FREQUENCY IN CORPORA AS A SIGNAL OF LEXICALIZATION (ON THE ABSOLUTE USAGE OF COMPARATIVE AND SUPERLATIVE ADJECTIVES)

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Abstract: The study deals with the category of comparison of Czech adjectives from the semantic point of view; it concentrates especially on the so-called absolute (or relative) usage of comparatives and the absolute usage of superlatives and their lexicographic treatment (or absence of the lexicographic treatment) in Czech monolingual dictionaries. The question is whether their frequency in corpora can prove lexicalization of this usage.

Keywords: corpus linguistics, corpus lexicography, dialect corpora

1 STARTING POINTS

1.1 The status of the adjective gradation in the language description

It is a well-known fact that in the language description the gradation of adjectives stands between inflection (morphology) and derivation (word-formation). This has been clearly expressed in [11]. J. Panevová [18], [19] presents a brief overview of arguments both for morphology and for word-formation and notes that descriptions in various grammar handbooks of the Czech language differ: the Grammar of Czech (*Mluvnice češtiny*) from 1986 treats gradation differently in different places – in the first volume as part of word-formation [5, pp. 378–380, 448–49] and in the second volume as part of morphology [14, pp. 79–80]; the Handbook of Czech Grammar (*Průruční mluvnice češtiny*) [12, pp. 176–180, 222] and the handbook Czech – Speech and Language (*Čeština – řeč a jazyk*) [4, pp. 132–133, 141] consider the comparative and the superlative to be part of word-formation, in contrast to the Grammar of Contemporary Czech (*Mluvnice současné češtiny*) [3, pp. 205–209] and the Academic Grammar of Contemporary Czech (*Akademická gramatika současné češtiny*) [21, pp. 380–385, 503–507], which consider them to be part of morphology. Concerning the lexicographic treatment, in Czech monolingual academic dictionaries, i.e. the Reference Dictionary of the Czech Language (*Průruční slovník jazyka českého*) [8]), the Dictionary of the Standard Czech Language (*Slovník spisovného jazyka českého*) [7], hereinafter SSJČ), the Dictionary of Standard Czech

for Schools and the General Public (*Slovník spisovné češtiny pro školu a veřejnost* [6], hereinafter SSČ), the Academic Dictionary of Contemporary Czech (*Akademický slovník současné češtiny*, hereinafter ASSČ), as well as commercial dictionaries, i.e. the Internet Dictionary of Contemporary Czech (*Internetový slovník současné češtiny* [10], hereinafter ISSČ), comparatives are listed as part of grammatical information, e.g. the comparative *větší* ‘bigger’ is listed in the entry for *vel(i)ký* ‘big’ – mainly because it is an irregular comparative form.¹ In a similar way the comparative *lepší* ‘better’ is listed in the entry *dobrý* ‘good’, at the same time it is treated as a separate entry – due to the lexicalization of the absolute (elative) usage of this comparative form.² The “grammatical” treatment of comparatives is probably related to the space limitations of the dictionary. The formation of comparative (and superlative) forms and their semantic structure are very regular; therefore, there are usually no lexicographic reasons for their special description.

It is evident that the absolute usage of comparative (or superlative) forms should be taken into consideration by lexicographers. As [1], [18], [19], [13]³, and grammar handbooks (see [14, pp. 79–80]; [21, pp. 383–384]) indicate, there exists an asymmetry between the form (comparative) and its function (non-comparative, absolute usage),⁴ i.e. comparative and superlative forms are used without explicit comparison. Some of these occurrences could be considered as their “regular” comparative usage – although comparison is not explicitly expressed – because the comparative aspect is more or less obvious (implicit comparison with the average or usual value is present) (see [18], [19]).

1.2 Treatment of lexicalized comparatives and superlatives in monolingual dictionaries

This fact influences the number of registered comparative (or superlative) forms with a lexicalized meaning, i.e. those that are listed in monolingual dictionaries. Surprisingly, the number of registered comparatives which are treated as a lexical unit (i.e. not only as adjective morphological forms) is very low. In the SSČ there are lexemes *lepší* ‘better’, *vyšší* ‘higher’, *menší* ‘smaller’, *starší* ‘older’, *horší* ‘worse’, *nižší* ‘lower’, *mladší* ‘younger’, *blížejší* ‘closer’, *dřívejší*⁵ ‘earlier’, *pozdější* ‘later’,

¹ Superlative forms are not usually listed because of their regularity.

² On the treatment of gradation of adjectives (and adverbs) in the ASSČ (and in other existing Czech monolingual dictionaries), see [20].

³ See the entries *Stupňování* (P. Karlík), *Elativ* (Z. Hladká) and *Komparativ and Superlativ* (both entries by K. Osolsobě).

⁴ The absolute usage is usually analysed for comparative forms ([18], [19]; [21]); [1], [14], [13] (in the entry *Superlativ*) mention it for superlative forms as well.

⁵ The comparative status of the form *dřívejší* (allegedly belonging to the positive form *brzký* ‘early’) was questioned in [13, Komparativ]. Nevertheless in the Internet language handbook (*Internetová jazyková příručka* [9]), in [3], and in the ASSČ it is registered as a comparative for the lemma *brzký*.

*širší*⁶ ‘wider’, there are the same lexemes (except *horší* and *starší*) in the ISSČ. In a larger, but older dictionary (SSJČ) we find only lexemes *lepší*, *menší*, *starší*, *mladší*, *pozdější*, *dřívější*, *blíže*⁷. There are no lexicalized superlatives in any Czech monolingual dictionary,⁸ but in the Dictionary of the Contemporary Slovak Language (*Slovník súčasného slovenského jazyka*, hereinafter SSSJ) we can find the superlative adjective forms *najbližší* ‘the closest, the nearest’, *najmenší* ‘the smallest’, which are listed as separate lexical units; the treatment of some adjectives in the positive form indicates the lexicalization of some other superlative forms, e.g. *drahý* ‘dear’. Entries for superlative forms *najhorší* ‘the worst’, *najlepší* ‘the best’, *najsvätejší* ‘the most holy’, and *najvyšší* ‘the highest’ are listed because they form phraseological and multi-word units.

2 ADJECTIVE GRADATION IN THE LATEST LEXICOGRAPHIC DESCRIPTION OF CZECH

2.1 Adjective gradation from the frequency point of view

It is a well-known fact that gradation applies to a small part of adjectives for semantic and formal reasons. In [3, p. 205] it is presented that only 6% of adjectives have graded forms, in [17, p. 21] the proportion is indicated to be 8% (i.e. 5440 lemmas of 65 400 adjective lexemes in the most complete corpus then, in 2010). In the corpus SYN2015 adjectives with comparative or superlative forms make up 5% of all adjectives.⁹ The above-mentioned distinctions lie in different corpus sources that were used. As it was pointed out, the possibility of the adjective gradation is related to semantics.

Commonly, qualitative adjectives create comparative and superlative forms, relational (classifying) adjectives do not. From a different point of view, the occurrence of these forms within the category of (originally) classifying adjectives indicates semantic changes. Therefore, in the ASSČ (started in 2012) comparative forms are registered in all adjective entries where comparatives are commonly used (the same principle is used in the SSSJ); this information has two functions – to indicate the correct form and to signal the semantic type of the adjective.

At the same time, gradable adjectives occur in comparative and superlative forms quite rarely. Experts from the Institute of the Czech National Corpus were

⁶ It is not listed as a separate entry but it is registered within the entry for *široký* ‘wide’; it is placed in the sense ‘relating to as many people as possible from a certain field’ with the comment “often *širší* (without comparison)” and with the examples *pořady pro široký, širší okruh posluchačů; výstava pro širokou veřejnost; zboží široké spotřeby* ‘programs for a wide, wider audience; an exhibition for the general public; goods of wide consumption’.

⁷ It is registered within the entry *blízký* in the sense “detailed, elaborate” with the comment “only the comparative”.

⁸ Only in the ISSČ lexicalized nouns from superlative adjective forms are registered – *nejmenší* ‘very young child’, *nejhorší* ‘the worst alternative’.

⁹ The methodology of determining this number was similar to that of [17, pp. 20–21].

asked to make a list of adjectives that are commonly used in comparative and superlative forms.¹⁰ The list contains units that have an absolute frequency of at least 10 in the corpus SYN2015, and at the same time appear in their graded forms, i.e. comparatives and superlatives together, at least in 20% of their occurrences. The list is quite short, including the adjectives with suppletive comparatives and superlatives (i.e. *dobrý* ‘good’, *lepší*, *nejlepší*; *velký* ‘big’, *větší*, *největší*; *malý* ‘small’, *menší*, *nejmenší*; *špatný* ‘bad’, *horší*, *nejhorší*; *dlouhý* ‘long’, *delší*, *nejdelší*; *brzký* ‘early’, *dřívější*, *nejdřívější*).

	Lemma	Comparative + superlative forms		Lemma	Comparative + superlative forms		Lemma	Comparative + superlative forms
1	velký ‘big, great’	72 053	31	přísný ‘strict’	1 023	61	vytížený ‘busy’	104
2	dobrý ‘good’	55 740	32	podrobný ‘detailed’	1 019	62	prozaický ‘prosaic’	93
3	vysoký ‘high’	38 906	33	pomalý ‘slow’	998	63	povolaný ‘qualified’	91
4	malý ‘small’	25 034	34	mocný ‘powerful’	866	64	markantní ‘striking’	77
5	starý ‘old’	23 701	35	závažný ‘serious’	860	65	odrostlý ‘grown-up’	76
6	špatný ‘bad’	14 382	36	rozšířený ‘widespread’	855	66	sdílný ‘communicative’	55
7	nízký ‘low’	13 764	37	tmavý ‘dark’	784	67	smířlivý ‘conciliatory’	55
8	mladý ‘young’	12 300	38	početný ‘numerous’	512	68	hořejší ‘top, upper’	53
9	dlouhý ‘long’	9 540	39	prodáváný ‘best-selling’	509	69	roztodivný ‘odd’	45
10	důležitý ‘important’	9 229	40	zazší ‘later’	409	70	vroucný ‘fervent, dear’	41
11	blízký ‘near, close’	8 290	41	vlivný ‘influential’	407	71	sebenepatrný ‘slight’	41
12	silný ‘strong’	6 439	42	produktivní ‘productive’	371	72	žádoucný ‘desirable’	36
13	široký ‘wide’	5 290	43	žádaný ‘desired’	347	73	obsažný ‘comprehensive’	33
14	pozdní ‘late’	4 300	44	navštěvovaný ‘visited’	274	74	obsazovaný ‘cast’	32
15	jednoduchý ‘simple’	4 168	45	šetrný ‘friendly [environmentally], thrifty’	258	75	fajnový ‘fine’	32
16	rychlý ‘fast’	4 008	46	hodnotný ‘valuable’	247	76	benevolentní ‘benevolent’	28

¹⁰ We express our thanks to Dominika Kovářiková and Václav Cvrček.

	Lemma	Comparative + superlative forms		Lemma	Comparative + superlative forms		Lemma	Comparative + superlative forms
17	levný 'cheap'	3 955	47	sofistikovaný 'sophisticated'	230	77	vyznamenávaný 'honour'd'	26
18	krátký 'short'	3 798	48	chutný 'tasty'	218	78	stahovaný 'downloaded'	24
19	drahý 'dear, expensive'	3 694	49	náchylný 'susceptible'	202	79	otužilý 'hardy'	24
20	častý 'frequent'	3 433	50	frekventovaný 'busy'	175	80	vzrušivý 'exciting'	20
21	hluboký 'deep'	3 387	51	příhodný 'appropriate'	172	81	zavilý 'fierce, ferocious'	20
22	složitý 'complicated, complex'	2 963	52	vyhledávaný 'sought'	164	82	onaký 'another, better'	18
23	dřívější 'earlier, previous'	2 900	53	lidnatý 'populous'	162	83	skladný 'compact'	18
24	slabý 'weak'	2 815	54	čtený 'read'	135	84	obletovaný 'adored'	18
25	snadný 'easy'	2 495	55	palčivý 'burning'	131	85	hovorný 'talkative'	14
26	náročný 'difficult'	2259	56	výstižný 'concise'	125	86	pregnantní 'succint'	14
27	výhodný 'favourable, advantageous'	1537	57	niterný 'inner'	122	87	poslouchaný 'listened to'	11
28	efektivní 'effective'	1146	58	výnosný 'profitable'	122	88	křepký 'sprightly'	10
29	účinný 'effective'	1129	59	důrazný 'strong'	119	89	první 'first'	10
30	cenný 'valuable'	1087	60	schůdný 'viable'	110	90		

Tab. 1. List of adjectives that are commonly used in comparative or superlative forms (in the corpus SYN2015).

Thirty of these adjectives were analyzed in more detail. Those were the adjectives with the biggest proportion of comparative forms among their total occurrences. The proportion of comparatives was chosen as the basic criterion because comparative forms are more often lexicalized (see above, 1.2). The same adjectives are sorted both by the proportion of comparatives (in the left part of the table) and by the proportion of superlatives (in the right part of the table). The list of them mostly contains the most frequent adjectives. It is obvious that a high proportion of graded forms among the occurrences of certain adjectives is conspicuous. Units with the biggest difference between the proportion of comparatives and superlatives are in bold type.

	Lemma	Com- para- tives	% of com- para- tives	Total frequency		Lemma	Super- latives	% of super- latives	Total freque- ncy
1	brzký 'early'	2 900	77,81	3 727	1	blízky 'near, close'	6 175	34,66	17 814
2	pozdní 'late'	4 276	60,33	7 088	2	častý 'frequent'	2 379	30,27	7 858
3	nízký 'low'	11 081	42,70	25 951	3	dobrý 'good'	29 806	25,59	116 490
4	levný 'cheap'	2 621	35,19	7 448	4	špatný 'bad'	6 298	20,69	30 447
5	podrobný 'detailed'	967	30,30	3 363	5	vysoký 'high'	15 781	20,09	78 558
6	vysoký 'high'	23 125	29,44	78 558	6	levný 'cheap'	1 334	17,91	7 448
7	špatný 'bad'	8 084	26,55	30 447	7	velký 'big, great'	33 233	17,38	191 203
8	starý 'old'	18 439	25,81	71 442	8	důležitý 'important'	6 490	15,86	40 918
9	složitý 'complicated, complex'	2 644	25,02	10 566	9	drahý 'dear, expensive'	1 544	13,55	11 392
10	široký 'wide'	4 529	24,14	18 760	10	nízký 'low'	2 683	10,34	25 951
11	slabý 'weak'	2 289	24,13	9 488	11	výhodný 'favourable, advantageous'	456	9,03	5 049
12	dobrý 'good'	25 934	22,26	116 490	12	efektivní 'effective'	342	7,75	4 413
13	snadný 'easy'	2 214	22,04	10 045	13	silný 'strong'	2 126	7,61	27 923
14	výhodný 'favourable, advantageous'	1 081	21,41	5 049	14	rychlý 'fast'	1 265	7,49	16 900
15	pomalý 'slow'	910	21,31	4 270	15	jednoduchý 'simple'	1 527	7,41	20 617
16	velký 'big, great'	38 820	20,30	191 203	16	starý 'old'	5 262	7,37	71 442
17	hluboký 'deep'	2 499	20,05	12 461	17	hluboký 'deep'	888	7,13	12 461
18	malý 'small'	18 864	19,72	95 652	18	malý 'small'	6 170	6,45	95 652
19	mladý 'young'	9 643	19,68	48 998	19	slabý 'weak'	526	5,54	9 488
20	drahý 'dear, expensive'	2 150	18,87	11 392	20	mladý 'young'	2 657	5,42	48 998
21	efektivní 'effective'	804	18,22	4 413	21	náročný 'difficult'	577	5,16	11 182
22	dlouhý 'long'	8 130	16,98	47 872	22	krátký 'short'	837	4,35	19 236
23	rychlý 'fast'	2 743	16,23	16 900	23	široký 'wide'	761	4,06	18 760
24	silný 'strong'	4 313	15,45	27 923	24	dlouhý 'long'	1 410	2,95	47 872
25	krátký 'short'	2 961	15,39	19 236	25	složitý 'complicated, complex'	299	2,83	10 566
26	náročný 'difficult'	1 682	15,04	11 182	26	snadný 'easy'	281	2,80	10 045
27	častý 'frequent'	1 054	13,41	7 858	27	pomalý 'slow'	88	2,06	4 270
28	jednoduchý 'simple'	2 641	12,81	20 617	28	podrobný 'detailed'	52	1,55	3 363
29	blízky 'near, close'	2 115	11,87	17 814	29	pozdní 'late'	24	0,34	7 088
30	důležitý 'important'	2 739	6,69	40 918	30	brzký 'early'	0	0,00	3 727

Tab. 2. List of thirty selected adjectives sorted by the proportion of comparatives (in the left part) and by proportion of superlatives (in the right part) in the total frequency.

2.2 Adjective gradation from the semantic point of view

Concerning the lexicographic treatment, we are interested in comparative and superlative forms being used “absolutely”, i.e. in examples without a general aspect of comparison (as pointed out above, comparison is not always explicitly expressed because of the occurrence of the average or usual value of the compared quality).

A high proportion of comparatives among the occurrences of a certain adjective suggests that the collocability of its comparative form compared with the collocability of both the positive form and the superlative form might need to be explored. The same should be done for superlative adjective forms, which need to be compared with both positive adjective forms and comparative forms. The collocability of positive, comparative and superlative forms with nouns is for some adjectives different (some examples see in C.2), for some adjectives identical (for some examples, see C.5).

The high proportion of comparative or superlative forms in Table 2 can be accounted for by:

(A) phraseological units:

– *hlad je nejlepší kuchař* ‘hunger is the best sauce’; *cesta nejmenšího odporu* ‘the line of least resistance’; *v nejhorším případě* ‘at worst’; *blíží košile než kabát* ‘blood is thicker than water’; *je snadnější uhlídat pytel blech, než...* ‘it’s impossible to keep tabs on it’; *je nejvyšší čas* ‘it’s high time’¹¹;

(B) multi-word names (mainly terminological units):

– *vyšší odborná škola* ‘higher vocational school’, *schůzka na nejvyšší úrovni* ‘top-level meeting’.

These structures with comparatives and superlatives (in both (A) and (B)) must enter the lexicon as a unit. The comparatives or superlatives are not substitutable by the positive, or the substituted version loses its idiomaticity (see [18]). In a dictionary these lexical units need to be registered with definitions.

(C) There is other group of comparatives and superlatives used with a meaning which cannot express comparison. Some of them are already listed in Czech monolingual dictionaries as separate entries (see 1.2), but some are not. The difference between the meaning of the graded forms and the meaning of the positive typically results from different collocability. Sometimes the adjective-noun combination with a comparative or superlative has a meaning different from the common comparison, or the comparative or superlative meaning is neutralized. We find:

(C.1) terminological units in which a comparative (or superlative) form is repeated in a systematic way, i.e. comparative (or superlative) form is used in multi-word

¹¹ Phraseological units and their corpus detection and their exploration were not our concern.

units of the same type. Some of the multi-word names can be registered within an “abstract” sense which associates (terminological) lexical units with similar meaning, e.g.:

– *jitrocel větší, bedrník větší, vlašovičník větší, citroník největší, liska největší* (binomial botanical names);

– *vyšší* ‘higher-level’ with nouns *rostliny* ‘plants’, *živočichové* ‘animals’, *organismy* ‘organisms’, *formy života* ‘forms of life’; *jednodušší* ‘less complex’ with nouns *sloučeniny* ‘compounds’, *formy života*; *složitější* ‘more complex’ with nouns *látky* ‘substances’, *organismy*;

– *mladší/starší žáci, mladší/starší dorostenci; nejmladší žáci* (adjectives *mladší* ‘younger’, *starší* ‘older’, *nejmladší* ‘the youngest’ in connection with nouns *žáci* ‘pupils’, *dorostenci* ‘adolescents’ express a well-defined age category);

(C.2)

– superlatives with different collocability compared with an adjective positive and comparative, e.g.: *nejbližší* ‘the nearest / the earliest’ collocates with the nouns *příležitost* ‘opportunity’, *jednání* ‘negotiation’, *(možný) termín* ‘possible date’ etc., the positive *blízký* and the comparative *blíží* are rare; similarly *nejvyšší štěstí/blaho* ‘absolute happiness/welfare’;

– the same with comparatives, e.g.: *hlubší* ‘deeper’ collocates with the nouns *význam* ‘meaning’, *smysl* ‘sense’, *analýza* ‘analysis’ etc., the comparative form is the most frequent (the positive *hluboký* and the superlative *nejhlubší* are rare);

– superlative and positive forms can collocate with the same nouns, different from comparative forms, e.g. *nejdražší* ‘the dearest’ collocates with *přítel* ‘friend’ and with family member nouns (*rodiče* ‘parents’, *maminka* ‘mum’, *tatínek* ‘dad’), and is thus similar in collocability to the positive *drahý* but different from the comparative *dražší*; *nejhlubší* ‘the deepest’ collocates with *úcta* ‘reverence’, *soustrast* ‘condolence’; *noc* ‘night’, *tajemství* ‘secret’, *nitro* ‘heart’, and is thus similar in collocability to the positive form, but different from the comparative form;

(C.3) comparatives which are used in the euphemistic way:

– *slabší povaha* ‘a weaker man’, *slabší zdraví* ‘rather poor health’; *má silnější postavu* ‘he/she is rather fat’; *nejsem už nejmladší* ‘I’m not that young’;

(C.4) comparatives which are very frequently used absolutely and their meaning is lexicalized in a “terminological” way, e.g. *kratší* ‘not long’, *delší* ‘not short’ – *kratší/delší vlasy, na kratší/delší vzdálenosti*.¹²

(C.5) A big number of graded forms are not indicative of semantic changes. The collocability of positive, comparative and superlative forms is also similar, e.g. collocability of *podrobný* ‘detailed’, *podrobnější*, and *nejpodrobnější* is basically the

¹² In C.1 – C.4 we list mainly examples of lexicalized comparatives or superlatives which are not yet registered in Czech monolingual dictionaries.

same – among the ten most frequent noun collocates are *informace* ‘information’, *popis* ‘description’, *zpráva* ‘message’, and *vyšetření* ‘examination’.

We propose that the examples listed in C.1 – C.4 need to be registered in monolingual dictionaries. This can be done in several ways (in a separate entry, in the exemplification section by means of an additional definition or by a comment relating to limited collocability), according to conceptual principles of the particular situation.

3 CONCLUSION

This paper deals with the treatment of lexicalized comparative and superlative forms in Czech monolingual dictionaries, which appears insufficient. We look for corpus signals providing clear evidence of the lexicalization of absolute comparatives or superlatives. High frequency of these forms can indicate idiomaticity and semantic changes. However, the most prominent signal for lexicalization assessment of a comparative or superlative adjective is its collocability.

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