes for the missing derivational dictionary of the Slovak language.

⁶ *Slovník súčasného slovenského jazyka* (first four volumes: 2006, 2011, 2015, 2021) represents a monolingual dictionary of the Slovak language. In the prepared fifth volume, distributed verbs will be processed.

research into the phenomenon of metonymy has proved that metonymy, like metaphor, is a conceptual phenomenon which is ubiquitous and plays a central and crucial role in conceptualization and communication (Denroche 2015, p. 70). Kövecses (2013) even argues that certain metaphors (e.g., ANGER is A HOT FLUID IN A CONTAINER) are derived from metonymy, i.e. metonymy has a default status in relation to metaphor (see also Barcelona 2003). Within Slavic context, the attention was paid mostly to metonymy in domain of word formation (e.g., Janda 2011, Janda 2014) or aspectuality (Janda 2008). In the given works, broad definition of metonymy is adopted: “Metonymy is an inferential relationship between two concepts: a source concept is overtly named and provides mental access to a target concept in a given context” (Janda 2011, p. 360).

Barcelona (2011, p. 8) considers the core properties of metonymy to be the phenomenon characteristic of (1) fundamentally conceptual nature, (2) experiential basis, (3) ability to be the basis for cognitive models, and (4) the integration of experientially and conceptually related elements. This definition brings metonymy and metaphor cognitively closer together; the difference between them essentially concerns only the fourth named property, i.e. the relationship between the source (source) and target (target) domains as constitutive elements of both metonymy and metaphor. Domain theory states that while the source (sub)domain and the target (sub)domain are conceptually distinct in metaphor, in metonymy they are both localized within the same conceptual domain. Whether these are one identical or two distinct conceptual domains may sometimes not be entirely clear, in which case this results in the problem of distinguishing metonymy and metaphor (see Barcelona 2003; Kövecses 2013). In his work, Croft (1993) introduces the term “domain matrix”, suggesting that both metonymy and metaphor involve mapping between domains, but in the case of metonymy, both domains belong to the same “matrix”, whereas in metaphor there are different (unrelated) domains matrices (Croft 1993, p. 348).

Ruiz de Mendoza Ibáñez (2000) recognizes two basic types of metonymy: (i) source-in-target, where the source domain is a subdomain of the target domain, (ii) target-in-source, where the target domain is a subdomain of the source domain:

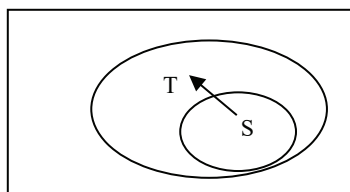


Figure 1: Source (S) in target (T)

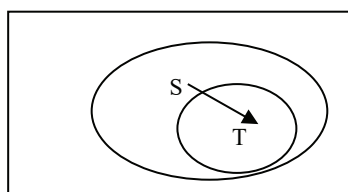


Figure 2: Target (T) in source (S)

A typical example of type (i) is the metonymy PART FOR WHOLE (e.g., *attract the best brains to Europe* for *attract the best brainy people to Europe*). In

contrast, metonymy of type (ii) is typically represented by the WHOLE FOR PART model (*I broke the window.* for *I broke the windowpane.*, *Tie your shoes.* for *Tie your shoelaces.*). Since in the case of source-in-target metonymy, source element refers to a wider subdomain, Ruiz de Mendoza Ibáñez (2000) characterizes this type of metonymy as a process of domain expansion. On the other hand, in the case of target-in-source metonymy, the source element refers to a narrower subdomain, so he understands this type of metonymy as a process of domain reduction.

Although operating within the same conceptual domain is a necessary condition for metonymy (and a disjunctive one in relation to metaphor), it is not a sufficient condition. Indeed, the belonging of two elements to the same conceptual framework does not mean that one element can serve as a reference point for the target subdomain. Just as there are metaphorical models, there are also metonymic models determining the relationship between two subdomains and their nature or role (WHOLE FOR PART, PLACE FOR CITIZENS, PERSON FOR PHYSICAL OBJECT, etc.). The relationship between them is referred to as the pragmatic function. In its absence, metonymy is not possible (the nose cannot be a source point for the mouth, although both elements operate in the same domain – human face) (Barcelona 2011, p. 14).

In Lakoff and Johnson (1980, p. 36) metonymy is defined as a mapping occurring within a single domain, and that there is a “stand for” relationship”. However, the Lakovian definition of metonymy is refined by Kövecses and Radden (1998, p. 39), who describe it as a “cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or ICM [Idealized Cognitive Model]”. Metonymy is often defined as an inferential process between two concepts: a source concept is overtly named and provides mental access to a target concept on the basis of contiguity of source and target. For Panther and Thornburg (1999), contiguity shows that our knowledge is classified in terms of frames and scenarios which are referred to as ICM in Lakoff (1987, p. 288).

4. METONYMY AND COERCION IN DISTRIBUTIVE CONSTRUCTIONS

According to Geeraerts and Peirsman (2011), the referential shift from source (reference point) to target in metonymy takes place on the basis of verbal selectivity and encyclopaedic knowledge. As an example, they cite the sentence *The Times criticized the minister*, where the verb *criticize* presupposes a volitional human subject. The expression *The Times* does not satisfy this, and so target activation is triggered. A referential shift also occurs in the case of the sentence *Nixon bombed Hanoi.*, where encyclopaedic knowledge tells us that it was not Nixon as such who actually bombed Hanoi.

(iii) participant is expressed by mass noun:

- (7) *Treba okolo celého domu po-rozlieva-t' benzín.*
necessary around whole house-GEN.SG DISTR-spill-INF petrol-ACC.SG
'It is necessary to spill petrol (little by little) around the whole house.'

(iv) participant is expressed by a quantized noun denoting an aggregate object with several subparts (e.g., *flat – rooms*):

- (8) *Po-upratova-l byt.*
DISTR-clean-PST-SG.MASC byt-ACC.SG
'He cleaned the flat part by part/room by room.'

(v) participant is expressed by a noun denoting possessor of things:

- (9) *Mama po-bali-l-a syn-a. (= jeho veci)*
mother-NOM.SG DISTR-pack-PST-SG.FEM son.ACC.SG
'The mother has packed her son (= his things one by one).'

(vi) participant is expressed by a quantized noun denoting container in locative construction:

- (10) *Po-vyklada-l prívesný vozík.*
DISTR-unload-PST-SG.MASC trailer-ACC.SG
'He emptied the trailer (one by one).'

Distribution over plural objects is typical of transitive modification and manipulation verbs for which one agent affecting more than one patient is a more typical situation than many agents affecting one patient⁷. It can be explained by the fact that, in these cases, the participant coded by the object argument usually represents an incremental theme. Hypothetically, plural agents may affect a different portion of one and the same incremental object, e.g., *deti pojedli jablko* '[the] children one by one have eaten the apple (part by part)', however, such examples are rare in the corpus data. Object distributivity is a more frequent pattern, e.g., *dieťa pojedlo jablká* '[the] child has eaten the apples one by one' (intuitive explanation is that eating represents an event that is individualized with respect to one agent eating one or more eatable items).

A different situation can be traced for transitive motion verbs⁸ which can distribute both over a plural subject as in example (11) and a plural object as in example (12):

- (11) *Vojáčik-ovia po-preskakova-l-i plot.*
soldier-NOM.PL DISTR-jump-PST-PL fence-ACC.SG
'The soldiers one by one jumped over the fence.'

⁷ Transitive manipulation and modification distributive verbs represent 80% of our sample.

⁸ Intransitive motion distributive verbs represent 12% of our sample.

- (12) *Boženka-a po-preskakova-l-a mlák-y.*
 Boženka-NOM.SG DISTR-jump-PST-SG.FEM puddle-ACC.PL
 ‘Boženka has jumped the puddles one by one.’

The explanation of this fact is related to the thematic role of actants in the Direct Transitive Construction with motion verbs. In this construction, the participant coded by object argument of the motion verb is conceptualized as a non-incremental obstacle which can be overcome by more than one agent.

Intransitive distributives are mostly of two kinds: (i) distributives from unprefixated unaccusative imperfectives (e.g., *podochnúť* ‘die one by one’, *pohynúť* ‘whiten sth. on the surface one by one’), see example (13), (ii) distributives from unergative secondary imperfectives (e.g., *povybiehať* ‘run out one by one’, *povchádzat’* ‘go in one by one’), see example (14)⁹.

- (13) *Aj zvierat-á po-hynu-l-i.*
 even animal-NOM.PL DISTR-die-PST-PL
 ‘Even animals have died (one by one).’
 (14) *Cestujúc-i po-vybieha-l-i von.*
 traveller-NOM.PL DISTR-run out-PST-PL outside
 ‘Travellers came running out one by one.’

Coding the participants from examples (11), (12), (13) and (14) in singular form would render the sentence structures ungrammatical: **Boženka popreskakovala mláku.*, **Vojačik popreskakoval plot.*,¹⁰ **Aj zviera pohynulo.*, **Cestujúci povybiehal von.*

However, the concepts of ‘plurality’ and ‘singularity’ are gradual in language and “different lexical items may [...] be associated with different degrees of plurality and singularity” (Gil 1996, p. 64). For example, the primary interpretation of the expression *chlieb* is a countable noun denoting ‘individual piece of food made from dough’ so that its plural form is required when used with distributive verb (e.g., *pokúpiť chleby*, not **pokúpiť chlieb*). However, it can also be used in singular form in sentence structures like (15) in which limited amounts of bread are conceptually profiled:

- (15) *Po-nosi-l-a na stól chlieb.*
 DISTR-bring-PST-FEM.SG on table-ACC.SG bread-ACC.SG
 ‘She brought the bread on the table (one by one).’

⁹ As opposed to Serbian and Croatian, *po-* distributives in Slovak are rarely created from perfective verbs, e.g., the Croatian *pozapamtiti*, but the Slovak **pozapamätat’ si* ‘memorize one after another’, one exception of derivation of distributive verb from a perfective pendant in Slovak is *po-kúpiť* ‘buy one after another’ which is formed from the perfective *kúpiť* ‘buy’.

¹⁰ Given structures would be acceptable only with iterativity adverbs like *Vojačik viackrát popreskakoval plot.*

It seems that some expressions are variable in their distribution of singularity and plurality level readings. It is “metonymic processing” that facilitates the “flexibility and subtleties” of what can be expressed while remaining within the conventionalized linguistic resources of ready-made signs (Denroche 2015, p. 85). In the following parts, metonymic models that can be identified on the basis of corpus data are examined.

4.1. THING-AND-PART ICM

The relationship between a whole and a part typically applies to things and their parts, where the notion of ‘thing’ is to be understood here in the schematic sense of Langacker (1991), referring to the conceptual archetypes ‘object’ and ‘substance’ (Langacker 2008, p. 128).

Distributive verbs can be used with a singular mass noun denoting substance in the case of temporal distributivity:

- (16) *Vosk sa po-vylieva-l z kahanc-a.*
 wax-NOM.SG REFL DISTR-pour out-PST-SG.MASC from burner-GEN.SG
 ‘The wax has poured out the burner little by little.’

Temporal distributivity in example (16) yields individuation of sub-events based on separate running times and results in adverbial temporal meanings ‘successively’, ‘consecutively’, ‘one part, portion at a time’ (e.g., *povyliovat’ sa* ‘to pour out part by part, one (proportion) at a time, after another’).

The possibility to use a singular participant with a distributive verb is determined by the semantics of actants taking part in each of the repeated situations, namely by differentiation of cumulative and quantized predicates (the term “predicate” is used pursuant to Krifka 1992).

In example (17), the predicate *dew* is cumulative because if one takes one portion of dew and adds to it some more dew, they also get dew¹¹:

- (17) *Ros-a po-sch-l-a.*
 dew-NOM.SG DISTR-dry up-PST-SG.FEM
 ‘The dew has dried up little by little.’

In example (18), the predicate *apple* is quantised because while it is true of some apple that it is an apple, a part of an apple is not an apple:

- (18) *Jablk-á po-pada-l-i pod strom.*
 apple-NOM.PL DISTR-fall-PST-PL under tree-ACC.SG
 ‘The apples have fallen under the tree one by one.’

¹¹ Krifka uses the term ‘cumulative’ to describe the unbounded construal of objects and quantised to describe the bounded construal of objects (Krifka 1989, p. 75). For mass nouns, the default construal is unbounded, for count nouns, the default construal is bounded.

Within this type of ICM, even quantized predicates can be used as arguments of distributive verbs under the condition that the action affects spatially scattered parts of a single object:

- (19) *Koláč* *po-praska-l*.
 cake-NOM.SG DISTR-crack-PST-SG.MASC
 ‘The cake cracked here and there.’

Spatial distributivity in example (19) encodes a set of sub-events affecting different locations or vantage points of the spatial entity and results in readings like “here and there”, “all over” (e.g., *popraskat’* ‘to crack here and there’).

We will use the terms *distributive share* for the set of objects that are distributed and *distributive key* for the set of objects among which the distributive share is distributed (Choe 1987; Gil 2005). The meaning of spatial and temporal distributivity is triggered by the contextual clues:

- (20) *Po* *výbuch-u* *po-praska-l* *strop*.
 after explosion-LOC.SG DISTR-crack-PST-SG.MASC ceiling-NOM.SG
 ‘The ceiling cracked here and there after the explosion.’
- (21) *Časom* *strop* *po-prask-á*.
 in the course of time ceiling-NOM.SG DISTR-crack-PRS.3SG
 ‘The ceiling will crack here and there in the course of time.’

In example (20), the subevents of cracking are distributive share and different parts of the ceiling are distributive key so that the meaning of the sentence is purely spatial distributivity (it is contextually determined by the semantics of the non-durative adverbial *po výbuchu* ‘after explosion’). On the other hand, in example (21), the subevents of cracking are distributive share and different parts of ceiling and different time periods are distributive key so that the meaning of the sentence is both spatial and temporal distributivity (it is contextually determined by the semantics of the durative adverbial *časom* ‘in the course of time’).

Spatial distributivity involves quantification over stages of an individual (Součková 2004). In the case of spatial distributives, the distributive prefix can scope even over singular forms of quantized predicates in case they denote spatial entity characterised by parthood. The singular form cannot be used if the action is expressed by the verb with non-dispersive semantics, compare the following examples *poprelamovat’ tabletku* ‘break the pill little by little’, but **poprehľtat’ tabletku* ‘swallow the pill little by little’. The verb *poprehľtat’* ‘swallow (little by little)’ is derived from the verb *prehľtat’* which cannot express a change affecting a single object part by part (it involves a closed scale which has a maximum degree that is construed as a result state). The verb *poprelamovat’* ‘break (little by little)’ is derived

from the verb *prelamovať* expressing an action that can affect a single object part by part (it involves an open scale lacking a maximal degree). For *poprelamovať tabletku*, there is the possibility of understanding the event as a multiple action affecting different fragments of the participant *tabletku*, which is not available for *poprehltať tabletku*. In this case, the plurality meaning is present in the semantics of the argument with the resultative semantics *na kúsky* which is not obligatorily expressed in the sentence structure, compare (22) and (22'):

- (22) *Konár* *poslušne* *po-prelamova-l*.
 branch-ACC.SG obediently DISTR-break-PST-SG.MASC
 'He obediently broke the branch.'
- (22') *Konár* *poslušne* *po-prelamova-l* *na kúsky-y*.
 branch-ACC.SG obediently DISTR-break-PST-SG.MASC on part-ACC.PL
 'He obediently broke the branch into parts.'

Two types of verbal units can be counted among inherent spatial distributives in Slovak: agentive verbs of splitting (e.g., *poprelamovať* 'break little by little, part by part', *poprerezávať* 'cut little by little, part by part') and reshaping¹² (*poohýbať* 'bend little by little, part by part', *popreliačovať* 'make a dent little by little, part by part') or non-agentive verbs of reshaping (e.g., *ohnúť sa* 'become bent little by little, part by part', *popreliačovať sa* 'become dented little by little, part by part').

Spatial distributivity is also evoked in other types of structures with distributive verbs. Singular quantized nouns can be used in them if the noun has a plurality feature at notional level, denoting conglomerate objects, assembly (which is often reflected in dictionary definitions), e.g., *byt* 'flat' is defined as *súbor miestností určený na bývanie jednotlivca al. rodiny* 'a set of rooms intended for the housing of an individual or a family' in *Slovník súčasného slovenského jazyka* (2006) (see example 7). On the other hand, nouns denoting simplex, non-conglomerate objects cannot be used in the singular form with a distributive verb, e.g., *porozbíjať výklad* 'to break [the] shop window', but **porozbíjať prasiatko* 'to break [the] piggy bank'.

Distributive verbs are usually formed by adding the prefix *po-* to the verb with the status of an accomplishment or achievement predicate (Vendler 1957) and they cannot be formed from verbs denoting state (e.g., *veriť* 'believe' – **po-veriť* 'believe one by one'), or activity (e.g., *tancovať* 'dance' – **po-tancovať* 'dance one by one'). The reason is that state and activity predicates are internally homogeneous and atelic. Accomplishments are durative and telic, they consist of an activity (process) leading up to a culmination point whereas achievements denote transition from one situation

¹² In FrameNet (2017), verbs of reshaping are defined as lexical units denoting the situation when a Deformer deforms a Patient possibly against a Resistant _surface such that it undergoes a shape-change from its canonical or original shape into the Configuration, a new shape.

Some activity predicates rarely do allow distributive formation. This usually involves a semantic re-construal of the activity predicate. It can be shown in the following example:

- The verb *pospat'* in example (22) has distributive-inchoative meaning so that one would expect to be derived from the prefixed inchoative verb *za-spávat'* 'fall asleep', not from the activity verb *spat'* 'sleep'. The distributive verb *po-spat'* exerts semantic re-construal of its motivating verb *spat'* as its meaning cannot be paraphrased as 'sleep one by one', only 'fall asleep one by one'.

The term “active zones” was first introduced in Langacker (1984) and has appeared in several of his other works (1991, 2009 among others). Langacker’s theory of active zones is based on the idea that there are few cases where entities participate in a relationship holistically, as an unarticulated whole, e.g., *A spaceship approaches Venus*. On the contrary, in a number of cases, not the whole, but only some part of the whole, is directly involved in the event. To illustrate this, the

following examples can be given: *Your dog bit my cat.*, *Roger heard a noise.*, *Susan has a cigarette in her mouth.* Realistically, it is not the whole dog that bit the whole cat, but only part of its body (the teeth) performed the action on part of the cat's body. Similarly, not Roger in the sense of the whole heard the noise, but only a part of his body (the ears), Susan does not have the whole cigarette in her mouth, but only a part of it, etc.

Similarly, in constructions with distributive verbs, different parts (or "facets") of our knowledge of the referent are brought to the fore, e.g., in the structure *povysávať dom* 'to vacuum the house part by part', ground parts (floor or carpets) are profiled whereas in the structure *ponatierať dom* 'to paint the house (part by part)', walls become the centre of our attention. Metonymy is therefore a reflection of our fundamental reference point ability to decide which facet is being profiled in any particular instance of language use.

Thus, in simple terms, the active zones can be said to denote those parts of the source that participate directly in the relation/event (Langacker 1984, p. 177). However, Langacker (ibid.) points out that the active zone is not necessarily a discrete, sharply delineated area within the whole entity. As opposed to situations such as *Paul hit me* or *The car needs washing*, where *Paul* and *the car* may be said to stand as wholes for the parts 'Paul's fist' and 'the car's body', respectively, in examples like (18), we cannot identify precise parts of the cake that participate most directly and crucially in that relationship. The given examples are often described as a case of a partial coercion licensed by the metonymy SUBSTANCE → PORTION/AMOUNT of SUBSTANCE or THING → PART of THING.

4.2. CONSTITUTION ICM

Another ICM to which the relationship between a whole and a part may be said to apply is what can be called 'constitution ICM'. Substances may be conceived of as parts which constitute or make up things, in particular physical objects.

This type of metonymy may arise when a mass noun denoting substance is used as a metonymic source for physical objects made of this substance as a metonymic target. In such cases, a singular mass noun is used as the argument of the distributive verb, as in example (23):

- (23) ... *jej porozbija-l-i vzácny čínsky porcelán.*
 her-DAT DISTR-break-PST-PL precious Chinese porcelain-ACC.SG
 'They broke her precious Chinese porcelain (= porcelain products).'

In the given example, a conceptual mismatch arises between the singular noun *porcelán* and the distributive verb. Conceptual conflict is solved by coercion based on metonymy MASS to COUNT which can be analysed under Constitution ICM.

This ICM involves the material or substance that constitutes an object. Substances are unbounded and therefore uncountable. A substance may, however, be conceived of as bounded, i.e. as object-like, and is then profiled as a count noun, as in example (23). In such cases, there is a metonymic connection between the material and the products made of them which enables metonymic operation.

4.3. POSSESSION ICM

In the study by Janočková (2011) the sentence in example (13) is interpreted as an example of internal distributivity. In fact, these examples can be interpreted as a case of external distributivity based on possession metonymy. The noun *syn* ‘son’ as a possessor metonymically stands for possessed belongings from his personal sphere (*veci* ‘things’) within *Possession ICM*. ‘Personal sphere’ can be defined as a “mental sphere which consists of persons, objects, localisations and facts so closely connected with a given person, who is called the target person”, that “any change which these objects, facts and persons undergo will directly or indirectly affect the target person” (Dąbrowska 1997, p. 17):

- (24) *Rodič-ia* *povyžúva-l-i* *chlapč-a*.
parent-NOM.SG DISTR-take off-PST-PL little boy-ACC.SG
‘The parents took the little boy’s shoes off.’

In this case, the action is directed at the boy’s shoes which are conceptualized as belonging to his personal sphere.

Possession ICM may lead to reversible metonymies, both POSSESSOR FOR POSSESSED and POSSESSED FOR POSSESSOR. There is, however, a clear preference for choosing the possessor as the vehicle and the possessed object as the target. The relation between possessor and possessed belongings constitutes the metonymic link labelled as *proximity* or *adjacency*, which is considered a less typical manifestation of contiguity (cf. Kövecses – Radden 1998).

4.4. CONTAINMENT ICM

Locative alternations require two “non-actor” arguments (locatum and location; or container and contents of containment) associated with a simple event verb structure and two different ways of realising them at the same time.¹³

In the primary structure (25), the theme argument expressing content of container becomes the direct object (*veci*), and the source argument expressing container is coded in the form of the preposition phrase (*z vozíka*):

¹³ Similar Czech constructions are discussed Kettnerová (2014).

- (25) *Povyklada-l* *vec-i* *z* *prívesného vozík-a*.
 DISTR-unload-PST-SG.MASC item-ACC.PL from trailer-GEN.SG
 'He unloaded the items from the trailer one by one.'

In the case of derived alternated structures as in example (25'), only the location argument expressing the container as a singular direct object is expressed in the sentence structure in spite of the plurality requirement that is imposed by a distributive verb on its participant.

- (25') *Po-vyklada-l* *prívesný vozík*
 DISTR-unload-PST-SG.MASC trailer-ACC.SG
 'He emptied the trailer (one by one).'

According to Sweep (2011), two core elements (theme – locatum and source – location) in the locative frame are closely connected and they can be seen as a single gestalt. Therefore, the direct object can metonymically shift between the theme-element and the source-element in locative constructions, depending on which part of the gestalt involved is highlighted. The contiguity between theme and source serves as a possible explanation for the fact why a distributive verb requiring plural participant enables the frame with an object participant expressed by a singular countable noun. Coercion of participant-plurality reading is determined by adaptive mechanisms that operate at the interface between semantic and conceptual knowledge.

5. CONCLUSION

The idea that the concept of coercion can be applied to cases of metonymic reference transfers has been shown in many theoretical studies (e.g., Nunberg 1979; Levinson 2000). Distributive coercion can be described as domain-internal operation which is used to solve conceptual mismatch between the plurality requirement of the distributive verb on its participant and singular coding of this participant. The role of metonymy in distributive construction is to provide a natural inference schema that connects the coerced element (NP argument) and the coercing element (distributive verb).

Depending on the type of predicate and the formal morphology of the arguments in the sentence structure, the following distributive interpretations are possible, as presented in Table 1.

Table 1: Types of predicates and distributivity scope

One-place predicates						
	Distributivity	Example	Interpretation	Noun	Profiling	ICM
singular subject	temporal	(a) <i>rosa poschla</i>	the dew dried up little by little	mass	portions of substance	Thing-and-part
	spatial / spatial + temporal	(b) <i>koláč popraskal</i>	the cake cracked here and there/here and there part by part	count	parts of thing	Thing-and-part
	participant	(c) <i>*zvierá pohynulo</i>	-			
plural subject	participant	(d) <i>zvieratá pohynuli</i>	the animals died one by one	count	things	-
Two-place predicates						
	Distributivity	Example	Interpretation	Noun	Profiling	ICM
singular subject – singular object	temporal	(e) <i>popil všetok čaj</i>	he drank all the tea little by little	mass	portions of substance	Thing-and-part
	spatial	(f) <i>otec povysával gauč</i>	the father hoovered the couch part by part	count	parts of thing	Thing-and-part
	participant	(g) <i>*otec pobudil dieťa</i>	-			
		<i>mama pobalila syna</i>	the mother packed son's things piece by piece	count	things	Possession
		<i>muž povykladal vozík</i>	the man loaded the card	count	things	Containment
		<i>muž porozbíjal porcelán</i>	the man broke up the porcelain	mass	things	Constitution
singular subject – plural object	participant	(h) <i>otec pobudil deti</i>	the father woke up children one by one	count	things	-
plural subject – singular object	participant	(i) <i>deti popredbiehali učiteľku</i>	the children one by one overtook a teacher	count	things	-
	participant + spatial / spatial	(j) <i>upratovači povysávali gauč</i>	(i) the cleaners one by one hoovered the couch part by part = distributive marker scopes over subject and object participant (ii) the cleaners collectively hoovered the couch part by part = distributive marker scopes over object participant	count	parts of thing	Thing-and-part

plural subject – plural object	participant	(k) <i>deti</i> <i>popredbiehali</i> <i>učiteľky</i>	(i) classmates collectively overtook more than one teacher one by one = distributive marker scopes over object participant (ii) classmates individually one by one overtook a group of teachers = distributive marker scopes over subject participant (iii) classmates individually one by one overtook more than one teacher one by one = distributive marker scopes over subject and object participant	count	things	-
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The meaning shifts in constructions with distributive verbs are twofold: lexical shifts based on lexical metonymy (e.g., from object to parts of objects or from mass to portions of substance) or grammatical shifts based on grammatical metonymy (*singularis pro plurali* schema).

Grammatical metonymy in Construction I involves no change on the conceptual level, the metonymic nature of the distributive construction is reflected in the use of a grammatical form not licensed by a verb selector:

[[OBJECT] → [SET OF OBJECTS]], e.g., *všetci žiaci podostávali vysvedčenie* ‘all pupils (one by one) got the school report’.

The noun *vysvedčenie* ‘school report’ has been used in the singular form even though the expression *vysvedčenie* does not actually designate only one school report being distributed among pupils, but many school reports, one for each pupil. However, the plural form of the subject enables the coding of the object argument in the singular form. This type of grammatical metonymy applies in constructions with *verba dandi* and *recipiendi* and the possible motivation for it is related to the possible semantic underspecification of the plural form. The usage of the expression *vysvedčenia* ‘school reports’ in the given construction could lead to semantical ambiguity (it would not be clear whether every pupil got one school report or more than one school report).

Lexical metonymy in Construction II is conceptual, i.e. it involves the change from concept A to concept B. The following types of concept metonymies may be distinguished in the case of distributive verbs:

(i) FORM_A -CONCEPT_A FOR FORM_B -CONCEPT_B: as in (*povyžívať*) *syna* ‘literally: to take off the son’ for (*povyžívať synovi*) *topánky* ‘to take off the son’s shoes’ (son as the possessor stands for shoes as possessed thing);

(ii) FORM-CONCEPT_A FOR CONCEPT_B: as in *vosk (sa povylieval)* ‘the wax poured out’ for ‘portions of wax poured out’ (wax as a substance stands for portions of wax);

(iii) FORM_A-CONCEPT_A FOR FORM_A-CONCEPT_B: as in (*poroznášat*) *pitie* ‘literally to take drinking round’ for ‘to take the drinks round’ (drinking as event *pitie 1* stands for drinks as objects of drinking *pitie 2*).

The first type involves two different signs denoting two concepts belonging to the same ICM.

The second type differs from the preceding one in that the target concept does not have a name in the language.

The third type adheres to polysemy which is a common way in which metonymic concepts manifest themselves in the language.

The major result of the present analysis is detection of a set of two general patterns and nine sub-patterns of lexical metonymic extensions.

Five of these sub-patterns refer to metonymic extensions within the domain “object”:

(i) [[OBJECT] → [SPATIALLY SCATTERED PARTS OF THE OBJECT]], e.g., *koláč popraskal* ‘the cake cracked’,

(ii) [[OBJECT] → [ALL PARTS OF THE OBJECT]], e.g., *povysával gauč* ‘he vacuumed the couch’,

(iii) [[OBJECT] → [SALIENT PARTS OF THE OBJECT]], e.g., *povysával byt* ‘he vacuumed the flat’,

(iv) [[OBJECT] → [OBJECTS CONTAINED IN THE OBJECT]], e.g., *povykladal vozík* ‘he unloaded the cart’,

(v) [[OBJECT] → [OBJECTS IN THE POSSESSION OF THE OBJECT]], e.g., *pobalila syna* ‘she packed her son’.

Sub-patterns (i) – (iii) can be labelled as cases of internal distributivity, sub-patterns (iv) – (v) represent external distributivity.

Four of these sub-patterns refer to metonymic extensions within the domain “substance”:

(vi) [[SUBSTANCE] → [LIMITED AMOUNTS OF THE SUBSTANCE]], e.g., *vosk sa povylieval* ‘the wax poured out’,

(vii) [[SUBSTANCE] → [OBJECTS MADE OF THE SUBSTANCE]], e.g., *porozbíjal porcelán* ‘he broke the porcelain’,

(viii) [[SUBSTANCE] → [CONTAINERS THAT HOLD THE LIMITED AMOUNTS OF SUBSTANCE]], e. g. *poroznášal kávu na stoly* ‘he took the coffee round to tables’,

(ix) [[CONTAINER THAT HOLD THE LIMITED AMOUNTS OF SUBSTANCE] → [SUBSTANCE]], e.g., *porozlieval fľašu vína do pohárov* ‘he poured the bottle of wine into glasses’.

Sub-pattern (vi) can be labelled as cases of internal distributivity, sub-patterns (vii) – (ix) represent external distributivity.

The constructions with grammatical and lexical metonymy represent various construals. The specificity of the construal methods introduced by both constructions is related to phenomena such as focusing, i.e., “the selection of conceptual content for linguistic presentation, as well as its arrangement into [...] foreground vs. background” (Langacker 2008, p. 57), focused viewing, focus of attention, and focal prominence (introduced after Langacker, 2008).

The metonymy in Construction I (with grammatical metonymy) introduces focused viewing and focal prominence (the focus is on an individual object from a set of objects), whereas the metonymy in Construction II (with lexical metonymy) serves as a mechanism for “zooming out” from the parts to the whole.

In the construction with grammatical metonymy, one of the objects of the set of presented objects is extracted, and it makes this element available for focused viewing. Thus, this construction appears to realize pattern ONE X for a MANY X-ES.

Zooming out applies in situations when the target parts are not easily accessible, or available for construal. Unavailability may be related to the conceptual level, when the substance is in focus instead of portions of this very substance, e.g., *vosk sa povylieval* ‘the wax poured out’. As the target concept does not have a name in the language and can be only paraphrased, it is communicatively more convenient to use the expression of the whole substance. Availability may also be restricted in the given communication context, such as particular contents of a container as in *povykladal vozík* ‘he unloaded the cart’ (perceptual accessibility of bigger objects such as containers is higher than those of smaller objects such as things in the container), or products made of some substance *v rámci predvianočného upratovania poumývajte sklo* ‘as a part of pre-Christmas cleaning, wash the glass’ (this metonymy reverses the cognitive principle BOUNDED over UNBOUNDED due to the Maxim of Quantity – the name of material *sklo* ‘glass’ stands for the set of nouns denoting products *poháre* ‘glasses’ which is in accordance with the Submaxim of Quantity “Do not make your contribution more informative than is required”), cf. Huang (2019). This strategy is also used in situations when the source meaning of the whole object is conceptually more prominent, i.e. more in the focus of attention, than the target meaning of parts (in the case of aggregate objects as in *povysával gauč* ‘he vacuumed the couch’ the whole is more prominent in conceptualization). As was shown, the involved distributive verbs may trigger various metonymic readings that bring different parts into focus and activate disparate active zones of the same object (as in *povysával dom* ‘he vacuumed the house’ and *ponatieral dom* ‘he painted the house’).

The analysed sub-patterns also demonstrate that there are a number of cognitive and communicative principles which govern the default selection of the preferred metonymic vehicle. These cognitive principles pertain to the areas of human experience and perceptual selectivity (cf. Radden – Kövecses 1999).

Human experience, determined by anthropocentrism (Vaňková 2005), is reflected in the different principles of relative salience. In the case of distributive constructions, human experience is instantiated by metonymies such as HUMAN OVER NON-HUMAN (*pobalila syna*) or VISIBLE OVER NON-VISIBLE, which is reflected in metonymies CONTAINER FOR CONTENT since containers are visible, but things in the container are, as a rule, not (*povykladal vozík*).

The *foci* of perceptual selectivity is reflected in the cognitive preference of perceptually salient sources and is instantiated in metonymies such as GOOD GESTALT OVER POOR GESTALT. This principle arises out of our tendency to perceive gestalts as a whole rather than separate parts and accounts for the wide-spread use of whole objects when in fact an “active-zone” part is meant (*povysával byt*). The perceptual selectivity is also responsible for the metonymic model labelled as BOUNDED OVER UNBOUNDED when the metonymic shift CONTAINER FOR THE SUBSTANCE IN THE CONTAINER (*porozlievať fľašu*) allows us to construe an unbounded thing as bounded. Its reverse metonymy, such MATERIAL CONSTITUTING AN OBJECT FOR THE OBJECT (*porozbíjať porcelán*), is possible, yet much less productive.

The present study tried to prove that the interaction between coercion and metonymy should be acknowledged as playing an essential role in distributive constructions in the process of coercing plurality meaning of arguments selected by distributive verbs and it may contribute to a more comprehensive understanding of both phenomena – distributivity as well as metonymic transfers.

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Keď jeden nestačí. Koercia distributívnej interpretácie na základe metonymie

Resumé

Cieľom príspevku je analýza distributívnych slovies v slovenčine utvorených pomocou distributívneho prefixu *po*. Distributívna sémantika slovesného prvku v príslušnej konštrukcii ukladá na argumenty verba isté obmedzenia. Distributívnym slovesom sa profiluje distribúcia deja na každý člen objektu alebo subjektu, čo predpokladá plurálové kódovanie týchto argumentov. Štúdia sa venuje príkladom tých vetných štruktúr, v ktorých sa argument distributívneho slovesa vyjadruje singulárovou formou substantíva. V takýchto štruktúrach vzniká nesúlad medzi sémantickými vlastnosťami distributívneho slovesa s úlohou selektora a gramatickými vlastnosťami jeho argumentu s úlohou selektovaného prvku. Gramatický kontext tak núti používateľa jazyka reinterpretovať sémantické a/alebo formálne vlastnosti argumentu. Použitie singulárovej formy argumentu v takýchto štruktúrach možno chápať ako výsledok operácie, ktorá mení sémantiku argumentu na základe metonymického transferu. Metonymické operácie zabezpečujúce cieľovú plurálovú interpretáciu možno analyzovať v rámci rôznych metonymických modelov, zodpovedajúcich rozličným idealizovaným kognitívnym modelom. V práci analyzujeme tri podoby distributívnosti: participantskú distributívnosť (označovanú aj ako externá distributívnosť), temporálnu distributívnosť a priestorovú distributívnosť (analyzované ako prípady internej distributívnosti). Analýza ukazuje, ako vznikajú rôzne interpretácie distributivity v závislosti od metonymickej sémantiky nominálnych argumentov.

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VERBAL ASPECT AND STATIVE CONSTRUAL IN CZECH

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STARÝ KOŘÁNOVÁ, I. (2025): Verbal Aspect and Stative Construal in Czech. In: *Slovenská reč*, 90/2, 152 – 183.

Abstract: The present article deals with the category of aspect in Czech and with some theoretical ramifications for aspect in general. So-called perfective verbs may be part of an imperfectively interpreted language expression, and vice versa. To address these situations terminologically, the distinction is made between morphological aspect (given by the morphological make-up of the verb) and aspectual construal. Thus, aspect appears not as an inherent quality of the verb as a lexical unit, but rather as a matter of verb use. Particular focus is given to the opposition ‘process’ and ‘state’. This opposition is examined in terms of the transition ‘process → state’. Relevant factors in this transition include the specificity/concreteness of the language expression construal, the ongoingness of the referred event: *ongoing event* (*aktuální událost*) and *non-ongoing event* (*neaktuální událost*), the tense, and modality, and the adverbial temporal complements. The conclusions are supported by two corpus-based analyses, one examining capacitives and the other ‘t + MP’ constructions (where ‘t’ is a temporal adverb with durative meaning, and ‘MP’ is a morphologically perfective verb). The latter analysis results in a classification of states into eleven semantic domains, the majority of which are modal states (about 35 % of the identified stative construals).

Keywords: verbal aspect, morphologically perfective verb, morphologically imperfective verb, state, stative construal, process, dynamic construal, capacitive verb, tense, modality.

Highlights:

- Distinctions are drawn between morphological aspect vs aspectual construal, i.e. between morphological perfectives/imperfectives vs. perfective vs imperfective construal.
- The same applies to the process – state opposition. The former relates to the verb as a lexical unit and the latter to the verb.
- Two corpus-based analyses to support the above points. Analysis 1 of Czech capacitives from the point of view of the process – state distinction and Analysis 2 of morphological perfectives + durative temporal adverb collocations. The latter analysis results in a classification of semantic types of states.

1. INTRODUCTION¹

1.1. IMPERFECTIVE – PERFECTIVE OPPOSITION

The article focuses on the opposition of state (stative) vs. process (dynamic) which is one of the distinctions relevant while describing aspectual meanings.

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Traditionally aspect has been considered a verbal category which concerns temporal nature of communicated situations: *aspect is different way of viewing the internal temporal constituency of a situation* (Comrie 1976, p. 3, bold is mine).

Languages differ in regard what kind of aspectual distinctions they work with, and language means they use to express them, i.e. to express temporal constituency, temporal layout of the situation to which language communication refers. In case of Czech, these language means are of morphological nature and the core aspectual distinction is opposition perfective vs imperfective.

The aspectual opposition perfective vs. imperfective has been traditionally described in terms of the following semantic features:² *event completion*³, *temporal boundedness*⁴, *event result achievement*⁵, *event as a whole*⁶. Besides features listed, other metaphorical descriptions can also be mentioned.⁷

Common morphological means of perfectivity vs imperfectivity in Czech are mostly prefixes: číst ‘to read impf’, dělat ‘to do impf’ – přečíst ‘to read completely, the whole text, perf’, udělat ‘to do sth to its end, to finish, perf’, prefixation being used to derive a perfective from an imperfective verb, and suffixes (nahradit – nahrazovat ‘to compensate, perf – to compensate impf’), suffixation being used to derive an imperfectives from a perfective verb. Comp. e.g. Karlík et al. (2020) or any grammar of Czech dealing with verbal categories.

² See further Starý (2020).

³ This perfective feature is claimed for instance by Givón, who speaks about *completive* (Givón 1984, p. 288), and by Bybee – perfectivity as *completed action* (Bybee et al. 1994, p. 276) or Dahl and Comrie (see footnote 5 below). Similarly in works of Czech scholars: for Trávníček is perfectivity connected with *vědomí dokonání děje* ‘awareness of event completion’ (Trávníček 1923, p. 3) and a perfective event is a *děj skonaný* ‘finished/fulfilled event’ (ibid p. 292); Kopečný refers to perfective as to a *děj dokonáný, resp. dokonaná činnost* ‘finished event, fulfilled activity, i.e. activity brought to its end/goal’ (Kopečný 1962, p. 9).

⁴ Temporal boundary/boundedness is being connected with perfectivity by Givón and Bybee. Both do so by stressing unboundedness of imperfectivity. Imperfectives do not contain any *temporal boundary* (Givón 1984, p. 276). Lack of *temporal boundedness* is also defining quality of imperfectivity for Bybee (Bybee et al. 1994, p. 5, 83, 301).

⁵ For instance, Dahl describes perfective verb as the one that denotes *a single event, seen as an unanalyzed whole with a well-defined result* (Dahl 1985, p. 78). This interpretation/meaning seems to overlap with event completion feature.

⁶ Comp. Comrie: *perfectivity indicates the view of a situation as a single whole* (Comrie 1976, p. 16), Dahl: *A PFV ‘i.e. perfective’ verb will typically denote a single event, seen as an unanalyzed whole* (Dahl 1985, p. 78). According to Kopečný perfective verb presents the event as *děj celkový, souborný* ‘event as a whole, aggregate event’ (Kopečný 1962, p. 9) and according to Dostál perfective verb presents the event *jako celek* ‘as a whole’ (Dostál 1954, p. 15f).

⁷ See Starý Kořánová (2021, p. 159 f.). One such description is the perspective of film (imperfective verbs) to photography (perfective verbs), a comparison that has already been made by several authors without citing the source. However, Ivan Poldauf seems to have been the first to use this metaphor in Poldauf – Šprunk (1968, p. 212ff).

1.2. THERE IS A PROBLEM

- (1) *Za rok mi bude osmdesát, ale stále vyjdu schody do 5. patra.*

‘I’ll be eighty in a year, but I can still walk up ‘perfective verb’ the stairs to the 5th floor.’

Verb *vyjdu* is perfective, its imperfective counterpart is *vycházím* ‘walk up, go up’, nevertheless, the sentence states that the participant of the situation is in good physical shape despite his high age. The usual and intended interpretation of the sentence does not exhibit prototypical semantic features of perfectivity: there is no event completion, no achievement since there is no ongoing process, no temporal boundary. Perfective verb has here a non-perfective, imperfective-like meaning. It looks like a perfective predicate participates on establishing imperfective meaning of the statement.

2. COMMUNICATED SITUATION (EVENT) AND ITS CONSTRUAL

To be able to deal with the contradictory “discrepancies” illustrated in the example just given, we will use the notion of **construal**.

Human *experience* is a way how real world is understood, and *meaning* is a way of representing that experience. To reflect the fact that the same experience can be expressed in different, alternative ways, we use together with Croft notions *process of conceptualization* or *construal*. Construal is a semantic structure for an experience (Croft 2012, p. 13). The most important characteristics of construal is that there is no ONE given way of event situation conceptualization. The fact that the same experience can be construed in different, alternative ways means that the used language means highlights certain details over others. Compare the alternative construals in examples (2) – (4).

- (2) *Hostinský přinesl dědovi slivovici. Ten si svlékl palčák a drobnou, od mrazu zmodralou rukou sáhl po sklence, ale palec odmítl poslušnost, takže děda neudržel sklenici v ruce a rozlil slivovici do sněhu.*

‘The innkeeper brought ‘MP’⁸ to the grandfather plum brandy. He took off ‘MP’ his mitten and with his tiny, frost-blue hand reached ‘MP’ for the glass, but his thumb refused ‘MP’ obedience, so the grandfather could not hold ‘MP’ the glass in his hand and spilled ‘MP’ the plum brandy into the snow.’

- (3) *A už se nese sklenka slivovice, dědova mrazem zmodralá ruka po ní sahá, palec však odmítá poslušnost a slivovice se rozlévá do sněhu.*

⁸ Morphologically perfective verb.

‘A glass of plum brandy is being carried ‘MI’⁹, grandfather’s frostbitten hand reaches for it ‘MI’, but his thumb refuses ‘MI’ obedience and the plum brandy spills ‘MI’ into the snow.’

- (4) *Dédova ruka byla celá **promrzlá**, **neschopná udržet** sklenku slivovice.*
‘Grandfather’s hand was frozen, unable to hold the glass of plum brandy.’

Examples (2), (3) and (4) refer to the same situation. Example (2) construes the situation as a sequence of dynamic actions performed by three entities, two of which are people. The actions are expressed by morphological perfectives ‘MP’, which means that they are bounded and follow each other iconically. Each action narrated by the verb with a perfective aspect precedes the action that follows it in the narrative.

Example (3) construes the situation as being performed by several entities, none of which is a person or a person expressly referred to. Dynamic actions are represented here by morphological imperfectives ‘MI’. The actions describe the situation as unfolding ‘here and now’, they are not bounded. The individual actions follow one another, but we perceive their sequence as more or less overlapping. The difference lies in the effect of the present imperfective: the perception of time slows down and the situation becomes very “present”, we see it as if in front of our eyes.

Example (4) construes the situation in a stative way. The states expressed by the adjectives are attributed to a part of the human body.

On a general level, it can be said that the very choice of participants, and the aspectual character of the situation are subject to construal (Croft 2012, p. 14). The choice is not any inherent property of the real-world situation the speaker communicates.

Aspectual meaning of language expression is determined by the communicator’s perception of the communicated situation. In this sense, aspect is a result of the construal of the communicated event. The speaker’s statement about the communicated event, e.g. whether the situation is stative or dynamic, perfective or imperfective and the like, is part of the situation construal.

In terms of notion of construal, it is thus possible to describe situation we have encountered in example (1). **Morphological aspect**, i.e., aspect determined by morphological make-up of a verb, and **aspectual construal** of the language expression the verb is part of have to be distinguished since morphological aspect and its construal may differ. While morphological aspect is perceived as a property of a particular verbal lexical unit, aspectual construal is determined by the way a verb is used in communication.

⁹ Morphologically imperfective verb.

3. PROCESSES VS. STATES

Let us start with Vendler's classification of aspectual meanings. In his work, which has influenced a number of linguists, Vendler developed ideas of Aristotle and followed other 20th-century philosophers, notably Gilbert Ryle and Anthony Kenny. He has distinguished four fundamental aspectual types of events: *achievements*, *accomplishments*, *activities*, and *states* and grouped them into two main groups, namely **processes** (involving achievements, accomplishments and activities) and **states**.

Throughout the chapter (Vendler 1967, p. 97f) Vendler pays special attention to states. Some predicates, by their very nature, might be used as states more often than others: *knowing something* or *loving someone* manifest as states. Habits and, more broadly, occupations, dispositions, qualities, abilities, etc. are also states in Vendler's sense of the word. Certain states are independent of the agent's will, which means that their stative construals cannot be collocated with the expressions *záměrně* 'deliberately' or *pečlivě* 'carefully'.

Taking up Vendler's 'process vs state' distinction, Croft specifies processes as dynamic, durative or punctual, and bounded or unbounded; states are stative, durative and unbounded (Croft 2012, p. 35).

There is another linguistic opposition related with the 'process vs state' opposition, namely the opposition of 'noun vs verb'. According to Langacker (Langacker 2008, p. 151), the most basic, fundamental grammatical categories are noun and verb. The dynamic and stative construal or interpretation of an event shows extensive parallelism with them. Langacker points out that noun and verb are polar opposites in terms of their conceptual characterizations (ibid. 128). Whereas a noun profiles a thing, defined abstractly as any product of grouping and reification, a verb profiles a process, defined abstractly as a relationship sequentially scanned in its evolution through time.¹⁰

Despite this uppermost, diametrical, maximal opposition, the two major categories of parts of speech have also much in common. The two basic types of nouns, traditionally known as countable and mass nouns, correspond to conceptual archetypes object and substance. The two basic types of verb use correspond to two archetypes that we will refer to here as the *dynamic* and the *stative*.¹¹

Dynamic interpretation of verb is prototypical: verbs denote action and change through time. Stative interpretation, on the other hand, is closer to the prototype of noun, since nouns denote living beings, things and their qualities. Noun construes the situation as a stable situation that continues through time.

¹⁰ For the transition from the dynamic construal of an event expressed by a verb to the stative construal of an event expressed by a noun, see the section *Process → State Transition* further.

¹¹ Langacker calls this polar, uppermost difference in verb usage *perfective* and *imperfective* and notes that other terms are often used, e.g. "active" vs. "stative" (Langacker 2008, p. 147). The metaphor of time as space, in which situations are material entities and, the perfective is a solid object while the imperfective is a fluid substance, is being developed in the work of Janda (2003).

Langacker considers some English verbs to be dynamic verbs because of what they denote – something happens, some change is observed in the described situation. Other verbs profile stable situations of indefinite duration, they are stative verbs. For example, *to learn* denotes a change, something is changed from not knowing to knowing. *To hope*, on the contrary, profiles a stable situation in which nothing changes, and nothing happens. The verb *to hope* itself excludes the beginning or the end of the relationship¹² from *what it puts onstage for focused viewing* (Langacker 2008, p. 147).

In addition, Langacker points out that many verbs can be used to articulate a process that changes over time or to describe a stable situation. Examples (Langacker 2008, p. 148).

(5) *The SWAT team surrounded the house.*

The verb *surround* is used to describe a temporally bounded activity, i.e. a process.

(6) *A hedge surrounds the house.*

The verb *surround* participates in the description of a stable situation with no temporal limits.

The Langacker's view is shared by several other authors (for instance Dahl 1985, p. 26f, Dowty 1979, pp. 61 – 62, Croft 2012, p. 37). They all agree that predicate has the potential to be conceptualized or construed in several aspectual ways, the predicate aspectual "value" is not an inherent property of the language unit (prototypically of verb).

This fact not only further motivates the necessity to distinguish between **morphological aspect** and **aspectual construal** (see above), but also draws attention to the fact that even the distinction between process vs state is not an inherent property of the verb, but a matter of the verb use: a so-called stative verb can participate in the establishment of a processual construal and vice versa, i.e. a verb that as a lexical unit seems to refer to an activity, process, can participate in establishing of a stative construal.

From now on, we will use the abbreviations **MI** and **MP** to refer to morphologically imperfective and morphologically perfective verbs, respectively, and, to avoid any ambiguity, we will use the term **event** as a superordinate term for both **stative** and **dynamic** events, as it is common in Croft (2012).

¹² The fact that the meaning of the verb *to hope* does not imply any change of the situation, does not prevent its combining with phrasal verbs *začít/start*, *přestat/stop* to express that the state of hoping started or subsided respectively.

4. ONGOING (AKTUÁLNÍ) VS NON-ONGOING (NEAKTUÁLNÍ) EVENTS

This difference can be illustrated with the following anecdote by Jiří Suchý:

- (7) *V parku na lavičce sedí pán se slečnou a ten pán chce s tou slečnou začít rozhovor, tak se jí ptá: „Pardon, slečno, hrajete na piáno?“ a ona na to odpoví: „Ne, vy něco slyšíte?“*

‘A gentleman and a young lady are sitting on a bench in park and the gentleman wants to strike up a conversation with the lady, so he asks her: “Excuse me, miss, do you play/are you playing the piano?” and she says: “No, can you hear anything?”.’

The anecdote is based on homonymy of the question *Hrajete na piáno?* in Czech. There are two possible interpretations of the question, stative or dynamic. The stative construal can be expressed in English *Can you play the piano? Are you a pianist?* The dynamic one then with English *Are you playing the piano right now? At this moment?* The young lady goes along with the dynamic construal and responds with a question about an ongoing process: *Can you hear anything?* The anecdote thus illustrates the difference between an ongoing process and a habit, ability, skill.¹³

Example 7 brings up distinction relevant for the relationship of states and processes, namely the distinction between an *ongoing event* (*aktuální událost*) and *non-ongoing event* (*neaktuální událost*). F. Kopečný and V. Mathesius were, to my knowledge, the first linguists who brought attention to this distinction. According to Mathesius, actuality consists in something happening before our eyes (Mathesius 1938). Kopečný in his *Dva příspěvky k vidu a času v češtině* (Kopečný 1948, p. 151f) uses the question *Co to tu děláš?* ‘What are you doing here?’ as a criterion of so-called “actual present”, i.e. of an event going on in front of speakers’ eyes and thus of an ongoing event.

But relevance of the opposition of *ongoing event* (*aktuální děj*) and *non-ongoing event* is not limited to present tense only. In order to define ongoingness (“actuality”) as such, i.e. independently of tense/temporal placement of the process, we have to specify in front of “whose eyes” the event is supposedly going on. A distinction must be thus made between the communicative (speech) event U^{SE} and the event narrated in the communication, U^{NE} . While Kopečný, like probably most users of the metaphor “in front of our eyes”, used the term “actual present” in the sense of “in front of our eyes” (U^{SE}), in the case of past and future it has to be in front of the eyes of the communicated, related event participants (U^{NE}). The fact that an *ongoing event* (*aktuální událost*) is a process, and a *non-ongoing event* is rather a state is valid. It holds even in cases of so-called stative verbs (*stavová slovesa*), i.e. verbs which by their nature tend to refer to states (cf. Langacker and Vendler in the previous section).

¹³ According to Vendler (1967, p. 108) habits are also states.

Ležet (MI)

Havránek and Jedlička (1981, p. 229) give an example of the so-called stative verbs *ležet* ‘to lie’, *sedět* ‘to sit’ and *stát* ‘to stand’ which, according to the authors, always express states. Nevertheless, even these verbs can be used in construals that indicate an occurrence of a process at the time of speaking. (8) is an example of the actual usage of the verb *ležet* ‘to lie’ to construe an ongoing process:

- (8) *Chtěl jsi to autíčko a ted' tady leží na zemi a nehraješ si s ním.*
‘You wanted to have the car and now it’s lying (MI) on the ground and you’re not playing (MI) with it.’

This usage excludes the stative interpretation, because the event implies a possibility of the car changing its position: right now, it “is doing/performing” lying.

A stative construal with the verb *ležet* ‘to lie’ implies stability, it does not take into account the possibility of change. See example 9:

- (9) *Obec Mnichovice leží asi 20 km na východ od Prahy.*
‘The village of Mnichovice lies about 20 km east of Prague.’

This construal does not imply an ongoing event (aktuální děj), the construal refers to the unchanging location of the village.

Sedět (MI)

The sentence *Dítě už sedí* has also two readings: a dynamic one refers to the child’s posture (the child is performing the sitting position, ‘The baby is sitting’), and a stative one which refers to the child’s ability to sit ‘The baby can, is able to sit already’, which is not necessarily being practiced in front of the eyes of the situation participants.

Uběhnout (MP)

The aforementioned verbs are morphologically imperfective (MI). Let’s take an example of a morphologically perfective (MP) verb *uběhnout* ‘to run/to be able to run a certain distance’, which does not inherently belong to a single aspectual type:

- (10) *Loni v září jsem uběhl maraton v Budapešti za čtyři hodiny a pět minut.*
‘Last September, I ran (MP, past tense) the Budapest marathon in four hours and five minutes’.
- (11) *Maraton uběhnu za čtyři hodiny a pět minut.*
‘I can run the marathon (MP, present tense) in four hours and five minutes’.

The same verb *uběhnout* is used in two aspectually different construals. Example (10) construes the situation as a dynamic event that took place before the moment of speaking, it is concrete and unique, it has an exact location in time and space. Construal (10) is a process.

Example (11) construes the situation as a stative event that doesn't have an exact location in time and space. It is an ability of the speaker of the utterance; what is put onstage for focused observation is his physical fitness. The event is not construed as a single specific (concrete) event, by using the present tense of the verb MP, a more general meaning emerges that refers to the physical qualities of the speaker, his physical state. Construal (11) is a state.

5.1. PROCESS – STATE RELATIONSHIP

Some states, such as traits, abilities and habits, cannot be observed directly. They are identifiable through processes they facilitate.

a) The state is identified/inferred from a process. Let's take an example: a young lady is playing Beethoven on a piano, we can see her playing and hear her playing. Based on this experience, we conclude that she can play the piano. We attribute to her the state (ability) of a *pianistka* 'pianist'. A state is thus inferred from the perceived/experienced process.

b) The state as a necessary condition of the process. Uttering *Dítě už chodí* 'The child walks already', we refer to his/her skill, ability the child has. Even though (s)he is sleeping at the moment, we can say that it refers to the fact that (s)he could get up and actually walk. The child's ability to walk is a necessary condition for him/her to walk.

c) Which comes first, the state or the process? The question of priority in this case depends on the point of view from which the situation is perceived.

– From the point of view of the observer, i.e. the one who attributes a state to someone or something, the process from which the state can be derived always comes first.

– From the point of view of the bearer of the state, however, it is always the state that comes first, which is the condition for its bearer to be able to apply it in the process.

5.2. PROCESS → STATE TRANSITION

The formation of a stative construal can be interpreted as a transition from verbality to nominality (see Hopper – Thompson 1984 and the below section on Langacker's 'noun-verb' opposition). The higher the degree of generalization of the statement and abstraction from the specific spatiotemporal parameters of the situation referred to, the higher the chance of a stative, i.e. non-processual, interpretation. Let us illustrate this with a sequence of examples (15) to (21).

- (15) *Honza včera ukradl panu Novákovi na zahradě broskve.*
'Honza stole (MP) peaches from Mr. Novak's garden yesterday.'

Utterance (15) describes a singular event, spatiotemporally specified, which has been construed as a process (by an MP predicate in the preterit). It is a construal of a bounded event that took place and ended.

We open the way to iterative interpretation by moving from the use of the MP verb to the use of the MI verb (example 16).¹⁴

- (16) *Honza včera kradl panu Novákovi na zahradě broskve.*
'Honza stole/was stealing (MI) peaches from Mr. Novak's garden yesterday.'

By leaving out the spatiotemporal specification (*včera* 'yesterday', *na zahradě* 'from/in the garden'), the chance of iterative interpretation comes even more to the forefront (example 17):

- (17) *Honza kradl panu Novákovi broskve.*
'Honza stole (MI) Mr. Novak's peaches.'

Another semantic generalizing shift occurs with a transition from preterit to present tense, comp. example (18):

- (18) *Honza krade panu Novákovi broskve.*
'Honza steals (MI) Mr. Novak's peaches.'

Construal (18) can be interpreted as a non-ongoing (nonactual) process, i.e. as a habit: '*Honza has a habit of stealing Mr. Novak's peaches*'. We have thus moved from the domain of activities to the domain of habits, i.e. states. However, this statement as it is, without situational context, can still convey a dynamic interpretation. In the next step, Honza's "stealing" already becomes Honza's characteristic:

- (19) *Honza krade.*
'Honza steals (MI).'

The utterance (19) contains only the agent of the event and the MI in the present tense without any further complements: it is no longer a unique situation, no longer

¹⁴ The transition from (15) to (19) consists in "peeling off" of some semantic features to transfer from verbal to nominal expression. In the process, namely the transfer from (15) to (16), we touch upon the issue of general factual meaning, i.e. issue of substitutability of morphological perfectives with their imperfective counterparts, namely in the past tense. It was introduced, to my knowledge, by Comrie in connection with his exposé on markedness of aspectual verbal forms (Comrie 1976, ch. 6 *Markedness*) and more recently dealt with for instance by Klimek-Jankowska (Klimek-Jankowska 2022) which includes numerous further references.

a single stealing, no longer a single type of stolen object; all specifications have been left out, omitted. A dynamic ongoing (actual) interpretation “*Honza is stealing/Honza is in the process of theft*”, is still conceivable, but in real use of the phrase it is usually ruled out by the situational context.

In example (20), the transition from process to state is even more pronounced.

(20) *Honza ukradne, na co přijde.*

‘Honza steals (MP) everything he comes across.’

In example (20) two MP verbs (*ukradne, přijde*) are involved in the habitual construal of the sentence. There are no specific patient participants (i.e. what is being stolen is not mentioned), the general statement about the event involving the agent (*Honza*) is construed as a sequence of two successive events (‘*na co přijde* ‘comes across’ and *ukradne* ‘steals’). Once again, a specific process has been generalized and shifted to the domain of habits, e.g. states.

The nominal construal (21) does not allow any other interpretation than as a property of Honza, i.e. a stative interpretation.

(21) *Honza je zloděj.*

‘Honza is a thief.’

The statement has acquired a general stative meaning. The nominal designation makes the state-like construal most prominent: the noun *zloděj* ‘thief’ is something like a stigma.

The transition from (15) to (21) is a gradual shift from a MP verb to a MI verb in the preterit, to a MI and MP verb in the present, eventually towards the nominal designation. The nature of this shift is de-specification, abstraction, de-concretization, generalization, gradual peeling off of the characteristics of the situation to which the linguistic expression under scrutiny refers. In this process the processual, dynamic construal of the situation is replaced by a “nominal” (stative) construal. The noun represents the central domain of stative meaning, it is most closely, intimately, firmly connected to it.

6. MP VERBS AS MEMBERS OF STATIVE CONSTRUALS

In the following sections the process-to-state transition in constructions involving morphologically perfective verbs (MP) is analysed. Two corpus analyses will be presented to examine hypotheses stemming from introspective observations, testing them on corpus data.

As noted above, in Vendler’s terms, processes are achievements, accomplishments and activities (Vendler 1967, p. 97f). The remaining events are states. In Croft’s terms, states are stative, durative and unbounded while processes, i.e. Vendlerian achievements,

are dynamic, punctual and bounded, accomplishments dynamic, durative and bounded, and activities are then dynamic, durative and unbounded (Croft 2012, p. 35). In these terms, MP verbs are prototypically dynamic, bounded and punctual or durative (*přečíst* ‘to read completely’, *bodnout* ‘to stab once’), and MI’s are prototypically dynamic, durative and unbounded (*číst* ‘to read’, *bodat* ‘to stab continuously, repeatedly’).

6.1. CAPACITY VERBS IN CZECH

The first corpus analysis (Analysis1) focuses on the area of the so-called **non-ongoing perfective verbs** (neaktuální perfektivní slovesa) (Kopečný 1949, 1962, p. 36f), i.e. verbs which depict non-dynamic, non-ongoing events, or **capacity verbs** (Poldauf 1964, p. 50). These verbs have attracted the attention of scholars mainly because of the confusion about how to interpret their aspect. Discussions have been going on since the 1940’s. The term “non-ongoing perfective” was first used by Kopečný (ibid.). He divides these verbs into three groups:

1) The first group consists of verbs with the prefix *na-*, which gives the meaning of intensity, high degree to the imperfective base: *nadělat se* ‘worked a lot’, *nadřít se* ‘toil a lot, overwork’, *nazpívat se* ‘sing a lot’ etc.

2) In the second group there are various types of verbs denoting abilities with the prefix *u-*: *unese*, *uveze*, *utáhne*, *uzdvihne* ‘able to carry, pull, lift up to a certain load’, *ujde*, *ujede*, *uběhne*, *uplave*, *uletí* ‘able to walk, go, run, swim, fly a certain distance’.

3) Kopečný has also identified other non-actual perfectives which do not carry the unifying morphological attribute, namely the prefixes *na-* or *u-*: *ujde to* ‘it is tolerable’, *vejde se to tam* ‘it fits in there’, *on to dovede* ‘he is able to do it’, *dokáže* ‘he manages’, *dá se to (udělat)* ‘it is possible to accomplish that’, etc.

According to Kopečný, “non-actual” perfective verbs form a special group of *perfective* verbs. The author assigns a perfective aspectual value to them on the basis of the following morphological criterion: *those verbs are perfective which cannot form the future tense with the help of the auxiliary form of the verb to be and the infinitive*. The author notes that these verbs are often used in a “non-actual” sense (i.e. the respective events do not unfold in front of our eyes) and as such they are close to events expressed by imperfective verbs (Kopečný 1962, p. 37). According to Kopečný, the question of temporal specification of these predicates is not resolved. Kopečný rejects the possibility that they would express a present ongoing event, so he speaks of *non-actual present* (non-ongoing event in the present tense) in the case of these verbs.

Poldauf considers these verbs to be *imperfective perfectives*, and he was also the first to use the term *capacity verbs* (Poldauf 1964, p. 50). In connection with capacity verbs Poldauf also mentions the term *states* and says that capacity verbs,

like all stative verbs, are *imperfective* (Poldauf et al. 1968, p. 254). Capacity verbs are thus defined by Poldauf not only morphologically, as by other scholars, i.e. the verbs derived by the prefix *u-*, but also semantically, namely that they express states. However, Poldauf does not examine the state-like character of capacity verbs in more detail.

Veselý (Veselý 2009 a 2014) tends to classify capacity verbs as *perfective* and emphasizes that capacity verbs refer to non-specific processes.

On the contrary, according to Kroupová (Kroupová 1976), the *imperfective* aspect of capacity verbs should have been marked in SSČ¹⁵. However, Kopečný (Kopečný 1977) strongly disagreed with this idea and reiterated his morphological criterion for determining verbal aspect. Probably as a result of his intervention, capacity verbs in SSČ are now marked as *perfective*. Šlosar (Karlík 1995, p. 205) calls capacity verbs as *bi-aspectual*.

It is obvious that all of the above-mentioned scholars have attempted to combine the criterion of the morphological form of the verb (morphological perfective verb with the prefix *u-*) with a non-dynamic quality of the construal (the verb is used in the sense of ability, which is not of processual nature). They assume that the non-processual use of a verb is the same as the imperfective use, the imperfective meaning. As we have already shown, it is not always possible to associate state meaning exclusively with morphologically imperfective verbs. The confusing formulations of the above quoted authors stems from the fact that they do not distinguish between the morphological form of the predicate (morphological perfective/imperfective) and the way this predicate functions in the event aspectual construal.

6.2. OUR APPROACH

It is crucial to distinguish between two types of construals in which capacity verbs can participate. SSJČ¹⁶ (vol. VI, 275) defines the meaning of capacity verbs in two ways (for emphasis the definition was divided into parts a) and b)):

- a) *possibility, ability or capacity to achieve a goal*
- b) *the actual achievement of the goal*

Case a) is a stative usage of a capacity verb (in the sense of the description of states above). Case b) is dynamic, it is a processual usage of a capacity verb.

If the capacity verb is defined as a *verb that expresses the ability of the agent to perform the action denoted by the base verb* (Veselý 2014, p. 55), i.e. in the stative sense a), the processual, dynamic construal b) would be excluded. As difficult as it may sometimes be, to disentangle the two interpretations a) and b), certain contextual

¹⁵ *Slovník spisovné češtiny* 'Dictionary of Standard Czech'.

¹⁶ *Slovník spisovného jazyka českého* 'Dictionary of Standard Czech Language'.

and extra-linguistic conditions seem to contribute to the fact that the capacity predicate can participate in both types of construal, stative (a) and dynamic (b).

7. PARAMETERS AND RESULTS OF CAPACITIVE VERBS ANALYSIS (ANALYSIS 1)

The analysis was performed on data from the Czech National Corpus of Written Texts (ČNK) SYN v7 and worked with a total of 1,200 concordances in the present indicative and the preterit indicative of the predicates of the capacity verbs *ujít*, *ujet*, *uvézt*, *uzvednout/ uzdvihnout*, *uhlídat* and *uživit*. The selection of these verbs was based on semantic criteria, so that the sample would include different aspectual characteristics of the base verb of each capacity verb. The base verb expresses activity in Vendler’s terms (*hlídat* ‘to guard’) and movement (*jít* ‘to walk’, *jet* ‘to drive’, *vézt* ‘to take by a vehicle’), punctual telic action (*zvednout/zdvihnout* ‘to lift sth’), or has the potential to express a state (*živit se* ‘to make one’s living’).

These were randomly selected concordances of the verbs *ujít*, *ujet*, *uvézt*, *uzvednout/ uzdvihnout*, *uhlídat* and *uživit*. The focus of the analysis was whether the concordances had a dynamic or a stative construal e.g. *ujde určitou vzdálenost* – *he walks a certain distance* or *he’s able to walk a certain distance*.

The assumption that the dynamic or stative meaning of a predicate cannot be determined a priori (i.e. assigned to the verb as a lexical unit) but emerges from the use of the verb in a particular construal, has been confirmed.

It turns out that when a capacity verb is used in a predicate, it either describes capacity, an ability of a living agent, or in the case of a non-living agent, it refers to the agent’s property, i.e., it states what the agent is like. In this instance, the verb has a stative meaning. Or the capacitive verb refers to a performance, to the execution of an activity that manifests the capacity/ability of a living agent or a disposition (property, characteristics) of a non-living agent. Thus, a capacitive verb can have a dynamic, processual interpretation. Table 1 summarizes the results of the Analysis 1.

Table 1: Corpus analysis of capacity verbs

Concordance type: Preterit / Present	Dynamic	Stative	Dynamic/Stative	Non- capacitive use	# of analyzed concordances	Total # of concordances
<i>Ušel</i>	37	0	1	62	100	18143
<i>Ujde</i>	14	17	6	63	100	8560
<i>Ujel</i>	11	0	2	87	100	73965
<i>Ujede</i>	26	33	6	65	100	14776
<i>Uzdvihl/Uzvedl</i>	85	7	8	0	100	313
<i>Uzdvihne/Uzvedne</i>	8	81	11	0	100	504
<i>Uvezl</i>	15	77	8	0	100	269

<i>Uveze</i>	5	93	2	0	100	2258
<i>Uhlídal</i>	100	0	0	0	100	13066
<i>Uhlídá</i>	45	49	4	2	100	3260
<i>Užíví</i>	0	100	0	0	100	1535
<i>Užíví</i>	0	100	0	0	100	14371

In general, preterit or present forms of the capacity verbs have the potential to become part of a dynamic, processual construal as well as of a stative construal.

- This implies that a given verbal lexeme cannot be automatically identified with either the stative or the processual meaning. The division into dynamic and stative uses thus runs within the lemma, across the set of its usages grouped under that lemma.
- Consequently, a linguistic approach that starts from the form of a linguistic expression and tries to assign an aspectual meaning to it, would prevent us from observing the variability of the meaning of the form in its different usages.
- The degree of abstraction of the verb meaning, also influences the dynamic vs stative interpretation of utterances. For example, according to Vendler's classification, the verb *živit* (MI) has the meaning of a generic state. As a result, construals with the verb *užíví* (MP) in the predicate tend to be interpreted as a state, i.e. not as a process.
- The ratio of dynamic and stative use of a predicate is also influenced by the lexical range (i.e. the range of experiential domains to which the verb can refer) of the verb under in question:
 - a) The verb *uvézt* has a small semantic range, it was mainly used to describe the properties of various means of transport. The expression of property itself is stative, therefore its present and preterit forms express states in the vast majority of cases.
 - b) The verb *uhlídat* had only one meaning in the preterit form type *uhlídal* and it was limited to sports: *to guard the opponent (uhlídal útočníka* 'he guarded the forward'). This is probably also related to the fact that all analyzed uses of the predicate in the preterit (*uhlídal* type) had a dynamic meaning.
 - c) The percentage of dynamic interpretations in the preterit is usually higher than the percentage of dynamic interpretations of the present forms of the same verb. In the case of the *ušel*, *ujel*, *uzvedl* and *uhlídal* (i.e. the preterit forms of these verbs) the dynamic meanings predominate over the stative meanings, whereas the occurrences of the types *ujde*, *ujede*, *uzvedne* and *uhlídá* (i.e. the present forms) show the opposite tendency, they express the state more often. This shows that the category of the verb tense is a relevant factor in establishing process/dynamic or state construal.

7.1. TENSE AND MODALITY AS FACTORS OF PROCESS – STATE CONSTRUAL

7.1.1. Tense as a factor of process – state construal

In the just presented results of the analysis of capacitive verbs usage from the point of view of process or state construal, the tense category turned out to be a relevant factor. Let's take a more general approach.

Language reflects an asymmetry consisting in the unequal nature of our experience, our perception of time. There is an essential difference between retrospective and prospective temporality. Retrospective temporality in the past is given to us by experience, it can be projected at different distances from the moment of speech, many languages have two or three forms to express the past. Prospective temporality is outside the field of our experience and is temporalized only as a prediction of what will be (many languages even have no specific form for the future). (Benveniste 1970, p. 16f).

How do Benveniste's observations reflect on construing of an event as a process or a state? We perceive the event referred to by a preterit verb as an event that has already taken place. As such, it is part of our experience, we consider it certain, and therefore we are more inclined to describe it and interpret it as an event that really happened as a real dynamic process.

(22) *Aljašský malamut Brit La Rose Loscan utáhl 2570 kilogramů. Sám přitom váží padesát kilo.*

'Alaskan Malamute Brit La Rose Loscan pulled (MP_{past}) 2570 kilograms. He himself weighs (MI_{present}) 50 kilos.'

Based on our experience with the dog's performance, we can make a generalization and assign it a property, i.e. a state. In doing so, we infer the state from the process that has taken place (comp. with the *Process – State Relationship* section above). I have witnessed the physical performance of an Alaskan Malamute demonstrating its strength, the Malamute thus has the ability to do so even now, its ability is expressed in the present tense.

(23) *Aljašský malamut Brit La Rose Loscan utáhne 2 570 kilogramů. Sám přitom váží 50 kilogramů.*

'The Alaskan Malamute Brit La Rose Loscan can pull (MP_{present}) 2,570 kilos. He himself weighs (MP_{present}) 50 kilos.'

In the example (22), there are two events. The first has a processual construal, the second one a stative one. The dog's performance is construed as a process. Its state, more precisely its physical weight, which remains the same at the moment of speaking, is compared to this process.

In the example (23) there are also two events but, unlike in example (22), both express a state. The dog's performance is transformed into a description of its physical strength (state), this strength is compared to the dog's weight (state).

The analysis of the corpus data led into the conclusion that the past tense influences our perception of the process in terms of its limits and completion. Looking back into the past, i.e. into the realm of 'certainty', leads us to perceive preterit utterances as completed, even though their completion is not necessarily morphologically signaled by a morphologically perfective verb.

Preterit forms in general, including MI verbs, have a higher potential to be interpreted as completed. A number of scholars have written about this, including Trávníček (1923, p. 272, § 214) and Kopečný. Kopečný states: *Řekneme-li: Včera jsme platili elektřinu nebo Včera jsme psali kompozici, neříkáme tím přece, že jsme tyto činnosti nedokončili. Právě naopak. Každý posluchač bude zcela přirozeně předpokládat, že je tedy elektřina zaplacená (MP) a kompozice napsána (MP)* (Kopečný 1962, p. 8). "When we say, 'Yesterday we paid (MI) for electricity' or 'Yesterday we wrote (MI) a composition', it does not mean that we did not complete these activities. Quite the opposite. Every listener will naturally assume that the electricity was paid for (MP), and the composition was written (MP)". Our conclusion is also supported by Chromý's research. Chromý (Chromý 2014, pp. 94 – 97) found that his informants tended to replace a bi-aspectual verb in the preterit with a morphologically perfective verb more often than in the present tense.

7.1.2. Modality as a factor of Process – State construal

In addition to morphological aspect and tense, there are other factors that influence interpretation/construal of an event. The most important of them is modality.

Benešová in Panevová (1971, 136f) introduces concept of the *originator of modality* (om) distinguishing it from *originator of action* (oa) to classify modal meanings of verb. In these terms the authors distinguish *ability* on the one hand side from *possibility* and *permission* on the other (ibid., p. 132).

- The originator of modality can be someone who is also the originator of the action, then it is the ability: *I can // I am able to ski because I have the prerequisites for it* (om = oa).
- The originator of modality is an external objective circumstance, then it is an intrinsic possibility: *I can ski because there is enough snow* (om ≠ oa).
- The originator of the modality is someone who is not the originator of the action = possibility/permission: *I can // I am allowed to ski because they have allowed me to do so* (the originator of the modality is not the originator of the action om ≠ oa).

On the basis of these findings, we distinguish between a **capability modality**, where the originator of the modality is the originator of the action, and a **possibility modality**, where the modality is derived from a participant who is not agent of the action, or from external conditions of the event.

Following three examples illustrate the synergy of tense and modality as factors in establishment of language expression construal. Let's compare the three stative construals using (24) noun, (25) MI verb, (26) MP verb.

(24) *Petr je kuřák.*

'Petr is a smoker.'

(25) *Petr kouří 20 cigaret za den.*

'Petr smokes (MI) 20 cigarettes a day.'

(26) *Petr vykouří 20 cigaret za den.*

'Petr smokes (MP) 20 cigarettes a day.'

With regard to tense, the construals (24) – (26) apply to the present, that means they are valid in the moment of speech. In the stative construal, the verb loses its specific temporal meaning. The interpretation of the statements is that Petr's habit is to smoke and that this habit is valid in the moment of speech.

With regard to the aspect in construals (24) – (26), both the MI and the MP verb lose their dynamic potential, it is neutralized. The aspectual difference between unbounded (25) and bounded (26) events is blurred.

With regard to modality, the construals (24) – (26) differ. MP in (26) makes the agent's performance the focus of attention. The MP predicate can convey not only that he is used to/can smoke, i.e. a basic disposition, as it is in (25), but also that he can smoke a certain amount. The ability expressed by the perfective thus **implies a performance**, i.e. the fulfilment of the event to a certain degree (*20 cigaret* '20 cigarettes'). In other words, while in (25) the process of smoking is foregrounded (the number of smoked cigarettes in a day can be omitted), in case of (26), it is Peter's ability to smoke certain amount of cigarettes, in our case 20 cigarettes a day, therefore the complement *20 cigaret denně* is obligatory (**Petr vykouří* is not an acceptable sentence). For more details on foregrounding of the performance output see similar cases in section 8 of this article *The Aspectual Paradox*, namely example (28).

7.1.3. Adverbs as a factor of Process – State construal

The hypothesis was based on a corpus analysis, discussed in Bermel, Kořánová (2008), which was conducted on the SYN 2000 corpus. The main focus of the analysis was the collocation of a temporal aspectual marker (TAM) with verbal aspect. A TAM is a lexical unit in the form of an adverb (*pořád, nepřetržitě, náhle*

‘always, continuously, suddenly’), a conjunction (*jakmile, zatímco* ‘as soon as, while’) or a particle (*konečně* ‘finally’). The main goal of this analysis was to determine the probability of collocation of a given TAM with a verbal aspect. It turned out that the adverbs *pořád* and *stále* (and their synonym *furt* used mainly in spoken language) have a significant correlation with the imperfective aspect. These results were also confirmed by the research of Cvrček and Fidler (2017, p. 288, Table 2b), who investigated the aspectual context using statistical tests. When testing the imperfective aspect of a verb, *dokud* ‘until’ is also used as a salient marker in conjunction with a positive verb form. This is proved, for example, by Petkevič (2010, p. 377n), Kořánová (2014, p. 238) and Veselý (2014, p. 37).

8. THE ASPECTUAL PARADOX

The aspectual paradox is based on verb – adverb collocation, that has been just dealt with. Let us start with an illustration of the paradox.

(27) *Za rok mi bude osmdesát, ale stále vyjdu* (MP) *schody do 5. patra.*¹⁷

‘I’ll be eighty in a year, but I can still walk up (MP) the stairs to the 5th floor.’

The adverb *stále* expresses the duration of the process expressed by the MP verb *vyjdu* ‘go up’. In this case, however, the speaker does not want to convey that he is actually going to climb the stairs to the 5th floor. The construal he means is that he is in a good physical condition, in good shape, that he is still able to go up the 5 floors despite his advanced age. The construal in question is an example of the use of a morphologically perfective verb in an event that has no dynamic, processual interpretation.

In terms of the definition of a perfective aspect, the sentence *stále vyjdu schody* is actually a contradiction, it is an example of an aspectual paradox. It consists of a collocation of:

a temporal adverb with a continuative meaning (*ještě*) *pořád/stále/furt/dokud* (*ještě*) ‘(still) all the time’ + *morphologically perfective verb* in the present indicative affirmative form ‘t+ MP’¹⁸

The quintessence of the aspectual paradox consists in that

- a morphologically perfective verb expresses a process in its result, as a finished fact, or a process as a bounded whole (comp. for instance with Kopečný (Kopečný 1962, p. 9). Let us add that the communicants cannot, so to speak, enter into the process conceived in such a way, i.e., metaphorically speaking, they “stand” either before or after the process.

¹⁷ Example (1) is reintroduced as example 27.

¹⁸ t – stands for temporal adverb, MP – morphological perfective

- in contrast, the adverbial expressions (*ještě*) *pořád/stále/furt* ‘(still) all the time’ mean that something continues: the process is ongoing, or the state is continuously valid. The expression *dokud* ‘until’ + morphologically perfective verb in the affirmative form has a prospective meaning, expressing the continuation of a process, which has already begun. This contradicts the boundedness feature introduced by the perfective verb.

Adequacy, validity of the aspectual paradox is supported by results of the following analysis of corpus data (Analysis2).

8.1. PARAMETERS OF THE ANALYSIS 2

We have used corpus of written texts ČNK SYN v7 focusing on collocation of morphologically perfective verb with one of the listed adverbs, namely of its aspectual construal, opposition ‘process vs. state’ in particular.

The query:

```
(([word="ještě"]?)
([word="stále"|word="pořád"|word="furt"|word="dokud"])
([word="ještě"]?)([tag="V.....P.A....P"])))within<s/>
```

Table 2: Corpus analysis of morphologically perfect verbs with adverbs

Total number of concordances: 7201	# of collocations <i>t</i> + <i>MP</i>
total lemma collocations retrieved	439
of which single occurrence collocations	192
analyzed collocations with N>3 occurrences	119
analyzed collocations with N≤3	193
total analyzed collocations	312
lemmatization errors	41
typographical errors	86

As shown in Table 2, 7201 concordances of the ‘t + MP’ collocation have been obtained, which has an ipm of 1.41. The concordances obtained belong to a total of 439 verb lemmas, of which 312 could be analyzed semantically. A total of 119 collocations have occurrences ‘N>3’. A total of 193 analyzed collocations have occurrences ‘N≤3’. The individual verb lemmas of the analyzed collocations were ranked according to their frequency of occurrence.

8.2. PROTOTYPICAL STRUCTURE OF THE CONSTRUAL

The following example presents the prototypical structure of the construal of analyzed utterances:

- (28) *Petr stále udělá 100 kliků.*
'Peter can still do 100 push-ups.'

The example (28) includes four members of the collocation:

- 1) a **living agent** (*Peter*) who
- 2) achieves a **performance output** (*dělat kliky* 'do push-ups') of **defined degree** (*100 kliků* '100 push-ups'), which is attributed to him as
- 3) an **ability**, by using
- 4) a **predicate** (*udělá*).

This collocation produces a non-ongoing, **stative construal**.

8.3. SEMANTIC KINDS OF STATIVE CONSTRUALS

The Analysis 2 has been done for each verb lemma found by the above query. It has turned out that construals of these collocations refer not only to ability or possibility, but also to other semantic stative domains. Based on the types of these domains, 11 semantic groups of predicates were distinguished. These groups are presented as follows:

- 1) Ability
 - 1a) t + MP original capacity verb
 - 1b) t + MP lexical meaning of ability
 - 1c) t + MP used in the sense of ability to perform
- 2) Possibility
 - 2a) t + MP lexical meaning of possibility
 - 2b) t + MP used in the sense of possibility
- 3) t + MP used in the sense of existence
- 4) t + MP used in the sense of property/qualifier
- 5) t + MP the actant determines the quantum
- 6) t + MP used in the sense of an agent's preference
- 7) t + MP used as duration
- 8) t + MP used in the sense of transaction and its components
- 9) t + MP used in the sense of sensory perception and/or cognitive activity
- 10) t + MP of cognitive activity used in the sense of ability
- 11) t + MP used in the sense of response to a stimulus, *verba dicendi*

Semantic groups 1 – 11 represent a set of distinct types of stative construals.

As can be seen from the overview, we have further subdivided the groups of predicates of the 't + MP' collocation with the meaning of ability according to the verb lexeme into a) capacity verbs, b) morphological perfectives with the lexical meaning of ability, c) morphological perfectives used in the sense of ability to perform certain kind of activity.

The groups of collocational predicates with the meaning of possibility were further divided according to the verb lexeme into a) morphological perfectives with the lexical meaning of possibility, b) morphological perfectives used in the sense of possibility to perform.

8.3.1. Ability

Group 1a) MP traditional capacity verbs:

This group contains predicates that are characterized by the prefix *u-* in addition to the capability meaning. The analysis of the ‘t + MP’ collocation yielded a total of 11 verbs:

ubéhat, uběhnout, udržet, uhájit, uhrát, ujet, unést, uskákat, ustát, utáhnout a uživit se. Collocation example:

(29) *ubéhat: někdo stále ještě uběhá fotbalové hřiště*

‘(to be able to) run: Someone is still able to run around the football pitch’

Group 1b) MP with the lexical meaning of ability:

These verbs have the properties of modal verbs¹⁹, i.e.

a) they are semantically empty in the sense that their lexical meaning expresses (mostly) the ability of the agent to perform the activity expressed in the second verb

b) the actual domain in which the ability is exercised is expressed by the infinitive of the second verb. The analysis of ‘t + MP’ collocations yielded a total of 9 verbs: *dokázat, dovést, snést, vydržet, vystačit, zvládnout, podařit se, svést, zmoc.*

Collocation examples:

(30) *stále ještě dokážeme myslet na druhé; někomu se stále podaří z nájmu splatit hypotéku*

‘We can still think of others; someone still manages to pay the mortgage from the rent’

Group 1c) MP is used in the sense of ability to perform the action:

This group includes verbs that express the agent’s ability in the collocation under study. And it is the aspectual value, i.e. perfectivity, that creates the conditions for the ability interpretation.

Collocation example:

(31) *stále se domluvím čtyřmi jazyky; pořád doskočím dál než ty*

I can still speak four languages; I can still jump further than you

¹⁹ That’s not to say they share all properties of modal verbs like *muset* (must), *moci* (can), *smět* (be allowed to), *chtít* (want), etc. Comp. with Ivanová 2017, p. 169.

The analysis of 't + MP' collocations yielded a total of 61 lexemes. Examples: *domluvit se (nějakým jazykem)*, *obstarat domácnost*, *obstát v profesi*, *poradit si s něčím*, *projít testy*, *přeplavat rybník*, *sníst nebo vypít nějaké množství*.

It turns out that these lexemes express ability of the agent under the same conditions as the so-called capacity MP verbs (1a). Compare the following cases, where (29) and (30) are formed by the predicate of a capacity verb, while (31) and (32) are formed by the predicate of another morphological perfective.

(32) *Led stále ještě **udrží** bruslaře.*

'The ice can still hold the skaters.'

(33) *Děda stále ještě **udrží** sklenici v rukou.*

'The grandfather can still hold the glass in his hands.'

(34) *Zařízení stále ještě **projde** zkušebními testy.*

'The machine can still pass the tests.'

(35) *Petr stále ještě **projde** zkušebními testy.*

'Peter can still pass the test.'

We can see from the examples (32) – (35), that examples (32) and (34) have a weaker capability interpretation than construals (33) and (35) due to the absence of a living agent. The capacity verb behaves in the same way as other morphological perfectives: the capability meaning is foregrounded when the agent is living and has to reach or overcome a certain limit.

8.3.2. Possibility

Group 2a) MP verbs with the lexical meaning of possibility:

These verbs have the properties of modal verbs, i.e.

a) they are semantically empty in the sense that their lexical meaning expresses (mostly) the possibility of the agent to overcome the condition,

b) the actual domain in which the possibility is exercised is expressed by the infinitive of the second verb with full meaning, or by the noun.

Collocation example:

(36) *Na jižní Moravě **se stále dá koupat**.*

'It is still possible to swim in South Moravia.'

The analysis of the collocation 't + MP' yielded 6 MP verbs with the meaning of possibility: *dát se udělat/dělat*, *dopustit*, *aby se něco dělo*, *dostat šanci*, *dovolit (si) smýšlet jinak*, *nechat (se)*, *umožnit někomu něco dělat*.

Group 2b) MP used with the meaning of possibility:

The analysis of the collocation ‘t + MP’ yielded a total of 23 MP verbs used in the sense of possibility, e.g. *dovolat se, nalít, pomoci, sehnat, svézt se* etc.

Collocation example:

(37) *Jan stále sežene vstupenky; Opavu stále sjedou i rafty.*

‘Jan still gets tickets/Tickets are still available; Opava river is still passable for rafts.’

8.3.3. Group 3. MP used in the sense of existence

The stative meaning of the event expressed by the collocation ‘t + MP’ can generally be paraphrased as *somewhere there is someone/something*, with subsequent development of the theme.

Collocation example:

(38) *Na obloze stále naleznete planetu Saturn a také couvající Měsíc.*

‘You can still find the planet Saturn in the sky and also the receding Moon.’

The following verbs were used in the sense of existence: e.g. *najít (se), nalézt, narazit na, natrefit na, objevit se, potkat, setkat se, spatřit, stát se, vyskytnout se* etc. The collocation ‘t + MP’ yielded a total of 12 MP verbs used in the sense of existence.

8.3.4. Group 4. MP used in the sense of property/qualifier

The events expressed by the collocation ‘t + MP’ have the meaning of a qualifier that expresses a property of either a living agent or a machine or device. Qualifiers refer, for example, to the following semantic domains: human appearance, general properties of phenomena such as size, distinctiveness, costliness, interestingness, usefulness, and human properties such as contentment, courage, tolerance, etc. The collocation ‘t + MP’ yielded a total of 25 MP verbs used in the sense of property/qualifier.

Collocation example:

(39) *Zatím se stále vejdu do stejné velikosti, akorát přes břicho mám šaty trochu napjaté.*

‘So far, I still fit in the same size, but my dress is a bit tight around my stomach.’

Other examples of verbs: *padnout (klobouk mu stále padne – je slušivý, nebo/a správné velikosti)* ‘his hat still fits – it suits him and/or is of right size’; *posloužit (něco stále dobře poslouží – je využitelné)* ‘something still serves well – it’s useful’; *přijít (něco stále přijde na velké peníze – je drahé)*; cost ‘something still costs a lot of money – it’s expensive’.

8.3.5. Group 5. MP the actant determines the quantum

The stative meaning of the collocation expresses a quantum. It yielded a total of 4 verbs: *spolykat*, *spotřebovat*, *vykázat* and *zabrat*.

Collocation example:

- (40) Hodně času jí **pořád ještě zabere** rehabilitace.
'Rehabilitation still takes her a lot of time.'

8.3.6. Group 6. MP used in the sense of an agent's preference

The analysis of the collocation 't + MP' revealed stative meanings expressing the individual preferences of the agent.

Collocation example:

- (41) *Potlesk pořád potěší*.
'Applause always pleases.'

We obtained stative events based on predicates, e.g.: *ocenit*, *pochutnat si*, *potěšit*, *potrpět si na něco*, *přijít k duhu*, *přijít si na své*, *udělat radost*, *užít si*, *zahrát si* and *zajít (si) někam*. The collocation 't + MP' yielded a total of 10 MP verbs used in the sense of agent's preference.

8.3.7. Group 7. MP used in the sense of duration

The events expressed by the collocation 't + MP' have the meaning of duration and they include the following predicates: *ponechat si*, *postačit*, *přetrvat*, *setrvat*, *uchovat si*, *zachovat si* and *zůstat*. The collocation 't + MP' yielded a total of 7 MP verbs used in the sense of duration.

Collocation example:

- (42) *Hořovická radnice si stále zachová podobu roku 1905*.
'The town hall of Hořovice still retains its appearance from 1905.'

8.3.8. Group 8. MP used in the sense of transaction and its components

The analysis of the collocation 't + MP' led to the identification of MP verbs involved in events containing the components of a transaction. A transaction consists in the transfer of something into someone's possession in exchange for a certain amount of money. A transaction can therefore be characterized in terms of these components:

a) the acquirer (*někdo stále něco dostane*) 'someone still gets something' or the other transaction transferee (*stále to prodá draho*) 'still sells it at a high price'.

b) the need of the acquirer (*někdo stále něco uvítá, přijme*) 'someone still welcomes something, accepts it'.

c) the acquired “object” (*někdo stále natankuje za kolik*) ‘someone still refuels for a certain amount’.

d) the exchange quantity (e.g. price) and its adequacy (*někdo stále přijde o 10 %, stále ušetří kolik, stále vydá, stále utratí kolik*) ‘someone still loses 10%, still saves a certain amount, still spends a certain amount’.

e) the general conditions of the transaction in the broad sense (*někdo stále přijme zaměstnance*) ‘someone is still willing to hire employees’.

The verb usages presented here take into account only some of the above-mentioned parameters of the transaction. The collocation ‘t + MP’ yielded a total of 19 MP verbs used in the sense of transaction.

8.3.9. Group 9. MP used in the sense of sensory perception and/or cognitive activity

The analysis of the collocation ‘t + MP’ yielded state meanings expressing sensory perception and/or cognitive activity, a total of 9 verbs.

Collocation example:

(43) *Pod pojmem skaut se většině lidí možná pořád ještě vybaví opálený hoch od Bobří řeky.*

‘The term scout may still conjure up images of a tanned boy from the Bobří River.’

Following stative events based on predicates *dočíst se, napadnout, poznat, představit si, něco přijde nějaké, uvidět, vybavit si, vyvolat představu a vzpomenout si* were obtained in the analysis.²⁰

8.3.10. Group 10. MP of cognitive activity used in the sense of ability: thematization of the agent

Events whose predicates are verbs of cognitive activity tend to be interpreted as ability under the same conditions as other morphological perfectives. By analyzing the collocation ‘t + MP’ we obtained stative events with the predicates *poznat, rozeznat, rozlišit, rozpoznat* and *vyznat se*, a total of 5 MP verbs used in the sense of possibility.

Collocation example:

(44) *V 81 letech pořád pozná falešný brilant.*

‘At the age of 81 (s)he still recognizes the fake diamond.’

²⁰ Some verbs of sensory perception and cognitive activity have a special usage in Czech compared to other MP verbs. Comp. Starý Kořánová (2022 and 2023)

8.3.11. Group 11. MP used in the sense of response to a stimulus and verba dicendi

The analysis of the collocation ‘t + MP’ yielded events with verba dicendi predicates and verbs with the meaning of response to a stimulus, a total of 28 MP verbs. These predicates have a quite low frequency ($N \leq 3$ in the analyzed set).

Collocation example:

- (45) *Návštěvníky pohled na africké zvíře na českém statku pořád ještě překvapí.*
‘Visitors are still surprised by the sight of an African animal on a Czech farm.’

Examples of predicates: *dojmout*, *nadchnout*, *nahnat hrůzu*, *naletět*, *odpovědět*, *oslovit*, *překvapit*, *rozesmát*, *rozrušit*, *rozzářit (oči)*, *udivit*, *uchvátit*, *užasnout*, *vytočit* and *zarazit*.

8.4. ONE VERBAL LEXEME – MORE STATIVE CONSTRUALS

The predicates have been grouped according to the construals in which they participate. However, the semantic content of a lexeme can be so broad, that the same lexeme can express different types of stative meaning depending on its occurrence. Therefore, the same verbal lexeme can appear in different types of stative meaning groups that we have described.

Examples (46) to (52) illustrate this. The combination of the same durative adverb with the same morphological perfective, namely the collocation *stále* + *najít* (*se*) ‘still + to find’, produced seven events of different stative construals.

- (46) *V jejich skupině se stále najde dost lidí ochotných pomáhat.*
‘There are still enough people in their group who are willing to help.’
- (47) *Tatínek stále najde nejvíc hub z celé rodiny.*
‘Dad still finds the most mushrooms of the whole family.’
- (48) *Bratr se stále najde nejvíc v cyklistice.*
‘The brother still finds the most in cycling.’
- (49) *Sestra stále najde nejvíc rozdílů mezi dvěma obrázky.*
‘The sister still finds the most differences between two pictures.’
- (50) *V jeho kuchyni stále najdou využití chilli papričky.*
‘Chilli peppers still find a use in his cousine.’
- (51) *Hugo stále najde odvahu jen nadávat.*
‘Hugo still finds the courage to just swear.’
- (52) *Ema stále ještě najde uplatnění ve školství.*
‘Ema can still find a job in education.’

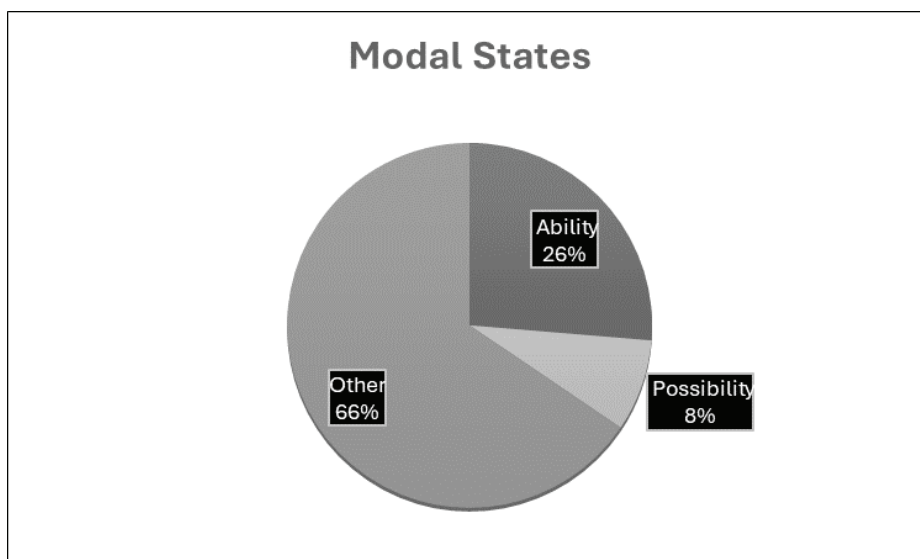
Example (46) refers to the existence of people with a certain characteristic; it would belong to the group of stative meanings number 3. In example (47) the agent reaches or exceeds the limit in picking mushrooms, becomes a winner and thus confirms his ability, group 1c. Example (48) speaks of the brother's predilection; it belongs to group 6. Example (49) also speaks of an achievement, this time an achievement in the cognitive domain, group 10. Example (50) expresses the qualifier of peppers: they are useful in his cousin. Example (51) is also a qualifier, this time of a living agent, both belong to group 4. Finally, example (52) expresses the modal possibility of the agent to overcome an obstacle and to engage in education, group 2b.

8.5. ANALYSIS 2 STATISTICAL RESULTS

The Analysis 2, focusing on 't + MP' collocation, shows that a single lemma can participate in multiple stative construals. A total of 312 lemmas yielded a total of 380 stative construals. Considerable proportion of these construals were of **modal** nature. The most frequent turned out to be being the **ability** construal. 100 constructions resulted in the ability construals, i.e. group 1 a, b, c – 77 ability construals (20,26%) and group 10 – 23 cognitive ability construals (6,05%). 31 constructions resulted in **possibility** construals (8,16%).

The total number of modal construals were 131. i.e., 34,47% out of 380 stative construals (100%), see Graph 1.

Graph 1: Modal construals of 't + MP' collocation



9. CONCLUSION

Aspect in the Comrian sense is a way of looking at the internal temporal constituency of a situation to which communication refers. Some languages, including Czech, use morphological means to express aspectual distinctions, perfective vs imperfective among them. Since morphologically perfective verbs can be part of language expressions that are interpreted imperfectively and vice versa, a notional distinction between morphological perfective / imperfective verbal form and perfective / imperfective aspectual interpretation of the whole language expression (utterance) is necessary. The notion of construal (Croft) has been used to deal with this distinction: **morphological aspect** that can be identified on a verbal form vs. **aspectual construal**. Consequently, **aspectual meaning is not an inherent property/quality of the verb as a lexical unit**, but a matter of the way **the verb is used**.

Of the range of aspectual meanings, this article has focused on the **opposition ‘process, dynamic – state, stative’**. Similar to the ‘perfective – imperfective’ distinction, the ‘dynamic (processual) vs stative’ character of the related event is **not an inherent property of the verb**. Verbs are not stative or processual by themselves, they are **used in a stative or processual way**.

If verbs are not inherently processual or stative, what does contribute to their processual or stative use, to their processual or stative construal? To answer this question, the issue is approached as a process of transition from processual to stative construal.

There are two primary, fundamental factors relevant to this transition.

– **Concreteness**, specificity of the communicated situation construal: **The less specific, concrete the construal is, the higher the chance that the communicated event will be construed as a state** rather than a process. This conclusion was also confirmed by a corpus-based study of so-called capacitive verbs presented in the article: a broader semantic range of the verb increases the chance of a state-like construal and verbs with a more general meaning, more abstract verbs are more likely to be interpreted in the stative way.

– The event referred to by a verb (predicate) can be construed as an **ongoing event, i.e. a process** (aktuální děj) or as an event which is not unfolding before the eyes of the event participants (neaktuální děj). **Suppressing the ongoing nature of the event increases the chance that the event will be construed as a state**. This fact may have motivated Kopečný’s reference to capacitives as *neaktuální perfekтива*, i.e. verbs that are (morphologically) perfective but do not refer to an ongoing (aktuální) process.

The study presented two corpus-based analyses, namely Analysis 1 of so-called capacitives (i.e. constructions whose predicate is a capacitive verb) and Analysis

2 of ‘t + MP’ constructions (*t* stands for a durative adverb and *MP* for a morphologically perfective verb). The results of Analysis 2 drew attention to an **aspectual paradox** since the constructions under study combine a morphological perfective, i.e. event boundedness, together with an adverb of durative meaning. This paradoxical situation seems to be behind the fact that speakers tend to construe the verbal event of such constructions as states, i.e. not as processes.

The results of Analyses 1 and 2 confirmed that aspect is a part of the so-called TAM space (time/tense, aspect, modality; Givón 1984, pp. 269ff) and as such it is closely related to the category of tense and modality. The Analysis 1 has shown that capacitives in the indicative preterit tend to be construed as processes, whereas capacitives in the indicative present tense tend to be construed as states.

The link between aspect and modality manifested itself namely in the results of the Analysis 2 (‘t + MP’ constructions). States resulting from the process → state transition in these constructions were semantically classified into 11 groups (1. ability to perform an action, 2. possibility to perform an action, 3. existence, 4. agent’s qualifier, 5. quantum, 6. agent’s preference/ enjoyment, 7. duration, 8. transaction and its components, 9. sensory perception and cognitive activity, 10. cognitive ability, and 11. reaction to a stimulus and *verba dicendi*). The Analysis 2 has demonstrated that 35% of ‘t + MP’ collocations result in modal state construal.

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Verbálny aspekt a statické konštruovanie v češtine

Resumé

Štúdia sa zaoberá kategóriou aspektu v češtine a niektorými teoretickými postulátmi vymedzovanými v súvislosti s aspektom. Poukazuje sa na fakt, že perfektívne slovesá môžu byť súčasťou imperfektívne interpretovaného jazykového výrazu a naopak. Aby bolo možné tieto situácie terminologicky riešiť, rozlišuje sa medzi morfológickým aspektom (daným morfológickou štruktúrou slovesa) a aspektovou interpretáciou. Aspekt sa teda nevymedzuje ako inherentná vlastnosť slovesa ako lexikálnej jednotky, ale skôr ako záležitosť použitia slovesa. Osobitná pozornosť sa venuje opozícii „proces“ a „stav“. Táto opozícia sa skúma z hľadiska prechodu „proces → stav“. Medzi relevantné faktory v tomto prechode patrí špecifickosť/konkrétnosť interpretácie jazykového výrazu, pretrvávajúca udalosť, na ktorú sa odkazuje (aktuálna udalosť a neaktuálna udalosť), čas, modalita a adverbiálne časové doplnenia. Závery sú podložené dvoma analýzami založenými na korpuse, z ktorých jedna skúma kapacitívne výrazy a druhá konštrukcie „t + MP“ (kde „t“ je časová príslovka s duratívnym významom a „MP“ je morfológicky perfektívne sloveso). Výsledkom druhej analýzy je klasifikácia stavov do jedenástich sémantických domén, z ktorých väčšina sú modálne stavy (asi 35 % identifikovaných statických interpretácií).

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THE ADAPTATION OF ONOMATOPOEIAS WITHIN THE LANGUAGE SYSTEM

Lubomír Andrej

ANDREJ, L. (2025): The Adaptation of Onomatopoeias within the Language System. In: *Slovenská reč*, 90/2, 184 – 201.

Abstract: This paper explores the adaptation of onomatopoeias within language systems, examining their transformation from spontaneous sound imitations to fully integrated lexical items. It discusses how these sound-based forms adapt and evolve through an examination of phonological adjustments, semantic shifts, and morphosyntactic integration. The paper highlights several stages of onomatopoeic transformation, drawing on complementary theories by Flaksman (2017), Körtvélyessy (2020, 2022), and Rhodes (1995). The contrast is primarily drawn between primary onomatopoeias that serve as iconic exclamations, and secondary onomatopoeias – fully conventionalised and grammatically embedded lexical items. By analysing the progression from the former to the latter, the paper offers insights into the broader cognitive and linguistic mechanisms that facilitate the incorporation of iconic forms into structured language.

Keywords: sound symbolism, onomatopoeia, conventionalisation, de-iconisation, institutionalisation.

Highlights:

- The paper explores the varied definitions and classifications of onomatopoeias, highlighting inconsistencies in how different scholars categorize them.
- It examines how onomatopoeias transition from spontaneous, iconic sound imitations to fully integrated lexical items
- It illustrates the semantic flexibility of onomatopoeias, which allows them to both enhance expressiveness in discourse and serve in functional linguistic roles.
- It highlights how the degree of morphosyntactic integration affects the expressiveness of onomatopoeias, with more integrated forms losing some of their iconic vividness.

1. INTRODUCTION

Onomatopoeias, as linguistic representations of natural sounds, occupy a unique space within language systems. Their iconic nature allows them to bridge the gap between human speech and the sounds of the external world. The present study aims to investigate that gap, analysing the processes present in the adaptation of onomatopoeias to a language system and their subsequent use within discourse. However, despite their apparent simplicity, the categorization and functional scope of onomatopoeias remain complex. The paper thus firstly addresses the various

definitions of what constitutes an onomatopoeia. It showcases how the term “onomatopoeia” has been used to describe several different linguistic phenomena, and how that affects our understanding of the concept.

The next section discusses the adaptation of onomatopoeias as lexical items. As words created to imitate external sounds, they provide a direct link between sense and form. However, while some onomatopoeic words retain their imitative character, others undergo processes that obscure their origins, evolving into fully integrated lexical items through various stages of conventionalisation. This transformation is crucial for understanding how such words transition from mere nonce formations to established lexemes. In analysing this transition, the study draws upon Flaksman’s (2017) diachronic analysis of onomatopoeias, Rhodes’s (1995) continuum of wild and tame onomatopoeias, and the work of Bauer (1983) that provides insight into the institutionalization process within language in general.

The research also considers the semantic aspects of onomatopoeias, addressing the distinction between primary and secondary forms. Drawing upon the works of Körtvélyessy (2020), Kita (1997), and Sasamoto (2019) this paper studies the semantic transition that pushes the onomatopoeias to the point at which they cease to function merely as an iconic representation and begin to fulfil a broader linguistic role. This aspect of onomatopoeias is closely linked to their morphosyntactic properties. Using the studies by Dingemanse (2012) and Kadooka (2005) the paper thus highlights the original syntactic independence of onomatopoeias and their gradual integration into grammatical structures.

In summary, the study addresses the classification and transformation of onomatopoeias within language systems, emphasizing their journey from expressive sounds to established lexical items. This investigation contributes to broader discussions on the cognitive processing of sound-based words.

2. THE SCOPE OF ONOMATOPOEIAS

Across the various literature on the subject, the term “onomatopoeia” is used to describe phenomena which not always align. While judging by definitions themselves, it would seem as if the concept of onomatopoeia was clearly defined. Rhodes (1995, p. 279), for example, defines an onomatopoeia as a word “directly shaped by the sound it represents”, Bredin (1996, p. 568) says that “[o]nomatopoeia is a relation of sound to sound”, while Flaksman (2019, p. 378) claims that “onomatopoeia is an acoustic imitation of acoustic phenomena”. Similarly, Catricalà and Guidi (2015, p. 175) consider onomatopoeic words to be “mimetic elements representing sounds and lexicalisations of sounds”; and Körtvélyessy (2020, p. 37), defines them as a phenomenon where “non-articulated sounds of extra-linguistic reality are imitated by articulated sounds chosen from a limited inventory of phonemes of a specific language system”.

But on closer examination it becomes obvious that interpretation of these definitions tends to differ from author to author. As soon as they start explicitly listing examples of words which – in their respective approaches – are supposed to be onomatopoeias, drastic differences start to show.

Bredin (1996), for example, recognises three types of onomatopoeic words – direct, associative, and exemplary – the last of which is quite problematic. While the direct onomatopoeias are words such as *hiss*, which directly resemble and represent a particular sound (or a group of sounds), the associative onomatopoeias include words, which resemble only a sound that is associated with the object they represent, such as a noun *cuckoo*, which resembles the sound of a bird but refers to the bird itself. However, the exemplary onomatopoeias lose the essential connection to the sound that the previous two types had. Bredin (1996, p. 563) defines them as words where the crucial element is the “amount and character of the physical work used by a speaker in uttering a word.” To illustrate the concept, Bredin compares the word *dart*, which, he believes, is predetermined to be said sharply and quickly, with the word *sluggish*, which is to be pronounced slowly and lazily. The problem is, this is not only a highly subjective notion with none (or scarce) empirical evidence, it also strongly diverges from the definitions above, including the definition of Bredin himself. To put it simply, there can be no “relation of sound to sound” in the words *dart* or *sluggish*, as the meanings of these words are in no way connected to any sound.

On the other hand, Körtvélyessy (2020, pp. 35 – 36) is much stricter in her definition. She differentiates between the primary onomatopoeias, where the sound imitation “defines the meaning of the word”, and the secondary onomatopoeias, which are usually derivatives of the primary ones. In other words, Körtvélyessy treats the primary onomatopoeias as pure imitative quotations of a sound and whenever an onomatopoeia functions as, for example, agent, action, or state, it becomes a secondary onomatopoeia. Körtvélyessy’s approach is based on the principles of Slovak morphology, where onomatopoeic words are treated as a part of interjections. This way, onomatopoeic expressions like *meow!* or *boom!* are primary onomatopoeias, and the content words usually derived from them (e.g., *to meow* or *a boom*) are secondary. In a way, this distinction can be equalled to Bredin’s distinction between the direct and associative onomatopoeias (even though the overlap is not absolute) but Körtvélyessy does not consider Bredin’s non-acoustic exemplary onomatopoeias to be onomatopoeias at all.

Non-acoustic onomatopoeias are proposed also by Ullmann (1962, p. 84) who differentiates between onomatopoeias that represent “acoustic experience [...] imitated by the phonetic structure of the word” (termed again “primary”) and onomatopoeias which, by paradigmatic association with certain phoneme clusters,

evoke a type of movement or a physical quality, such as *slick*, *slimy*, and *slither* (termed “secondary”). This distinction is later altered by Rhodes (1995) who renames Ullmann’s primary onomatopoeias to “true onomatopoeias” and pushes his secondary onomatopoeias to the area of “sound symbolism”.

To complicate matters further, often used synonymously with onomatopoeia is the term “ideophone”. The term itself was, in this context, first introduced by the South African linguist Doke (1935, p. 118) in his description of Bantu languages. However, he defines ideophones as “vivid representation of an idea in sound”, the idea in question being anything from smell, colour, state, manner, intensity, action, and sound. In African, South and Southeast Asian, and South American languages, as well as Japanese and Korean, this group represents “enormously rich repertoire” of words that are used with high frequency (Akita, Tsujimura 2016, p. 133). In the grammars of those languages, the term is usually used as an umbrella-term for all kinds of words that “depict sensory imagery” in an iconic way, including sound imitation (Dingemanse 2012, p. 2). That is the case also for Kita (1997), Radden (2021), or Sasamoto and Jackson (2016, p. 45). The latter, for example, claim that onomatopoeia is an “iconic representation of sensory experience via sound, whether the original experience was aural, visual, or of any other sensory type.” Granted, they admit that the term onomatopoeia is “typically defined as an imitation of sound” but argue against this restriction, noting that “it can be very difficult to determine which sensory organs a particular onomatopoeia is linked to” (2016, p. 46).

Nevertheless, it seems that only the sound-imitating words can be singled out as universal. Dingemanse (2012), for example, proposes an *implicational hierarchy* based on different sensory areas that ideophones can imitate, as shown in (1):

- (1) SOUND < MOVEMENT < VISUAL PATTERNS < OTHER SENSORY PERCEPTIONS < INNER FEELINGS AND COGNITIVE STATES

According to this hierarchy, imitations of sound are “universally attested” (Akita, Dingemanse 2019, p. 9), meaning that every language includes at least sound-imitations. They are closely followed by imitations of movement, visual patterns and other sensory perceptions, while the least widespread is the area of inner feelings and cognitive states.

The current paper focuses primarily on the English and Slovak language, where traditionally, only the sound-imitations are recognised. Nuckolls (2004, p. 132) maintains that “the English language, and European languages generally, are ideophonically impoverished”. Similarly, Dingemanse (2011, p. 41), claims that “as a distinct class of words [ideophones] are rare in Indo-European languages”, which is also supported by Körtvélyessy (2020, p. 8), who claims that “there are no ideophones in Slovak.”

However, some exceptions can be pointed out. The above examples provided by Bredin or Ullman, which they classify as “exemplary” or “secondary” onomatopoeias, can, in fact, be considered as such iconic representations of movement or visual patterns. Nevertheless, the term onomatopoeia should not be applied here. As Akita and Dingemanse (2019, p. 1) claim, the term onomatopoeia is “mostly understood to be limited to sound imitatives”. The reason being, that the sound-imitations are the most widespread, and almost the only ‘ideophones’ in the European languages. The 20th century western linguistics thus began to associate the Greek term *onomatopoeia* mostly with them specifically. Both de Saussure (1916) and Sapir (1921) equate the term onomatopoeia solely with sound-imitative words, and even Doke (1935, p. 155) claims the use of the term onomatopoeia to refer to all ideophones is “not strictly correct”, which is the reason why he introduces the term ‘ideophones’ in the first place. The current paper thus suggests limiting onomatopoeias solely to human-made imitations of natural sounds.

3. THE ADAPTATION OF ONOMATOPOEIAS

Having established onomatopoeias as sound imitations, it is now possible to study the cognitive processes involved in transformation of the mere exclamations to the fully integrated linguistic signs. While exclamatory utterances often emerge spontaneously and serve immediate communicative needs, they often lack the structural and conventional properties of true lexical items. Therefore, they need to undergo the transition from a raw, expressive sound to a recognized word, during which phonetic, morphological, and semantic adaptations occur. The present chapter examines the adaptation of onomatopoeias, tracing their journey from the spontaneous, expressive utterances to conventionalised lexical items.

3.1. CONVENTIONALISATION AND INSTITUTIONALISATION

Flaksman (2017, p. 24), in her research into the diachronic development of imitative words, remarks that the life of onomatopoeias often starts in the form of “nonsense words” or “unintelligible, yet extremely expressive noises”. Such utterances are, according to her, the iconic signs in their purest form, as far as human physiology allows. However, the majority of such utterances are created only for a specific purpose in a specific act of communication and never picked up again. Only a tiny percentage, she claims, is “destined to become a part of a language”.

One example of such a word is provided by de Saussure (1916). According to him, the English word *pigeon*, which, based on its etymology, comes from the Vulgar Latin *pīpiō* of the imitative origin. But because of phonetic and morphological evolution, the English word no longer exhibits any imitative features, it has been fully integrated into the system. The *pigeon* case is discussed also by Flaksman

(2017, p. 30), who treats it as an onomatopoeia at the fourth “stage of de-iconisation”, meaning it is “indistinguishable from the rest of the ‘conventional’ vocabulary”. The concept of *de-iconisation* itself she defines as “the gradual loss of iconicity caused by the simultaneous acting of regular changes and regular sense development of an iconic word” (2020, p. 77). Thus, each subsequent stage in the life of onomatopoeias represents an onomatopoeia that is “less iconic” than it was in its previous stage, both formally and semantically (2017).

As mentioned above, according to Flaksman (2017) the life of onomatopoeias usually starts in the form of extremely expressive noises, which she terms the SD-0 stage. Such forms are free to contain phonemes outside the phonemic inventory of a language and are rarely written down. However, some of them may undergo the process of conventionalisation, understood by Flaksman as the usage of the system of phonemes available to a particular language.

As she notes: “An original iconic utterance may include all and any possible sounds in all possible sequences, whereas the phonemic collocations within a word are dictated by conventional phonotactic restraints of the language in question” (2017, p. 25); and thus: “The main difference is that words in a language consist of phonemes, the smallest structural units, the choice of which is limited by the phonemic inventory of a particular language. Once iconic utterances are endowed with these phonemes, they become conventionalised” (2017, p. 24).

Such conventionalised onomatopoeias therefore abandon the highest possible imitative accuracy for the possibility of belonging to the system of language. The process of conventionalisation, as far as English is concerned, is discussed, for example, by Fischer (1999, p. 124). He claims that it is rare to find English words consisting only of consonants or only of vowels, such as *aaaaaa*, *pprrpffrrppffff*, or *shshsh*. Therefore, adding an extra consonant or vowel to form a syllable is traditionally the first step towards the conventionalisation. In the case of the above-mentioned *shshsh*, the resulting conventionalised forms can be *shoo*, *swoosh*, or even *whoosh*. Nonetheless, even the conventionality of a form is not always sufficient for such forms to become established in the language.

As defined by Bauer (1983), the life of a lexeme has typically three stages – nonce formation, institutionalisation, and lexicalisation. Bauer (1983) originally uses these terms in relation to complex lexemes, but they are also applicable to onomatopoeias, as demonstrated below. The previously discussed imitative utterances, even the conventionalised ones, can be considered nonce formations, as they fit Bauer’s (1983, p. 45) definition, that they were coined “on the spur of the moment to cover some immediate need”. Additionally, despite their iconic character, the meaning of such utterances can still be highly context dependent. For example, the meaning of the above-mentioned *pprrpffrrppffff* cannot be properly deduced in

isolation. Therefore, some onomatopoeic nonce formations can exhibit the “potential ambiguity” that Bauer (1983, p. 46) speaks of.

The next stage, institutionalisation, is defined by Bauer (1983, p. 48) as the point “when the nonce formation starts to be accepted by other speakers as a known lexical item.” In the case of onomatopoeias, it is the moment when a conventionalised lexeme becomes part of the lexicon of language. Such a lexeme has a relatively clearly specified form and meaning and is often listed in dictionaries (e.g., *whoosh* ‘to utter or emit a dull, soft sibilant sound, like that of something rushing through the air’, OED).

Thus, returning back to Flaksman’s process of de-iconisation, once the SD-0 onomatopoeias get conventionalised – i.e., they start to use only the phonemes from a language’s inventory – they move to the SD-1 stage. At this stage, their written forms can still be relatively variable (e.g., *bzzz!*, *bwoom!*, or *crashhh!*) until they become fully institutionalised, such as *boom!* or *crash!* However, the key point for Flaksman (2020) is, that they are not used as proper content words, but rather as “iconic interjections”.

Once the onomatopoeias start to operate as verbs, nouns, adverbs, etc. (e.g., *to clap*, *a crash*), they move to the SD-2 stage. As Flaksman (2020, p. 83) remarks, “the iconic interjection *crashhh!* is more expressive and depictive than (still iconic) *to crash* and *a crash*.” Nevertheless, the rule that such onomatopoeias “haven’t undergone any phonosemantically significant sound changes and retain their original meaning” still stands, as they still refer, even though indirectly, to the original imitated sound (Flaksman 2020, p. 95).

Returning to Bauer (1983, p. 48), the final stage in his life of a lexeme is lexicalisation. It occurs when “the lexeme has, or takes on, a form which it could not have if it had arisen by the application of productive rules”. Likewise, an onomatopoeia is lexicalised when its meaning is no longer connected to the sound it originally imitated, or/and its form no longer resembles that sound. Flaksman (2020) in this context speaks of SD-3 and SD-4 stages of de-iconisation.

The significant phonosemantic changes move an onomatopoeia up to the SD-3 stage, where the sound changes decreased its iconic qualities, or it lost its sound-related meaning by semantic shifts (e.g., *laugh*, *clip*, *purr*). Finally, an SD-4 onomatopoeia has lost its imitative qualities completely, its iconic origin visible only via etymological analysis (e.g., *lunch*, *gargoyle*, or the above-mentioned *pigeon*).

According to Flaksman, onomatopoeic words of all stages can be found in modern languages. Nevertheless, she remarks that the SD-0 and SD-1 are optional, as many onomatopoeic words can be created right into the SD-2, as conventionalised and quickly institutionalised content words based on the external sound (Flaksman 2020; Lavitskaya et al. 2022). Additionally, she considers this stage of onomatopoeia

to be the “optimal one”, stating that “on the one hand, the word is clearly iconic; on the other, it is fully integrated into the conventional system” (2017, p. 29). Such onomatopoeias can therefore be used in a sentence in the most natural way, while still being recognisably sound-imitative.

The reason for it, is that the most iconic expressions, like those “iconic interjections” at the SD-0 or SD-1 stages exhibit “very limited collocation ability”. As such, they can seem like intrusions within a sentence. Additionally, they exhibit salient intonational markedness and their semantic meaning is restricted to representing “the sound itself”. Consequently, as Flaksman (2017, p. 28) notes, “once an iconic interjection becomes another part of speech, it automatically loses these qualities,” which allows it to integrate more naturally into linguistic structures while still being recognisably sound-imitative. However, once an iconic interjection transitions into another part of speech, it undergoes a fundamental cognitive shift: speakers begin to recognize it not merely as an expressive sound but as a structured linguistic unit.

The adaptation of onomatopoeias, therefore, is not simply a matter of phonetic modification or of their storage within mental lexicon. It is a process of deeper cognitive restructuring that allows these forms to function as fully integrated linguistic signs. As onomatopoeias move from spontaneous vocalisations to conventionalised words, they shift from being processed primarily as quotations of a sound to being stored and retrieved as lexical items with broader semantic and syntactic potential. The following section thus analyses the semantics of onomatopoeias, followed by the discussion on their morphosyntax in section 3.3.

3.2. SEMANTICS OF ONOMATOPOEIAS

In Chapter 2, Körtvélyessy’s distinction between primary and secondary onomatopoeias was mentioned, where primary onomatopoeias (similarly to Flaksman’s SD-0 and SD-1 stages) are simply exclamations or interjections imitating external sound, while secondary onomatopoeias can function as various parts of speech (as is the case in Flaksman’s SD-2 stage). Körtvélyessy (2022) argues for the semantic uniqueness of primary onomatopoeias as their semantic category is in each case always SOUND. In a similar way, the meaning of Flaksman’s (2017, p. 28) “iconic interjection” is described as “‘X’ (the imitated sound itself)”, while the onomatopoeic verb or adjective she defines as “acting X” or “qualities of X”, respectively. As discussed above, this makes the word lose some of its iconic qualities. Semantics therefore represents one of the crucial properties in onomatopoeias.

From the perspective of cognitive linguistics, several different approaches to the semantics of onomatopoeias have been proposed by different authors. For example, Kita (1997) claims that onomatopoeias operate in their own semantic dimension,

separate from the rest of the lexicon. Tsujimura (2001), on the other hand, maintains that no such distinction is necessary, as onomatopoeias still need to undergo linguistic analysis, while Sasamoto (2019) suggests the onomatopoeias operate on the continuum between “more necessary” and “less necessary” linguistic analysis.

Kita (1997), who focuses mostly on the Japanese onomatopoeias¹, claims they tend to have a unique psychological effect on the native speakers. In his own words, the meaning of such words is “felt, by native speakers, to be direct and real, as if one is at the scene” (1997, p. 386). Drawing from the conclusions in Diffloth (1972), Kita (1997) proposes that onomatopoeias operate in the “affecto-imagistic dimension”, which is separate from the “analytic dimension” of the rest of the lexicon. This dimension is characterised by the activation of affective, emotive, and perceptual facets of experience, instead of the decontextualised objective experience provided by the analytic dimension. It is the same dimension in which the spontaneous gestures and expressive prosody reside, and in fact, onomatopoeias are often accompanied by these elements in an act of communication.

As evidence for this new dimension, Kita (1997) cites the lack of redundancy in utterances including onomatopoeias. As he claims, in a traditional utterance, some words can feel semantically redundant, such as the adjective *male* in the phrase *male rooster*. But this is not the case with onomatopoeias, as the same information encoded by an onomatopoeia can be encoded also by a verb accompanying it without creating the effect of redundancy. Instead, the onomatopoeia makes the description “more vivid and experiential in tone” (1997, p. 389). According to Kita, this is because the onomatopoeia and the verb operate in two different dimensions – the former in the affecto-imagistic and the latter in the analytic.

Granted, Kita (1997) speaks of onomatopoeias in broader sense, but similar features are observed in purely sound-imitative onomatopoeias as well. For example, Dvonč et al. (1966) maintains that onomatopoeias, understood by him as sound-imitative interjections, function as a sort of expressive “doubling” of what is said by linguistic expression. In (2) an example of such doubling is provided, where an onomatopoeia *prásk* (‘the sound of gunshot’) would be an affecto-imagistic doublet of the analytic expression ‘shoot’:

- (2) *Janko* *pochytí* *kušu* *a* *prásk!*
 Janko-NOM.SG grab-PRS.3SG crossbow-ACC.SG and crash!-INTJ
 odstrelil *jastrabovi* *křídlo*.
 shoot off-PST-MASC.SG hawk-DAT.SG wing-ACC.SG
 ‘Janko grabs a crossbow and crash! he shot the hawk’s wing off.’
 (Dvonč et al., 1966, p. 816)

¹ Kita (1997, p. 381) understands onomatopoeias as words evoking various sensory domains, such as sound, motion, texture, as well as psychological states.

The usage of such doublet does not feel redundant here; on the contrary, it adds a certain degree of expressivity or vividness to the message. At the same time, the omission of such onomatopoeia would not disrupt the conceptual completeness of the utterance (Dvoňč et al., 1966, p. 817).

However, in response to Kita's (1997) proposal, Tsujimura (2001) argues against the necessity of the two-dimensional approach. She claims that the discussed "lack of redundancy" is not the result of different dimensions, but simply of different meanings of the two elements. As she claims, the meaning of onomatopoeias is often much broader than the meaning in their specific usage. Indeed, going back to the onomatopoeia in the example (2), *prásk* does not necessarily mean only the sound of gunshot, but also a generally loud sound of something breaking, or two surfaces hitting each other, or even the lightning strike. Thus, even though the onomatopoeia in question brings a degree of vividness to the speech act, it still needs to undergo linguistic analysis based on the context, just like the rest of the utterance.

Sasamoto and Jackson (2016) provide a different solution to the problem. Their theory is inspired by the distinction proposed by Grice (1957), according to which communication is carried out in two levels – the "showing" level and the "saying" level. In this theory, the saying level, which involves verbal input (e.g., the sentence "I cannot go play tennis, because I broke my arm") is put into contrast with the showing level, which involves providing 'direct' non-verbal evidence (e.g., a communicator showing a broken arm to communicate that they cannot play tennis) (Sasamoto 2019, p. 49). Instead of the levels, however, Sasamoto and Jackson (2016) speak of "continuum", where some cases may involve elements of both showing and saying at the same time. And onomatopoeias are example of such cases.

According to the theory, a communicator may use an onomatopoeia to provide more "direct evidence" of an acoustic experience (e.g., the sound of gunshot from the example (2)) in a similar way that they would show a broken arm to provide direct evidence of their inability to play tennis. As Sasamoto claims, "it may be a simple case of "seeing is believing", where providing direct evidence is more convincing than explaining in words" (2019, p. 57). Therefore, this direct evidence can still be accompanied by a coded conceptual expression (e.g., the verb *shoot* from the example (2)), without it being redundant. And at the same time the omission of an onomatopoeia can still be possible since the coded expression provides all the necessary meaning (Sasamoto 2019).

However, onomatopoeias are rarely perfect imitations of sound and often may represent several different sounds based on context. Therefore, they still need to be decoded by a listener. In this way, onomatopoeias share characteristics with both *showing* and *saying*. In some cases, they may exhibit more features of the former, in others the latter. For example, novel and creative ad-hoc onomatopoeias, such as

hjkrrrh, prioritize similarity to the sound, even at the expense of breaking phonemic rule, their linguistic decoding is thus less necessary (albeit context still plays a crucial role). These onomatopoeias are at the showing end of continuum, but their form is not conventional, nor is it institutionalised.

At the other end of continuum are highly conventionalised onomatopoeias, such as *sizzle* or *chatter*, which exhibit primarily saying features. Although they have some iconic characteristics, they provide more indirect evidence, are much more language-specific, and thus need to be decoded by the listener. The middle ground between the two ends is filled with onomatopoeic interjections or exclamations, such as *pop*, *meow* or Slovak *prásk* from the above-mentioned example (Sasamoto – Jackson 2016; Sasamoto 2019).

Therefore, while Kita (1997) claims that onomatopoeias operate separately from the analytic semantic dimension, and Tsujimura (2001) argues against this view, Sasamoto and Jackson (2016) suggest that onomatopoeias are situated on the continuum and can exhibit the elements of both saying (or the analytic dimension) and showing (the affect-imagistic dimension). Their position on this continuum depends on the level of conventionalisation and institutionalisation. As a result, this continuum between showing and saying onomatopoeias is very much in parallel with Flaksman's distinction between the stages from SD-0 to SD-2, or Körtvélyessy's distinction between primary and secondary onomatopoeias.

In this way, the primary (or SD-1) onomatopoeias seem to be placed closer to the showing level of Sasamoto and Jackson's continuum, since even though they are partly conventionalised lexemes, they all belong to the semantic category SOUND and are used to bring a certain degree of vividness and imagery to the utterance. However, they still are not fully institutionalised content words. Their semantic purpose in speech is only to replicate (to "show") the listener the sound event the speaker is talking about. As a result, it is possible to use them as semantic doublets of coded conceptual expressions, as shown in the example (2).

On the other hand, secondary (or SD-2) onomatopoeias, which serve the function of content words, contain more of the *saying* level. Consequently, using them alongside other expressions with similar meanings would be redundant, and their omission would disrupt the meaning of a sentence, as shown in example (3) below:

- (3) a) *And then – crash – he hit the car in front of him.*
- b) *And then he crashed the car in front of him.*
- c) **And then **he crashed and hit** the car in front of him.*

The onomatopoeia *crash* from example (3a) is a primary onomatopoeia, its reference being the sound itself. The use of both *crash* and *to hit* is not redundant

here. In (3b), on the other hand, the reference of the secondary onomatopoeia *crashed* is ‘performed the action (that creates the sound)’, making it more coded and closer to the saying level. Consequently, using both *crashed* and *hit*, as shown in (3c), may seem redundant.

Nevertheless, some ambiguity may still remain. Due to the extensive use of conversion in English, the lexeme *crash*, for example, can be used both as a primary onomatopoeia, as was the case in (3a), and as a noun, as shown in example (4) below:

(4) *I heard a loud crash.*

From a semantic perspective, the meaning of the word is still “the sound itself”, but such use of the onomatopoeia is no longer primary. It has been restricted to a specific word class, which brings with itself the possibility of inflection available for that word class.

To conclude, the semantic nature of onomatopoeias is shaped by their position on the continuum between direct imitation of sound and linguistic meaning. While primary onomatopoeias function as vivid, affecto-imagistic representations of sound, secondary onomatopoeias transition into coded lexical items with defined syntactic roles. The continuum proposed by Sasamoto and Jackson (2016) offers a compelling synthesis between the two, proposing that onomatopoeias simultaneously exhibit elements of both showing and saying. The primary forms thus act as vivid yet optional enhancements of meaning, while secondary ones integrate fully into syntactic structures. This duality explains why primary onomatopoeias enhance vividness without redundancy, whereas secondary onomatopoeias assume grammatical roles that constrain their use. The extent of this integration is ultimately shaped by their morphosyntactic behaviour, which will be examined in the following section.

3.3. MORPHOSYNTACTIC PROPERTIES OF ONOMATOPOEIAS

The integration of onomatopoeias into linguistic structures is a key factor in their conventionalisation and subsequent institutionalisation. While these words originate as imitative expressions, their ability to function within morphosyntactic frameworks varies. The distinction between primary and secondary onomatopoeias (Körtvélyessy, 2020) is not only a matter of semantic function but also of structural adaptability – where primary onomatopoeias tend to remain independent, secondary ones exhibit greater grammatical integration. This section therefore explores the morphosyntactic behaviour of onomatopoeias, examining their ability to enter syntagmatic relations, their use in specific constructions, and their resistance or susceptibility to inflectional morphology. In doing so, it will highlight how that level of integration influences their expressive potential.

One of the key frameworks addressing this integration is Rhodes's (1995) continuum between wild and tame onomatopoeias. Rhodes's wild onomatopoeias are "precise imitations", the closest possible imitations that the human vocal tract allows (1995, p. 279). These are often one-and-done nonce formations, but, as illustrated above, they can eventually adapt to the phonological constraints of the speakers' language and become part of the language system. Rhodes calls the result of this process "tame onomatopoeias", i.e., conventionalised, often institutionalised onomatopoeias.

Between these two extremes, Rhodes (1995, p. 281) identifies a middle-ground, which he terms "semi-wild onomatopoeias." These are already conventionalised (but not necessarily institutionalised) lexemes, which are used in a sentence in a "wild" manner. One of Rhodes's criteria for distinguishing between the tame and wild use is the ability to form a syntactic construction "*to go X*" where X is an onomatopoeia. This construction is typical when imitating a sound but impossible for tame onomatopoeias. The example (5) illustrates this distinction:

- | | |
|----------------|-------------------|
| (5) a) | b) |
| It goes pop. | *It goes rattle. |
| It went boom. | *It went rumble. |
| It goes crash. | *It goes clatter. |

The examples in (5a) are all possible constructions, suggesting that the onomatopoeias used here are at the wilder end of the continuum, despite being already institutionalised conventionalised forms, while the constructions from (5b) may sound odd or even incorrect.

This again illustrates the interplay between showing and saying proposed in the model of Sasamoto and Jackson (2016). The onomatopoeias from (5a) are used to directly "show" what happened, essentially using the construction "*it went like this*" followed by the illustration itself. On the other hand, onomatopoeias from (5b) have been "tamed" to the point they no longer have the necessary "showing" qualities, they need to be decoded, and such use is therefore impossible. It also brings into discussion Körtvélyessy's (2020) distinction between primary and secondary onomatopoeias. Based on the Rhodes's criterion, secondary onomatopoeias, those lexemes that function as content words, would always be tame, while primary ones could either be wild or semi-wild as partly conventionalised, possibly lexicalised linguistic signs with limited use as pure imitations of sound.

This un/availability of a specific syntactic construction for the primary onomatopoeias is brought up by other authors as well. For example, Dingemanse (2012, p. 656) claims that ideophones in general show cross-linguistically "a great measure of syntactic independence". Onomatopoeias specifically display even more

of this independence, as they “tend to have more peripheral syntactic realisation” when compared with the rest of the ideophones. Dingemanse (2012) names four specific tendencies of syntactic independence: a) they occur at clause edges, b) they avoid inflectional morphology, c) they tend to be set off from the clause by a pause, and d) they are often introduced by quotative markers.

In similar manner, Dvonč et al. (1966) describes onomatopoeias as syntactically “amorphous”, since they do not enter any syntagmatic relations. Additionally, Dvonč et al. (1966), Flaksman (2017), or Laing (2019) all claim onomatopoeias can form free-standing sentences on their own, and Flaksman (2017) even maintains that this “limited collocation ability” is a crucial characteristic of the most iconic utterances.

Kadooka (2005, p. 3) introduces the concept of the [QUOTATIVE] marker, which traces how morphosyntactically integrated an onomatopoeia is. He distinguishes three types: [QUOTATIVE+], [QUOTATIVE±], and [QUOTATIVE-]. Onomatopoeias with the [QUOTATIVE+] marker can be used “only for quotation” or as a direct citation of the sound imitated. These are characterised by their introduction via quotative markers, their repetition within a sentence, and their highly limited collocation ability, as they are used only to show the sound event, to use the terminology of Sasamoto and Jackson (2016). An example of such onomatopoeia is *bow-wow*. On the other hand, [QUOTATIVE-] is fully integrated into the system and can be used only as a content word, for example, *chatter*. The middle ground is [QUOTATIVE±], which can be used both as a direct citation and as a content word, as was exemplified by the onomatopoeia *crash* in examples (3) and (4) above.

To reinforce this point, Kadooka introduces the [INFLECTIVE] marker, that traces the possibility of acquiring inflectional morphology. By the nature of onomatopoeias, the marker goes in the opposite direction than [QUOTATIVE] – if an onomatopoeia is [QUOTATIVE+], it is [INFLECTIVE-] – meaning such onomatopoeia has limited (or none) inflectional morphology. Kadooka (2005, p. 6) calls such onomatopoeias “raw” as they are “only quoted as citation”. The onomatopoeia *crash* from the sentence (3a) is thus [QUOTATIVE+] and [INFLECTIVE-], whereas *crashed* from (3b) and (3c) is in both cases conjugated as a verb and therefore [QUOTATIVE-] and [INFLECTIVE+]. Similarly, the instance of *crash* from example (4) is also [QUOTATIVE-] and [INFLECTIVE+], since it is possible to use it, for example, in the plural form as seen in (6) below:

(6) *I heard several loud crashes.*

Therefore, a primary onomatopoeia is used only in (3a), while all the other instances include secondary onomatopoeias. It begs the question, why is this the case? Why are the most iconic onomatopoeias always highly quotative, and without any inflection?

Dingemanse and Akita (2017, p. 507) postulate that this is the result of the universal relation between grammatical integration and expressiveness, which they formulate as “the more expressive an ideophone is [...] the less it is integrated in the morphosyntactic structure of the sentence.” The reason behind this universal relation, they propose, lies in the mode of representation: while general linguistic signs belong to the arbitrary, “descriptive” mode of representation, the onomatopoeias work in the “depictive” mode, attempting to show to the listener the events, instead of describing them. The joining of the two modes within one linear utterance poses challenges, the most iconic onomatopoeias are therefore always “free” from the rest of the utterance.

It becomes obvious, that this notion draws many parallels with Sasamoto and Jackson’s (2016) continuum between saying and showing. This suggests that Körtvélyessy’s primary onomatopoeias, often situated somewhere closer to the showing end of the continuum, are generally “more expressive”, and therefore, based on Dingemanse and Akita’s (2017) universal relation, morpho-syntactically less integrated.

To conclude, primary onomatopoeias are used as quotations of the sound they imitate. They can either form a sentence on their own or be used in the sentence with introductory phrases like “*to go X*” or “*to sound like X*”. Therefore, they have limited collocation ability and no inflectional morphology. However, the primary onomatopoeias can motivate the secondary onomatopoeias – institutionalised content words formed either by conversion or derivation from the primary, which can be used in an utterance in a traditional grammatical manner.

4. CONCLUSION

The purpose of this paper was to explore the adaptation of onomatopoeias within language system, emphasizing how these sound-imitative forms evolve from mere exclamations to established lexical items. It was demonstrated that while onomatopoeias originate as spontaneous, iconic representations of natural sounds, their adaptation into conventional language involves significant phonological, morphological, and semantic transformations. Through processes of conventionalisation and institutionalisation, these sound-imitative forms eventually transition into fully integrated lexical items, exhibiting varying degrees of syntactic and semantic independence.

The distinction between primary and secondary onomatopoeias proposed by Körtvélyessy, as well as the stages of de-iconisation developed by Flaksman, highlight how the increasing structural and functional integration of onomatopoeias within language results in the gradual loss of their depictive, sound-imitative properties. This loss is evident in the semantic analysis of onomatopoeias. It was shown that less conventionalised primary onomatopoeias can often be inserted into

an utterance alongside their arbitrary counterparts without appearing redundant or repetitive. However, as they become secondary and more conventionalised, the redundancy becomes more noticeable and undesirable. The morphosyntactic analysis further underscores this aspect, demonstrating how primary onomatopoeias tend to be syntactically independent, avoiding inflectional morphology and requiring introductory phrases, while secondary onomatopoeias are fully integrated into the system.

Ultimately, the adaptation of onomatopoeias reflects the cognitive and linguistic processes that show how sound-based expressions evolve within human language. The research demonstrates how this dynamic between the iconic depiction and vividness of onomatopoeias on one hand and their linguistic functionality and integration on the other can shape their phonological, morphological, and semantic makeup.

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Adaptácia onomatopojí v jazykovom systéme

Resumé

Štúdia sa zaoberá adaptáciou onomatopojí v jazykových systémoch, pričom analyzuje ich transformáciu zo spontánnych zvukových imitácií na plne integrované lexikálne jednotky. Práca sa zameriava primárne na procesy, ktoré umožňujú začlenenie týchto zvukomalebných slov do štruktúrovaného jazyka, vrátane fonologických úprav, sémantických posunov a morfosyntaktickej integrácie. Hlavným konceptom v tejto práci je delenie zvukomalebných slov podľa Körtvélyessy (2020) na primárne, ktoré slúžia ako priame zvukové imitácie alebo výkriky (napr. *buch!*, *mňau!*), a sekundárne, ktoré predstavujú už slová konvencionalizované a gramaticky začlenené do jazykového systému (napr. *mňaukať* alebo *buchot*). Práve prechod z primárnych onomatopojí na sekundárne je oblasťou skúmania v tejto štúdii. Štúdia čerpá z prác viacerých lingvistov, ako sú Flaksman (2017), ktorá predstavila koncept de-ikonizácie, teda postupnej straty ikonickosti onomatopojí, alebo Rhodes (1995), ktorý predstavil koncept tzv. „divokých“ (*wild*) a „skrotených“ (*tame*) onomatopojí. V práci sa poukazuje na to, že počas procesu konvencionalizácie onomatopoje prispôbujú svoju formu fonotaktickým pravidlám konkrétneho jazyka, čím strácajú časť svojej pôvodnej zvukovej identity. Počas ďalšieho procesu inštitucionalizácie sa tieto slová stávajú súčasťou bežného lexikónu a získavajú stabilné gramatické funkcie. Napríklad zvukové výrazy ako *prásk!* môžu byť používané ako interjekcie v expresívnom prejave, zatiaľ čo ich sekundárne formy, ako *prasknúť*, sa stávajú plnohodnotnými slovesami v gramatickej štruktúre vety. Sémantická flexibilita onomatopojí je ďalším dôležitým aspektom tejto štúdie. Primárne onomatopoje sú priamo späté s konkrétnym zvukom, ktorý napodobňujú, zatiaľ čo sekundárne môžu nadobudnúť širšie významy a plniť rôzne funkcie v texte. Táto zmena je úzko spätá s ich morfosyntaktickými vlastnosťami – čím viac sú onomatopoje integrované do gramatických štruktúr, tým menej si zachovávajú svoju pôvodnú ikonickosť a expresívnosť. S tým sa spája aj vzťah medzi expresívnosťou a gramatickou integráciou onomatopojí, podľa ktorého tie najikonickejšie a najexpresívnejšie formy majú tendenciu byť syntakticky nezávislé, často sa nachádzajú na okrajoch viet, vyhýbajú sa flexii a môžu byť prezentované ako priame citácie zvukov. Naopak, sekundárne onomatopoje, ktoré sú viac gramaticky integrované, strácajú časť tejto expresivity, ale získavajú širšie použitie v rámci jazykového systému. Záverom štúdie je, že adaptácia onomatopojí nie je len otázkou fonetickej úpravy alebo lexikálneho začlenenia, ale predstavuje hlbší kognitívny a jazykový proces, ktorý umožňuje transformáciu ikonických zvukových foriem na plnohodnotné jazykové jednotky. Tento proces odhaľuje, ako sa jazyk vyvíja a prispôbuje, pričom integruje prvky, ktoré spočiatku slúžili výlučne na expresívne účely, do svojej štruktúry a funkcie.

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IF YOU MUST KNOW ... **LIFE OF MODAL VERBS AFTER MODALITY**

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Abstract: Drawing on data from the Omnia Slovaca IV Maior corpus, the paper presents a case study of the Slovak structure C1[*Ked/Ak už* SUBJ *musiet'* INF... 'if/when already SUBJ must INF'] C2[(then) (at least) ...] when it is used as a pragmatic modal construction (PMC) in the sense, as is customary in Construction Grammar (CxG). In CxG, the term “construction” is used for a form-function unit that is likely to be stored in a speaker’s mental repository of words, idioms, recurrent sequences, and semi-fixed patterns (cf. Goldberg 2006). Sarcastic use of modal verbs in these cases proves the notorious ambiguity of modal verbs which are often used in utterances with specific pragmatic effects. Within given structures, the former modal meanings of the modal verb have receded and have been lost to peripheral pragmatic meaning with its illocutionary function very close to a complaint or a reproach. To identify intra-clausal and cross-clausal associations of the patterns under scrutiny, statistical tests applied in covarying-collexeme analysis will be applied to reveal which filler items (in terms of grammatical and lexical features functioning as constructional elements) contribute to the degree of its entrenchment.

Keywords: modal verb, necessity, Slovak, Construction Grammar, pragmatic modal construction, allostructions, illocutionary function

Highlights:

- Constructional account for the Slovak conditional clauses with sarcastic use of the modal verb functioning as the pragmatic modal construction.
- Distinguishing the meaning of the general construction and the meaning of the allostructions with deontic, circumstantial, internal and pragmatic meaning.
- Enriching theory of modality with the distinction between semantics and pragmatics of modal verbs.
- Statistical testing the inter-clausal associations in C1 and cross-clausal associations between C1 and C2 comprising semantic value of the modal verb with regard to person and tense of modal verb, aspect and semantic type of infinitive complement expressed in C1 and illocutionary function expressed by C2.
- Revealing the indicators of pragmatic modal construction which support the degree of its entrenchment.

1. INTRODUCTION

The present research applies usage-based Construction Grammar (CxG) and Construction Pragmatics (CxP) (cf. Wen 2022) as its theoretical framework.

Following Goldberg (2013, p. 17), constructions are defined as form-meaning pairings at different levels of abstraction displaying different degrees of idiomaticity, ranging from fully substantive to fully idiomatic patterns.

The notion of “construction” will be applied to structures with modal verbs. In Cappelle and Depraetere (2016a, 2016b), it is argued that a modal verb and the immediate context in which it occurs – one or more words to the left and/or to the right of it – may often be considered a construction. Modal expressions have recently gained serious interest within usage-based, constructionist frameworks (see e.g. Hilpert 2016, Hohaus – Schulze 2020, Depraetere et al. 2023, Daus – Roberts 2024, etc.). Nevertheless, it has been discussed whether treating modal verbs as constructions adds any substance to understanding their intricacies and modality as such.

Modal verbs are notoriously ambiguous with regard to the different subtle semantic values they can express (see, among many others, Ruppenhofer – Rehbein 2012; Marasovic et al. 2016) and can be used in utterances with often specific pragmatic effects (see, for instance, Leech 2014, Gillmann 2024, etc.). One may ask whether modal verbs as such have a meaning by themselves or whether their meaning is determined by the lexical and grammatical environment they appear in. The aim in the present paper is to address this issue by looking at the use of the Slovak modal verb *musieť* ‘must’ in conditional clauses in which the given modal verb is developing new patterns of use. This raises the question whether the status of *musieť* as a modal verb is also changing. I argue that the modal verb is going through a process of post-modal pragmaticalization and constructionalisation¹ in these cases, and that its meaning in this construction cannot be viewed as a special post-modal meaning of the modal verb per se, but it is linked to the more complex conditional clause construction.

2. PRAGMATIC MODAL CONSTRUCTION (PMC)

The idea that post-modal meanings often come into existence as a part of constructions has been discussed in many theoretical studies (e.g. de Haan 2012, Daus 2020, Leclercq 2022, 2024, etc.)². Drawing on data from the Omnia Slovaca IV Maior corpus, the present paper presents a case study of the Slovak structure *Ked’*/

¹ Pragmatic reinforcement is usually associated with the early stages of grammaticalization (Hopper – Traugott 1993). The question whether the emerging pragmatic usages of original modals manifest the change in the modal-postmodal interval or should be treated as different layers of modality and more elusive modal meanings is still under discussion (see, e.g., Celle 2018).

² The idea that the collocational profiles of modals give us direct insights into their primary modal and secondary grammaticalized meaning potential has been discussed in several theoretical studies (e.g., in Flach 2020, Hilpert – Flach 2020). However, collocational profiles “do not necessarily capture complete constructions” (Cappelle – Depraetere 2016c, p. 90).

Ak už SUBJ musiet' INF..., (tak) (aspoň)... 'if/when already SUBJ must INF..., (then) (at least)...', as used in example (1):

- (1) *Ked' už musíte niečo vypiť, tak dajte prednosť prírodnému vínu a vyhnite sa kalorickému pivu.*

'If you must drink something, choose natural wine and avoid caloric beer.'

Without contextual clues, the given structure oscillates between the following interpretations:

- a) some external force (person or institution) imposes on you the obligation to drink something,
- b) situation or existing circumstances impose on you the obligation to drink something,
- c) your internal need imposes on you the obligation to drink something.

Within the first interpretation, deontic modality is at play. Deontic modality, usually classified as a subdomain of participant external modality, identifies compelling circumstances external to the participant as some person(s), often the speaker, and/or some social or ethic norm obliging the participant to engage in the state of affairs (van der Auwera – Plungian 1998, p. 81).

The second interpretation adheres to participant-external modality, labelled here as circumstantial modality. Within the domain of participant external modality, there is a sub-distinction based on the nature of source that impinges on the actor. The term "circumstantial modality" refers to circumstances that are external to the participant, if any, engaged in the state of affair and that make this state of affairs necessary (van der Auwera – Plungian 1998, pp. 80 – 81).

The third interpretation represent a kind of modality labelled as "participant-internal modality" (van der Auwera – Plungian 1998, p. 80). It relates to necessity internal to a participant engaged in this state of affairs. In this case, the pull on the actor comes from their own psyche.

A similar classification has been adopted in research on Slovak modal verbs (cf. Ivanová 2017). Nevertheless, in many cases the former modal meanings of the modal verb have receded and have been lost to peripheral pragmatic meaning with its illocutionary function very close to a complaint or a reproach (examples 2 and 3):

- (2) *Aspoň doobeda (nech je ticho), keď už večer musia všetci vrtať a vieskať!*
'Let it be quiet at least in the morning, if all people must drill and scream in the evening!'
- (3) *Ked' už musíš robiť striptíz v obývačke, mohla by si aspoň zatiahnuť závesy.*
'If you must do a striptease in the living room, you might at least pull the curtains.'

One of the main questions addressed in this paper is whether given patterns are employed with regard to the morpho-syntactic environment in which the modal verb is used. Based on pre-empirical intuition, the assumption is that this pattern functions as a special type of Pragmatic Modal Construction (PMC) which prototypically consists of two clauses that will be referred to as C1 and C2 in the following (which can be considered their preferential order).

On the formal side, the given PMC can be described as a phrasal pattern consisting of construction-specific invariant lexical/phonological elements *ked’/ak už musiet’* INF in C1 and optional *(tak) (aspoň)* in C2. The pattern combines a subordinate conditional connector *ked’, ak* ‘if’ with the particle *už* ‘already’³ and modal verb *musiet’* ‘must’ with infinitive predicate. The clause slot for infinitive phrase is optional so that it is possible to distinguish between what can be referred to as elided C1 and full C2, depending on whether the infinitive slot is filled or not. In matrix clause C2, conventionalized devices are used to prototypically express directive function. The illocutionary profile of C2 is supported by particle *aspoň* ‘at least’ which is typically a part of the matrix clause.

Pragmatic use of the modal verb within this construction can be described as a special type of post-modal pragmatic meaning close to complaint, thus representing an example of speech act modality (Sweetser 1990). Complaints are generally realized by means of the following strategies proposed by Olshtain & Weinbach (1988): 1. below the level of reproach, 2. expression of annoyance and disapproval, 3. explicit complain, 4. accusation and warning.

The presence of clausal connectors *ked’/ak* signals that this bipartite structure instantiates the structure labelled as if-conditionals which are said to attract modality statistically significantly above average (cf. Gabrielatos 2019). Within this construction, proposition *p* expressed in C1 encodes the propositional content, evaluated as negative by the speaker, however, it is signalled that the given state of affairs has to be accepted (in the sense of “nothing can be done”) (cf. Karlík 1998, pp. 234 – 235). In such a case, the speaker may attempt to minimize the negative consequences of the event described by the proposition *p* by expressing an alternative proposition *q*.

The pragmatically motivated necessity is coded by the modal verb *musiet’* ‘must’. In case of direct complaints, the addressee is held responsible for the perceived offence and is expected to acknowledge or change the undesirable state of

³ The status of given expression as an adverb or a particle is disputable, depending on the linguistic traditions and their approach to delimitation of adverbs and particles as independent word classes. In Slovak, the original meaning of *už* ‘already’ is that of temporal adverb expressing that an event occurred earlier than expected, thus often conveying surprise, astonishment. These evaluative aspects of meaning may prevail within the particular contexts so that the unit loses its status of temporal adverb in favour of evaluative particle which seems to go well with the construction and its tendency to mark a negative speaker’s stance and disalignment.

affairs. In case of PMC, the presence of necessity modal verb gives rise to a mitigated complaint. However, as opposed to hedged performatives (Fraser 2010), the mitigation procedure is a sort of ironic manoeuvre: the referential content (negative evaluation of action within the field of participant's responsibility) and the locutionary content of the utterance (necessity modal which decreases the responsibility of the participant for the action) are discordant. It can be referred to as ironic hedging – the meaning intended by both the particle and the modal verb is opposite of the true situation: the meaning that a speaker implies differs from the meaning that is conventionally expressed by these constructional elements. By uttering it, the speaker aims at preventing potential detrimental effects on the hearer (by usage of necessity modal verb) but also tries to guarantee the achievement of his or her communicative goals (signalled by directive act expressed in C2).

The usage of particle *už* gives rise to mirativity effect which originates from the semantics of originally aspectual *už* in Slovak (the term is due to König 1991). In case of aspectual *už*, the speaker asserts that it is raining and indicates that there is alternative proposition – that it still is not raining. The contribution of *už* is to restrict this alternative proposition:

Neprší... 'It is not raining...' = no inference,

Už neprší... 'It is not raining any more...' = it isn't the case that it still is raining.

In PMC, the particle invites the inference about the failure of expectation:

Ked' musíš piť kávu... 'If you must drink coffee...' = no inference,

Ked' už musíš piť kávu... 'If you insist on drinking coffee...' = it isn't the case that you don't have to drink coffee.

Sarcastic or ironic interpretation cancels the inference invited by particle *už* in the construction (= it is the case that you don't have to drink coffee).

The question is how to differentiate PMC from other structures with deontic, circumstantial and internal modality.

In the case of deontic necessity, the person, authority, convention, or whatever from whom the obligation is understood to emanate is referred to as the deontic source (Huddleston – Pullum 2002, p. 178), as illustrated in example (4):

(4) *Ked' už musím do pracovného tábora, dajte mi možnosť zárobku.*

'If I have to go to a work camp, give me an opportunity to earn some money.'

In the case of circumstantial necessity, it is not an obligation imposed by a deontic source, but simply force of the circumstances that are at play, as in example (5):

(5) *Ak už musíte prekonať horský potok či bystrinu, majte na pamäti, že sú domovom mnohých živočíchov.*

'If you absolutely have to cross a mountain stream or gorge, keep in mind that they are home to many animals.'

The internal necessity is subjective, and it originates in internally motivated compulsion, i.e. compulsion that is not influenced by the will of the speaker.

- (6) *Ak už musíš na niečo myslieť, tak myšli na to.*

‘If you have to think about something, think about this.’

Two parameters are important in these cases: source of necessity and the will of the participant performing the action. Deontic and circumstantial modality have the external source which provides the basis of the obligation. In cases of internal modality, necessity to carry out the action originates from internally motivated compulsion which cannot be influenced or fully regulated by the will of the participant.

Pragmatic usage of modals hinders the source of the action to be external – similarly to internal modality, however, the impulse or proneness to perform the action is understood as being under the control of the participant who carries out the action willingly. Willingness to perform the action can be understood as the propositional content condition for the speech act complaining (the complainees must be responsible for the state of affairs described in the proposition).

To identify the cases of PMC, it is crucial to identify signals of irony called ironic clues. Utsumi (2000. p. 1787) classifies all the signals into two categories: verbal and non-verbal. The category of verbal signals encompasses adjectives (e.g. *excellent, fantastic*), adverbs (e.g. *surely, really, absolutely*), metaphors, hyperbole, exclamations (e.g. *Oh!, God!*), prosodic paralinguistic signals (e.g. accent, intonation, nasalization), etc. Obviously, for written texts, non-verbal and prosodic markers are not a relevant category. The ironic clues in PMCs appear in many different forms ranging from lexical and syntactic to stylistic.

The range of lexical signals in the PMC varies from verbs with pejorative component, to various phrases and idioms added to the ironic utterances to enhance their ironic effect. The examples below (from 7 to 11) illustrate this point.

- (7) *Ked' už musíš mudrovať, tak nech si ostane vo Fun rádiu.*

‘If he has to wise up, let him stay on Fun Radio.’

In example (7), the pejorative verb *mudrovať* ‘wise up’ is an ironic signal whose presence overtly points to the ironic nature of the entire utterance. The similar status can be assigned to the pragmatic dative particle *si* in example (7). In Fried (2011), it is referred to as distancing dative of empathy, which is speaker-centred, since it presents the speaker’s attitude toward the grammatical subject’s reported self-interest, but it also puts a distance between himself and the subject’s activities. The speaker essentially rejects someone else’s self-interest, recasting it as excessive self-indulgence.

In example (8), the ironic interpretation is triggered by the pejoratively used adverb *trápne* ‘embarrassingly’, e.g.

- (8) *Ked’ už musíte všade trápne vyťahovať RPS, aspoň si ustáľte prezývku.*
‘If you have to embarrassingly trot out RPS everywhere, at least settle on a nickname.’

Unlike lexical markers, there were only several ironic utterances in the PMCs in which the presence of syntactic and stylistic signals was detected. Stylistic clues include the usage of hyperbole (example 9) and similes (example 10), e.g.

- (9) *Ak už musíte, pán profesor, rýpať do bolestivých vecí, aby ste dokázali svoju vševedúcnosť, radšej by som rozpovedala všetko sama.*
‘If you, Professor, have to nitpick painful things to prove your omniscience, I’d rather tell it all myself.’
- (10) *Ale keď už musíte urážať ako malé deti, nemôžete len seba konkrétne! Musíte uraziť celú skupinu ľudí.*
‘But if you must take offence like little children, you can’t just insult yourself in particular! You have to insult a whole group of people.’

In example (9), the hyperbolic noun *omniscience* adds to the ironic nature of this statement. In example (10), the simile *take offence like little children* enhances the ironic effect of the utterance together with hyperbolic exaggeration in the following clause.

Among syntactic clues, exclamatory constructions or ironic questions, as in example (11), can be counted, e.g.

- (11) *Ked’ už musíme niekoho kritizovať, ohovárať alebo jednoducho „haniť“, nemohli by sme to urobiť takto, trochu kultúrnejšie alebo aspoň originálnejšie?*
‘If we have to criticize, slander or simply “denigrate” someone, couldn’t we do it this way, a little more culturally or at least more originally?’

Due to their strong overlap in form and function, I will conclude that the structures illustrated in examples (7) – (11) are variants of the same overarching construction, i.e., allostructions in the sense of De Vaere et al. (2020), Zehentner (2023), and most recently Gillmann (2024). Allostructions are defined as “two or more grammatical constructions with (nearly) synonymous function and very similar form” (Neset – Janda 2023, p. 70). Despite their similarity in form and function, these allostructions may differ in terms of their “conventionalized pragmatics” (Finkbeiner 2019). Due to such illocutionary-structural properties, this type of clause is especially suitable for the analysis of constructions.

3. DATA AND INVESTIGATION

Using the query [lemma="ked'|ak"] [lemma="už"] [{,2} [lemma="musiet"] [tag="VI.*"], a total of 2996 tokens was extracted from the Omnia Slovaca IV Maior Beta, from which a random sample of 300 tokens was drawn. 43 irrelevant tokens were discarded, leaving a data set of 257 tokens for statistical analysis.

A construction has minimally two components: meaning and form, however, following Croft (2001) at least six properties can be identified: for meaning it is semantics, pragmatics, discourse functions, and for form syntax, morphology and phonology, or a set of features. Therefore, several form and meaning properties have been annotated in the present sample. Among meaning properties, it is modal value of the modal verb (MV) and semantic type of infinitive predicate (INF) in C1 and illocutionary function in C2. Among form properties, it is person and tense of modal verb and aspectual value of infinitive predicate.

Table 1: Variables coded in dependent clause C1

Factor	Levels
MODAL VALUE OF MV	deontic, circumstantial, internal, pragmatic
SEMANTIC TYPE OF INF	state, activity, achievement, accomplishment
PERSON OF MV	1 st , 2 nd , 3 rd
TENSE OF MV	present, past, future
ASPECT OF INF	imperfective, perfective

Table 2: Variables coded in matrix clause C2

Factor	Levels
PRAGMATIC VALUE	directive, desiderative, assertive, volitive, interrogative

In constructions with *ked'*, 931 instances of the given construction were found with 312 item fillers and with 209 unique lexical fillers for infinitive predicate. In constructions with *ak*, 601 instances of the given construction were found with 204 item fillers and 128 unique lexical fillers for infinitive predicate. The results show that speakers have many choices to fill the lexical filler slots in C1. At the same time, no pairings of modal verb and lexical predicate were used significantly more often than could be expected by chance which underscores the high degree of variability and productivity of the lexical filler slot in the investigated construction.

Subsequently, the p-values of the Fisher-Yates Exact test were used to “gauge the degree of attraction” (Schmid – Küchenhoff 2013, p. 535) between a construction (e.g. the Modal Construction) and constructional elements (Filler Types in C1 and C2). Note that Stefanowitsch and Gries originally intended covarying-collexeme analysis to be applied to lexemes in constructions, stating that it can be used to

investigate “cooccurrence between three signs (lexeme1, lexeme2, and construction)” (Stefanowitsch – Gries 2005, p. 10). As Hoffmann et al. (2019) have demonstrated, however, covarying-collexeme analysis can easily be applied to more abstract constructional slots as well (e.g. Filler Types). The associations were described as attraction or repulsion on the basis of real and expected frequencies of investigated items. They were calculated by p-values of Fisher-Yates Exact test and measuring probability of A and B both occurring $P(A \cap B)$ ⁴.

The following two-way interactions were tested to reveal a more detailed picture of the Slovak constructional network:

- 1) Inter-clausal Filler type associations in C1: Modal value & Person; Modal value & Tense; Modal value & Semantic type of predicate; Modal value & Aspect of predicate
- 2) Cross-clausal Filler type associations in C1 and C2: Modal value & Illocutionary function of matrix C2.

Table 3 shows the ‘input’ of an analysis as a two-by-two distribution table, using the frequencies found in the annotated data (the totals are relevant for calculating expected frequencies).

Table 3: Example of a two-by-two table as used in analysis

	<i>pragmatic in C1</i>	<i>¬pragmatic in C1</i> (deontic + circumstantial + internal in C1)	
<i>2nd person in C1</i>	66 (frequency of <i>2nd person</i> in C1 and <i>pragmatic</i> in C1)	25 (frequency of <i>2nd person</i> in C1 and <i>¬pragmatic</i> in C1)	91
<i>¬2nd person in C1</i> (<i>1st and 3rd person in C1</i>)	31 (frequency of <i>¬2nd person</i> in C1 and <i>pragmatic</i> in C1)	135 (frequency of <i>¬2nd person</i> in C1 and <i>¬pragmatic</i> in C1)	166
	97	160	257 ⁵

4. RESULTS AND INTERPRETATION

4.1. MODAL VALUE & PERSON

Table 4 shows the results of the analysis of inter-clausal association between MODAL VALUE and FILLER TYPE PERSON in the annotated data.⁶

⁴ Despite critical comments, it is believed that covarying-collexeme analysis is one of the best tools currently available for describing interdependence between constructional slots, a fact that is also reflected in its widespread use in constructional literature (cf. Horsch 2023, pp. 718 – 719).

⁵ Number of annotated structures.

⁶ Statistically relevant values can be interpreted as attraction if the observed frequency is higher than expected, and as repulsion if the observed frequency is lower than expected. Statistically irrelevant

Table 4: Statistical analysis results of inter-clausal associations between MODAL VALUE and FILLER TYPE PERSON

Filler	Modal value	Filler frequency	Modal value frequency	Observed freq. Filler + Modal Value	Exp. freq.	p-value	Significance	Relation
1 st	Deontic	74	34	12	9.8	0.0712	Not sign.	n.v.
1 st	Circumstantial	74	114	47	32.6	0.0001	Sign.	Attraction
1 st	Internal	74	12	9	3.6	0.0009	Sign.	Attraction
1 st	Pragmatic	74	97	6	27.8	0.00001	Sign.	Repulsion
2 nd	Deontic	91	34	1	11.9	0.00001	Sign.	Repulsion
2 nd	Circumstantial	91	114	22	40.1	0.00001	Sign.	Repulsion
2 nd	Internal	91	12	2	4.2	0.2229	Not sign.	n.v.
2 nd	Pragmatic	91	97	66	34.3	0.00001	Sign.	Attraction
3 rd	Deontic	92	34	21	12.1	0.001	Sign.	Attraction
3 rd	Circumstantial	92	114	45	40.7	1	Not sign.	n.v.
3 rd	Internal	92	12	1	4.3	0.0609	Not sign.	n.v.
3 rd	Pragmatic	92	97	25	34.7	0.0107	Sign.	Repulsion

The results indicate the existence of four inter-clausal associations: Circumstantial modality & 1st person in C1, Internal modality & 1st person in C1, Pragmatic modality & 2nd person in C1, and Deontic modality & 3rd person in C1.

PMC strongly associates with second person which is the major indicator of the pragmatic function of the modal verb within this construction. The frequency distribution of 2nd person modals in this construction is higher than would be normally expected which can be proved by statistic calculations.

Using the query [lemma="ked'ak"] [lemma="už"] [word="musíš|musíte"] [tag="VI.*"], a total of 455 tokens was extracted.

Table 5: Contingency table with the frequencies of Wfs (word forms) and Cxs (constructions)

	+Target word form	¬Target word form	
+Target Cx (PMC)	1. frequency of Wf in Cx (2 nd person in PMC) = 455	3. frequency of Cx with other Wfs except for Wf (1 st and 3 rd person in PMC) = 1077	1532

values are described as non-valid (n.v.). A p-value of 0.05 (or 5%) is a common cutoff used to determine statistical significance.

¬Target Cx (other Cxs)	2. frequency of Wf in other Cxs (2 nd person in other Cxs) = 563 192	4. frequency of other Cxs with Wfs except for Wf (1 st and 3 rd person in other Cxs) = 356 824 934	357 388 126
	563 647	356 826 011	357 389 658 ²

The Fisher exact test statistic value is < 0.00001 . The result is significant at $p < 0.05$. The results show that 2nd person turns out to appear in given construction template significantly more often than could be expected by chance.

The preference of second person strongly reflects the pragmatic function of the construction as direct complaint. Direct complaints are face-threatening acts through which speakers make complaints about someone or something that is present in the speech act scene (Salmani Nodoushan 2007, 2008).

The usage of 1st or 3rd person in PMC thus represents a kind of deviation from the directive prototype. 1st person usually occurs in case of reportive evidentiality signalled by reportive markers (such as adverbs) so that the construction can be interpreted as mediated complaint, e.g.

(12) ... *vraj, keď už musím viesť taký aktívny nočný život, nech mám aspoň nejakú ochranu.*

‘... they say that if I must lead such an active night life, I should at least have some protection.’

Constructions with 3rd person function as indirect complaint (also known as griping) in which the responsible party or object of the complaint is not present during the interaction within which the speech act is performed, e.g.

(13) *Keď už musel byť beznádejne zalúbený do niektorej z nich, nemohol si vybrať horšie ako manželku Jamesa Maloryho.*

‘If he had to be hopelessly in love with one of them, he couldn’t have chosen worse than James Malory’s wife.’

In case of indirect complaint, the complaineer is not necessarily intended to change or improve the unsatisfactory situation (Clyne 1994). This fact explains why the matrix clause C2 in examples like (13) do not express directive function, merely pointing out an unsatisfactory situation.

² Number of sentences in Omnia Slovaca IV Maior Beta.

4.2. MODAL VALUE & TENSE

Table 6 shows the results of the analysis of inter-clausal association between MODAL VALUE and FILLER TYPE TENSE in the annotated data.⁸

Table 6: Statistical analysis results of inter-clausal associations between MODAL VALUE and FILLER TYPE TENSE

Filler	Modal value	Filler frequency	Modal value frequency	Observed freq. Filler + Modal Value	Exp. freq.	p-value	Significance	Relation
Present	Deontic	235	34	27	31	0.015	Sign.	Repulsion
Present	Circumstantial	235	114	106	104.3	0.505	Not sign.	n.v.
Present	Internal	235	12	12	11	0.6072	Not sign.	n.v.
Present	Pragmatic	235	97	90	88.6	0.6492	Not sign.	n.v.
Past	Deontic	22	34	7	2.9	0.015	Sign.	Attraction
Past	Circumstantial	22	114	8	9.8	0.505	Not sign.	n.v.
Past	Internal	22	12	0	1	0.6072	Not sign.	n.v.
Past	Pragmatic	22	97	7	8.3	0.6484	Not sign.	n.v.

The results indicate the existence of one inter-clausal association, namely Deontic modality & Past tense. There were no significant results in the data with regard to Filler type & Tense with regard to pragmatic modality.

The only significant association concerns deontic usage which attracts past tense and repulses present tense. This fact proves that deontic necessity modals are used preferentially descriptively in this type of construction. The usage of past tense goes hand in hand with different illocutionary functions of the matrix clause which codes declarative (assertive) statements:

(14) *Ked' už musela ukázať žiakku knižku, bolo to vždy neochotne a so strachom v očiach.*

‘Whenever she had to show her school record book, it was always reluctantly and with fear in her eyes.’

The data also bring the evidence of past tense used in PMC.

(15) *Ak už musel osloviť inšpektora hneď, mal to urobiť zoči-voči, nie telefonicky.*

‘If he insisted on addressing the inspector right away, he should have done it face-to-face, not over the phone.’

⁸ In the speech act of complaint, which is expressed in PMC, the speaker reflects or shows dissatisfaction, annoyance or rebuke because of a past or present action. Therefore, the analysis is focused on constructions with present and past tense of modals.

Past tense in C1 blocks the directive function in C2 as directives are illocutionary acts that have the purpose of committing the speaker to a specific course of action in the future. In this case, the function of the matrix clause C2 is to express an unfulfilled obligation or a sensible action that was neglected.

4.3. MODAL VALUE & SEMANTIC TYPE OF PREDICATE

Table 7 shows the results of the analysis of inter-clausal association between MODAL VALUE and FILLER TYPE SEMANTIC TYPE OF PREDICATE in the annotated data.

Table 7: Statistical analysis results of inter-clausal associations between MODAL VALUE and FILLER TYPE SEMANTIC TYPE OF PREDICATE

Filler	Modal value	Filler frequency	Modal value frequency	Observed freq. Filler + Modal Value	Exp. freq.	p-value	Significance	Relation
ACC	Deontic	40	34	4	5.3	0.6193	Not sign.	n.v.
ACC	Circumstantial	40	114	16	17.8	0.6056	Not sign.	n.v.
ACC	Internal	40	12	2	1.9	1	Not sign.	n.v.
ACC	Pragmatic	40	97	18	15	0.3749	Not sign.	n.v.
ACT	Deontic	132	34	22	17.4	0.1013	Not sign.	n.v.
ACT	Circumstantial	132	114	55	58.6	0.3823	Not sign.	n.v.
ACT	Internal	132	12	7	6.2	0.77	Not sign.	n.v.
ACT	Pragmatic	132	97	48	49.8	0.6997	Not sign.	n.v.
ACH	Deontic	37	34	1	4.9	0.0379	Sign.	Repulsion
ACH	Circumstantial	37	114	24	16.4	0.0075	Sign.	Attraction
ACH	Internal	37	12	1	1.7	1	Not sign.	n.v.
ACH	Pragmatic	37	97	11	14	0.3598	Not sign.	n.v.
ST	Deontic	48	34	7	6.3	0.8134	Not sign.	n.v.
ST	Circumstantial	48	114	19	21.3	0.5209	Not sign.	n.v.
ST	Internal	48	12	2	2.2	1	Not sign.	n.v.
ST	Pragmatic	48	97	20	18.1	0.6207	Not sign.	n.v.

The results indicate the existence of one inter-clausal association, namely circumstantial modality and semantic class of achievements. There were no significant results in the data with regard to Filler type & Semantic type of predicate with regard to PMC.

The one possible explanation for association existing between achievements and circumstantial modality is that achievements are incompatible with adverbs expressing that the referent of the subject NP participated intentionally in the

described eventuality (Piñón 1997, p. 282). This fact corresponds with circumstantial modality in which the source for the obligation is external so that the action cannot be performed intentionally, e.g.

(16) *Ked' už musí umrieť aj nádej, nech naozaj umiera posledná.*
'If even hope must die, let it indeed be the last to die.'

4.4. MODAL VALUE & ASPECT

Table 8 shows the results of the analysis of inter-clausal association between MODAL VALUE and FILLER TYPE ASPECT in the annotated data.

Table 8: Statistical analysis results of inter-clausal associations between MODAL VALUE and FILLER TYPE ASPECT

Filler	Modal value	Filler frequency	Modal value frequency	Observed freq. Filler + Modal Value	Exp. freq.	p-value	Significance	Relation
IPRF	Deontic	181	34	25	23.9	0.8404	Not sign.	n.v.
IPRF	Circumstantial	181	114	72	80.3	0.0277	Sign.	Repulsion
IPRF	Internal	181	12	9	8.4	1	Not sign.	n.v.
IPRF	Pragmatic	181	97	75	68.2	0.0674 (0.05)	Not sign.	n.v.
						0.0674 (0.1)	Sign.	Attraction
PRF	Deontic	76	34	9	10	0.8404	Not sign.	n.v.
PRF	Circumstantial	76	114	42	33.8	0.0277	Sign.	Attraction
PRF	Internal	76	12	3	3.6	1	Not sign.	n.v.
PRF	Pragmatic	76	97	22	28.7	0.0674 (0.05)	Not sign.	n.v.
						0.0674 (0.1)	Sign.	Repulsion

The results indicate the existence of one constructional preference, namely circumstantial modality & Filler type Aspect. Additionally, one more p-value threshold (0.1) was be used to differentiate between degrees of entrenchment⁹. It enables one to provide evidence for the existence of constructions and their degrees of entrenchment, understood as the hight degree with which the form-meaning pairing is repeated and learned regardless of where it falls along a scale ranging from relatively compositional to non-compositional (Neset – Janda 2023, p. 70).

⁹ A p-value of 0.1 indicates that there is a 10% chance of observing the data if the null hypothesis is true. While not typically considered statistically significant at the commonly used significance level of 0.05 (5%), it suggests a weak or moderate evidence against the null hypothesis, or a trend.

The data show that perfective contextual aspect triggers circumstantial readings, whereas imperfective contextual aspect elicits pragmatic readings of modal verbs. However, association of imperfectivity with pragmatic reading is not a fully entrenched feature as it is relevant only at p-value 0.1.

This observation of association between circumstantial modality and perfective aspect is in accordance with Abraham's and Leiss' proposal (2008, p. xiii) that perfective aspect is compatible ('converges strongly') with root modality, i.e. deontic modals in a wider sense (deontic and circumstantial in presented terminology). The feature of perfectivity always includes the future-projecting features typical for deontic modals (Leiss 2008, p. 19). Due to the fact that narrowly understood deontic modals are preferentially used in past tense in this type of construction can be counted as a possible explanation why there is no correlation between deontic modal constructions and perfective aspect.

Imperfective PMCs are of two types. On the condition that PMC refers to ongoing acts, verb elements both in C1 and C2 are coded by imperfective grammatical aspect:

- (17) *Ak už musíš jazdiť na tomto prekliatom zvierati, buď láskavo opatrná a ne-spi v sedle!*
'If you must ride this goddamn animal, please be careful and don't sleep in the saddle!'

In structures with generic meaning, there is a grammatical aspect switch with perfective forms used in the matrix clause C2 and imperfective forms used in the subordinate clause C1:

- (18) *Ked' už musíte piť kávu, vždy si po nej vypite aspoň 0,5 L čistej vody.*
'If you must drink coffee, always drink at least 0.5 L of water afterwards.'

The discursive function of aspect was discussed in Hopper (1979). In his approach, the information in the discourse can be classified into foreground information and background information. The former relates to events belonging to the skeletal structure, and the latter provides support material that elaborates on or evaluates the event in the foreground. C1 in PMC can be understood as illocutionary background to directive function expressed in C2, therefore infinitive predicate in C1 preferentially takes the imperfective form. The background status of C1 in PMC will be closely discussed in chapter 4.5.

4.5. MODAL VALUE & ILLOCUTIONARY FUNCTION OF C2

Table 9 shows the results of the analysis of cross-clausal association between MODAL VALUE and FILLER TYPE ILLOCUTIONARY FORCE OF C2 in the annotated data.

Table 9: Statistical analysis results of inter-clausal associations between MODAL VALUE and FILLER TYPE ILLOCUTIONARY FORCE OF C2

Filler	Modal value	Filler frequency	Modal value frequency	Observed freq. Filler + Modal Value	Exp. freq.	p-value	Significance	Relation
DIR	Deontic	129	34	7	48.6	0.0002	Sign.	Repulsion
DIR	Circumstantial	129	114	46	57.2	0.0057	Sign.	Repulsion
DIR	Internal	129	12	2	6	1	Not sign.	n.v.
DIR	Pragmatic	129	97	74	48.8	0.00001 (0.5) (0.01)	Sign.	Attraction
ASS	Deontic	85	34	15	11.2	0.1709	Not sign.	n.v.
ASS	Circumstantial	85	114	50	37.7	0.0013	Sign.	Attraction
ASS	Internal	85	12	9	4	0.0029	Sign.	Attraction
ASS	Pragmatic	85	97	11	32	0.00001	Sign.	Repulsion
DES	Deontic	26	34	5	3.4	0.3585	Not sign.	n.v.
DES	Circumstantial	26	114	13	11.4	0.5414	Not sign.	n.v.
DES	Internal	26	12	1	1.2	1	Not sign.	n.v.
DES	Pragmatic	26	97	7	9.7	0.2883	Not sign.	n.v.

As the results show, there were three statistically significant cross-clausal associations that constitute evidence for the following meso-constructions: Pragmatic modality in C1 & Directive illocutionary function in C2, Circumstantial modality in C1 & Assertive modality in C2, Internal modality in C1 & Assertive modality in C2.

The results show that a given structure may be part of stored expressions that conventionally trigger a specific implicature or a specific illocutionary force. In addition to the aforementioned classification of complaining presented in Section 2, a complaint may be realized by means of three additional strategies (DeCapua 1998): 5. request for repair, 6. justification, and 7. criticism. In case of investigated constructions, the directive act expressed in C2 can be viewed as a request for repair. It fully conforms to the fact that when a complaint is issued, a directive act may be implied or added (Trosborg 1995, p. 320). The author suggests that this involves an attempt to make the complaine repair the damage he/she caused. In case of PMC, the remediation of the problem is presented as a kind of “settling for less” (Nakanishi – Rullmann 2009) and any directive act expressed in C2 is evaluated as a minimal good outcome. This interpretation is often supported by using the evaluative *aspoň* ‘at least’ which is often expressed in the matrix clause:

- (19) *Ked' už musíš hádzat' príspevky každých päť minút, tak si aspoň napíš niečo vlastné.*

'If you have to publish posts every five minutes, at least write something of your own.'

Despite their subordinate structure, the clauses are often not integrated into a matrix clause, but occur independently, anticipating the speech act of the subsequent clause. Syntactic disintegration of C1 from C2 is driven by the background status of C1 and its pragmatic function, as mentioned in Section 4.4. In such cases, C1 turns into a syntactically independent parenthetical segment which is embedded within the matrix clause only formally, keeping an overt syntactic link to the matrix clause, yet semantically independent. Such structures are often subject to "conventionalization of the construction" (Constructionalization). A good example of such a fully idiomatic construction is the following structure used when one is answering a question that one does not want to answer because the information is personal, embarrassing, etc.

- (20) *Ked' už musíš vedieť, nemali sme deti, lebo nám žiadne nepovolili.*

'If you must know, we didn't have kids because they wouldn't let us have any.'

Such insertions form a fertile space for managing local interactive tasks and shaping the participant framework. In examples like (20), C1 is anything but surplus to the interaction. It is exactly because of the existence of C1 that the negative content in C2 is not presented as being initiated by the speaker, but as a response to a hypothetical request by the listener (Gabrielatos 2020, p. 155). In such a way, the speaker conforms to the agreement maxim which runs as follows: "Minimize the expression of disagreement between self and other; maximize the expression of agreement between self and other." From functional point of view, parenthetical constructions can fulfil various interactive tasks, from interpersonal (managing the relationship between participants) to metalinguistic (commenting on language itself).

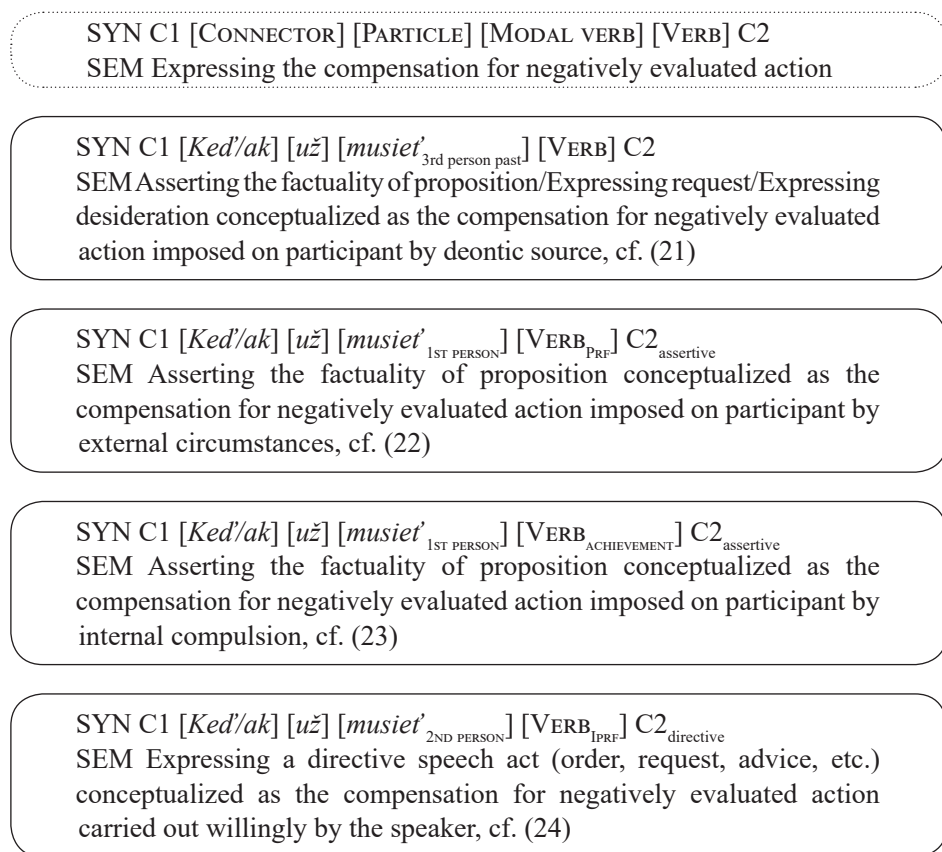
In such cases, it is not the content of the apodosis (formally coded by C2 expressing the logical consequent) that is contingent on the protasis (formally coded by C1 expressing the condition), but either the relevance of its uttering, or the wording/clarity of its content. This is illustrated in (20): the content of the C2 (not having any kids) is not contingent on the listener's knowledge as formally presented in C1; rather the protasis functions as a hedged introduction to the comment expressed in the apodosis.

5. CONCLUSION

Previous accounts of modal constructions differ in their views on whether to treat them as transparent syntactic structures consisting of a main and a subordinate clause or as semi-fixed patterns. The development of a pragmatic function presents an argument in favour of the latter interpretation.

Regarding the modal constructions focused on in this paper, diverging degrees of schematicity can be observed. Overall, four configurations were identified in the present paper that are located on the lower levels of the constructional network. They are highly specific; only their verb slot is variable. In addition, the analysis has revealed that there is a high formal overlap among the identified configurations. The constructions resemble one another in that they combine similar categorical slots, which are summarized at the highest node in Figure 1.

Figure 1: Modal macro-construction and its allostructions



SYN C1 [*Ked'/ak*] [*už*] [*musiet'*] [VERB] ; C2_{assertive/expressive...}
 SEM Hedged introduction to the comment/rebuke..., cf. (25)

Modal construction with deontic modal:

- (21) *Ked' už musel za hranice vyjsť, používal obrnený vlak.*
 'When he had to go beyond the border, he used the armoured train.'

Modal construction with circumstantial modal:

- (22) *Ked' už musím zaparkovať do vysokého snehu, ujazdím sneh jazdou dvakrát trikrát dopredu a dozadu.*
 'When I have to park in high snow, I drive forward and backwards two or three times to make it smooth.'

Modal construction with internal (subjective) modal:

- (23) *Ked' už musím zahýbať žene, tak si odskočím trochu ďalej od domu.*
 'If I have to cheat on my wife, I don't do it on my doorstep/the further from home, the better.'

Pragmatic modal construction:

- (24) *Ak už musíte mať na ráno palacinky, nepoužívajte na ne polotovary.*
 'If you must have pancakes in the morning, don't use semi-finished products.'

Parenthesis:

- (25) *Deti nestačí natrkať, aj sa o ne treba postarať, keď už musím byť taký vulgárny.*
 'It's not enough to spit out the kids/It's not enough to have sprogs, they also need to be taken care of, if I have to be so vulgar.'

PMC can be referred to as "illocutionary construction(s)" with particular formal, semantic and pragmatic features. This finding is in accordance with Searle (1975) who suggested that the forms with special grammar are idiomatic ways of accomplishing an illocutionary goal. The investigation proves that lexically and grammatically specific modal constructions can give rise to short-circuited pragmatic effects. In this case, the chunk *Ked'/ak už musiet'*_{2nd person} *Verb*_{imperfective} is immediately understood as an opening sequence to the following order.

Short-circuiting is in some respects similar to the process of conventionalisation that affects frequent invited inferences (cf. Traugott – König 1991). Treating modal

structures as stored sequences, particular grammatical and lexical features of items immediately help the hearer to determine which the semantic value of *musiet'* is intended among a range of possible candidates. For further investigation, it would also be worthwhile to take filler types retrieved here as predictors of modal values in a multinomial regression model to see how well they classify (i.e., predict the actual use) the semantic value of particular modals in a different (but similar) corpus.

Conventional linguistic units (such as modal verbs) are semantically quite schematic and, therefore, the construals they impose upon the conceived scene and, in particular, upon aspects of the ground, are compatible with multiple actual interactive and interpersonal contexts in which speech acts are performed. Therefore, a single construction with such conventional units may be employed as a tool for achieving multiple and often quite diverse pragmatic effects in different circumstances (Kochańska 2018). Formal, semantic, and discourse features that define the pragmatic uses of modal verb *musiet'* in analysed structures form the pattern representing the construction, which is conventionally tied to certain types of discourse settings and speaker-hearer expectations. In order to represent this construction, and its relationship to other, partially related, patterns with conventionalized values of the given modal verb, the present paper proposes a network representation in the form of contiguous functional spaces that overlap at the boundary between semantics of (deontic, circumstantial and internal) necessity and pragmatically motivated usage.

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Ked' (to) už musíš vedieť'... Život modálnych slovies po modálnosti

Resumé

Cieľom príspevku je analýza konštrukcie C1[*Ked'/Ak už* SUBJ *musí* INF...], C2[(*potom*) (*aspoň*)...] v prípadoch, keď daná štruktúra funguje tzv. ako pragmatická modálna konštrukcia v tom zmysle, ako konštrukciu definuje konštrukčná gramatika (CxG). V CxG sa termín „konštrukcia“ používa na označenie formálno-významových jednotiek, ktoré sú uložené v mentálnom úložisku zahŕňajúcom slová, idiómy, opakujúce sa sekvencie a polofixované vzorce (porov. Goldberg 2006). Sarkastické použitie verba *musieť* v týchto prípadoch potvrdzuje ambiguitu modálnych slovies, ktoré sa často používajú vo výpovediach so špecifickými pragmatickými účinkami. V istom type štruktúr môžu pôvodné významy modálnych slovies ustúpiť do úzadia a funkciou modálneho verba je signalizovať pragmatický význam, v daných prípadoch ide o ilokučný význam zodpovedajúci rečovému aktu sťažnosti alebo výčítky. S cieľom overiť štruktúrne indikátory, ktoré sa s pragmatickou modálnou konštrukciou spájajú, sme danú štruktúru vyhľadali v korpuse *Omnia Slovaca IV Maior*. Z celkového počtu 2 996 tokenov sme na základe náhodne zvolenej vzorky manuálne anotovali 257 dokladov tohto typu štruktúry, a to z hľadiska vnútrovetných indikátorov (sémantická hodnota modálneho verba a osoba a čas modálneho verba a vid a sémantický typ infinitívneho predikátu) a medzivetných indikátorov (sémantická hodnota modálneho verba a ilokučná funkcia matricovej vety). Na identifikáciu asociácií spomínaných indikátorov v rámci týchto skúmaných modelov sme použili štatistické testy aplikované v kovariančnej lexikálnej analýze. Tá odhaľuje, ktoré z daných indikátorov (z hľadiska gramatických a lexikálnych vlastností štruktúr

fungujúcich ako relevantné konštrukčné prvky) prispievajú k miere ukotvenia danej konštrukcie.

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