

Theses of PhD dissertation

The System of the Hungarian Suffixes

Written by

Attila MÁRTONFI

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0 The dissertation consists of two main parts. After giving an account of my post-graduate studies, the first part – which serves as its backbone – makes an attempt at classifying the Hungarian suffixes. The subsequent, second part clarifies some related phenomena in three case studies.

1 The original idea behind the **classification** is that it examines the topic in a **strictly deductive** way. This classification does not attempt to rationalize, verbalize the intuitive concept of the ‘képző’, ‘jel’, ‘rag’¹, or the derivational or inflectional morphemes, but it characterizes the suffixes on the basis of criteria published in the literature (cf. especially Plank 1994; Keszler 2000a; Károly 1965b; Dressler 1989; Booij 2000; Berrár 1973; Kiefer 1998; Kenesei 2000). Subsequently, it gives an interpretation of the outlined patterns based of this characterization. Apart from being deductive, the survey is also strongly **empiric**, and it **aims to be complete** regarding the level of the criteria used and the analyzed suffixes as well.

1.1 The **list of criteria** is made up of 22 more or less unrelated items. This list is complete in the sense that according to my knowledge, no other non-recursive criteria has been raised in the literature besides these or their equivalents. Recursive criteria (e. g. a suffix is inflectional, if it cannot be followed by a derivational suffix) could not be adopted, because their application would violate the principle of strict deductiveness in this survey. The description of the criteria is followed by the discussion of the problems of their interpretation and usage.

1.2 In the survey the other, ‘orthogonal’ parameter is the **register of the suffixes**. This is made up of 167 items, and in reverse-alphabetized order contains all the Hungarian suffixes that can be disclosed by distributional analysis: *-A, -bA, -csA, -(O)dA, -ia, -kA, -(V)cskA, -ikA, -ÓkA, -lA, -mA, -nA/-nÁ, -rA, -(V)ntA, -szOrtA, -ista, -vA/-vÁn/-vÁst, -vÁ, -((V)b)b, -Onc, -Óc, -(A)cs, -d, -(V)d, -Vd, -dAd, -hOd[ik], -önd, -Ód[ik], -((l)A)kOd/-kÓd/-(V)lkOd/-(V)skOd[ik], -(O)lÓd[ik], -kOlÓd[ik], -AmOd[ik], -é, -né, -Ag, -lAg, -(A(s))sÁg, -AtAg, -leg, -ig, -Ong, -Og, -VlOg, -i¹, -i², -((j)A)i, -(s)i, -ci, -(O)sdi, -beli, -(A)ni, -nyi, -si, -zsi, imperative suffix, -(V)k, verbal*

¹ In the traditional Hungarian description use three categories: ‘képző’, namely derivational suffix, ‘jel’, namely non-terminal inflectional suffix, and ‘rag’, namely terminal inflectional suffix. These equivalents are only approximative.

personal suffixes, *-nAk*, *-ek*, *-ék¹*, *-ék²*, *-(A)dék*, *-(A)lék*, *-hAtnék*, *-(a)ték*, *-ik*, *-Vdik*, *-Ánk*, *-dok*, *-nOk*, *-(V)l*, *-al/-Ál*, *-(l)Al/-lÁl*, *-Ál*, *-(i)csÁl*, *-dAl/-dÁl*, *-(i)gÁl*, *-dOgÁl*, *-nÁl*, *-(A)tAl*, *-vAl*, *-izál*, *-(A)kOl/-ikol/-(i)kál*, *-(V)ll[ik]*, *-Aml[ik]*, *-bÓl*, *-dÁcsOl*, *-dOkOl*, *-rÓl*, *-szol*, *-tÓl*, *-Ul¹*, *-Ul²*, *-(s)Ul*, *-(V)stUl*, *-Ály*, nominal possessive personal suffixes, *-Am*, *-AlOm*, *-(V)dAlOm*, *-(A)n*, *-(O)n*, *-An*, *-bAn*, *-(A)t(A)lan*, *-vAn*, *-(O)ny/-Ány*, *-(O)mÁny*, *-(O)vÁny*, *-ékOny*, *-ó*, *-Ó¹*, *-Ó²*, *-AndÓ*, *-kó*, *-ikó*, *-nsÓ*, *-képp(en)*, *-Ár*, *-kor*, *-szOr*, *-(V)s*, *-Ás*, *-omás*, *-Ós*, *-dOs*, *-lAgOs*, *-sÁgOs*, *-(A)tOs*, *-us¹*, *-us²*, *-ikus*, *-izmus*, *-(Á)sz¹[ik]*, *-(Á)sz²*, *-Asz*, *-t*, *-(V)t*, *-(Ot)t*, *-((O)t)t¹*, *-((O)t)t²*, *-((O)t)t³*, *-At*, *-(t)At¹*, *-(t)At²[ik]*, *-(O)gAt*, *-hAt*, *-lAt*, *-ÁszAt*, *-(O)zAt*, *-((a)s)ít*, *-ként*, *-(V)nként*, *-int*, *-ért*, *-Aszt*, *-u*, *-(j)Ú*, *-(An)tyÚ/-AttyÚ*, *-(V(d))z[ik]*, *-Ó(d)z[ik]*, *-(A)dOz[ik]*, *-hOz*, *-(A)kOz/-kÓz[ik]*, *-íroz*.

The presentation of the emerging problems focuses on three points:

1. single compound derivational suffix or succession of some derivational suffixes;
2. derivational-suffix-like posterior constituents;
3. homonymy.

Obviously, the decisions on these questions influence the register of the suffixes.

1.3 The above mentioned 22 criteria and 167 suffixes determine a **22×167 chart**. In this chart all the cells contain one of the +, 0, or – signs, whether the discussed criterion characterizes the suffix, it is ambivalent to the suffix, or the opposite criterion characterizes the suffix. Consequently, the essence of this analysis towards the classification of the Hungarian suffixes is filling this chart with +, 0, and – signs.

1.4 There are several **connections between individual criteria**. These fall under two types:

1. exceptionless **implications** as inevitable consequences of a logical-theoretical necessity;
2. **correlations** as tendencies that can be explored by statistical methods.

Supposing that there is an implication between two criteria, it is not necessary that their correlation coefficient should be high, since the implication merely says that a certain value of a criterion induces the value of the other criterion – however the other values of the criterion could remarkably weaken the correlation.

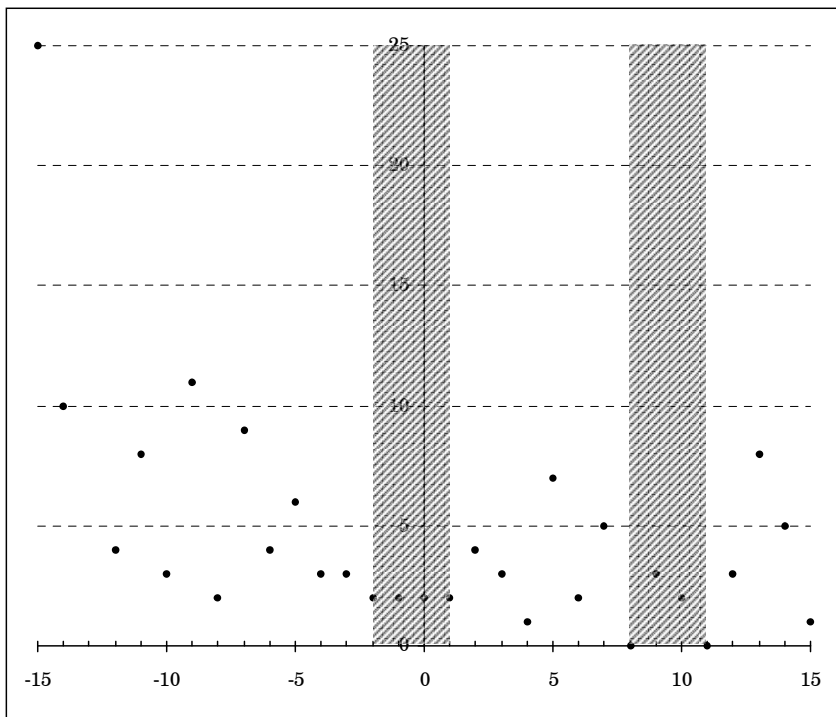
1.5 On the other hand, correlations could be examined not only between individual criteria, but between a specific criterion and the mean of the criteria, too. Thus, it can be laid down that **that criterion shows the strongest correlation with the mean**, because this criterion can mostly replace the set of all criteria. The most traditional possible, but to some extent the most problematic criterion: “does the suffix create a new lexeme?” proved to be the most relevant one. The reason for this could presumably be that authorities attempted to approximate the view provided by this problematic criterion with more exact ones.

In seven cases the correlation coefficient with the mean is less than 0.5. These criteria are presumably uninteresting from the point of view of the entire system of the suffixes, so these are neglected in the following part of the survey. The remaining 15 criteria can be ordered most effectively by their fulfilling probability, arranging suffixes from the ones with the highest number of ‘+’-s to the highest number of ‘-’-s:

- the suffix can be joined only to the stems of a single class of lexemes;
- the suffix is productive at the present;
- the suffix does not change the part-of-speech category of the stem;
- the meaning of the word form is always compositional, the semantic connection between the stem and the word form is always transparent;
- the suffix does not play a role in the determination of the part-of-speech category of the word form;
- the suffix does not play a role in the determination of the complement possibility or the government of the word;
- the suffix can be joined to each element of the given part-of-speech category;
- the suffix has syntactical function;
- the suffix does not create a new lexeme;
- the suffix can be joined to a syntactical phrase;
- the suffix is a part of a more or less closed, finite system, therefore it is obligatory on all the elements of the part-of-speech category;
- the suffix makes impossible a farther change in the part-of-speech category;
- the suffix is determined by governing: e. g. the word form is congruent, or it expresses a government;
- the suffix closes the word form;
- the suffix can appear in the initial position of a word.

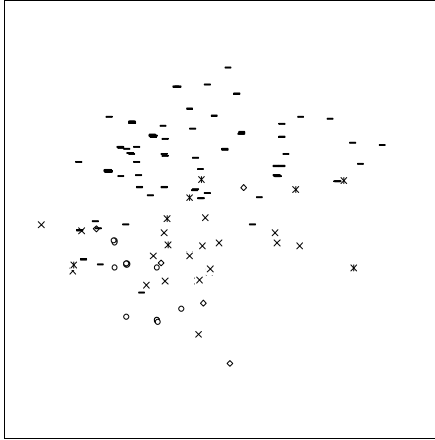
1.6 The dissertation elaborates two methods for the visualization of the system of the suffixes based on the above mentioned criteria.

1.6.1 First, a **one-dimensional** arrangement, in which the horizontal axis shows the sum total of individual suffixes, and the vertical axis shows the frequency, thus the -15 value represents the prototypical derivational morpheme, the $+15$ value represents the prototypical inflectional morpheme (this arrangement rather supports the three-class, ‘képző’ – ‘jel’ – ‘rag’ analysis):



1.6.2 The one-dimensional arrangement is followed by a **15-dimensional** one (which rather supports the two-class, derivational-inflectional analysis). In the dissertation, 16 views of this arrangement is shown. The most expressive one is the following – comparing against the one-dimensional analysis. On the diagram, the symbols represent the following (they do not necessarily mean the traditional label, but rather the domains of the one-dimensional arrangement):

- – domain of the ‘rag’-s;
- ◇ – domain of the ‘rag’-‘jel’ transition;
- × – domain of the ‘jel’-s;
- * – domain of the ‘jel’-‘képző’ transition;
- – domain of the ‘képző’-s.



1.6.3 The three-class analysis as well as the two-class one show a strong degree of abstraction, indeed they are artificial constructions. In practice, the real situation can be described by a high degree of dispersion between the two extreme values.

1.7 Consequently, in the course of the accurate analysis of the Hungarian suffixes the hypothesis was proved, that **the suffixes do not constitute strictly discrete groups**, but they take place on a scale, of which the two extremities are the prototypical derivational and inflectional morpheme. There is a real pattern that can be shown as an argument for both of the two-class (derivational–inflectional) and the three-class (képző–jel–rag) classification, but the variety and the disorder of the linguistic reality proves that both classifications are quite arbitrary, and strongly simplifying. The conclusion for teaching the mother-tongue is the many times repeated principle: the aim of grammar teaching in the school should not be drilling each category, but developing the analytical skills.

It can stimulate further research that the one-dimensional analysis shows two important **transitional domains**. In the followings, ‘jel’ and ‘rag’ technical term do not mean the traditional categories, but the domains from the one-dimensional analysis; because this analysis smoothes

the domain of the ‘rag’–‘képző’ transition into the domain of the ‘jel’, therefore distinctly strong deviations are expected to arise from the standard categorization.

One of the transitional domains is the ‘jel’–‘rag’ transition: the *-(V)stUl*, the *-ként* and the *-szOr*, as well as the imperative suffix and the nominal possessive personal suffixes; the other one is the ‘képző’–‘jel’ transition: the *-né*, the *-Vdik*, the *-(V)ntA*, the *-((V)b)b*, the *-lAg*, the *-beli*, the *-(V)cskA* and the *-(j)Ű*. In a certain sense the elements of the domain of the ‘jel’ – regarded ‘rag’ or ‘képző’ by the traditional analysis – compose another transitional group (some of them are rather described as ‘képző’–‘rag’ transition by the intuition, while about some of them – especially to the deverbative ones – are rather accept that the ‘jel’ label is more plausible, than the ‘képző’ label), these transitional morphemes are the *-Ul²*, the *-képp(en)*, the *-(A)n*, the *-kor*, the *-(Ot)t*, the *-szOrtA* and the *-(V)nként* denominative suffixes, as well as the *-(A)ni*, the *-vA/-vÁn/-vÁst*, the *-Ó¹*, the *-hAt*, the *-((O)t)t¹*, the *-AndÓ*, the *-(t)At¹* and the *-(t)At²[ik]* deverbative ones. Because the dissertation outlines the system of suffixes as a system, it stimulates to further research to analyze in detail of these transitional cases, and the occasional revision of their current standard categorization.

2 The case studies in the second main part of the dissertation reflect the system shown in the general analysis.

2.1 The first case study presents the relations between the **typical endings of the foreign words**, and their connection with the proper system of suffixes, respectively. The basis of the survey is formed by a corpus, which contains 2872 words as well as 1555 word-pairs, and which is used for discovering the foreign word endings identified by distributional analysis in Hungarian.

Altogether 44 foreign word ending were detectable, 8 from these (*-ia*, *-ista*, *-ál*, *-izál*, *-us*, *-ikus*, *-izmus*, *-íroz*) took place in the above standard register of suffix. Consequently, there were 32 typical, distinguishable foreign word endings, which is not considerable as an independent Hungarian suffix: *-a*, *-encia*, *-éria*, *-ika*, *-tika*, *-isztika*, *-úra*, *-áta*, *-oid*, *-ice*, *-ál*, *-um*, *-ium*, *-átum*, *-ió*, *-áció*, *-or*, *-átor*, *-ör*, *-ás*, *-itás*, *-is*, *-ális*, *-zis*, *-ózis*, *-ens*, *-tikus*, *-isztikus*, *-íanus*, *-átus*, *-ózus*, *-isz*, *-osz*, *-ív*, *-atív*, *-áz*, *-ázs*.

These are – although they are not necessarily independent suffixes – important from the point of view of the Hungarian language, because

they are – at least partly – productive, namely they are able to create new ‘foreign words’ not existing in foreign languages, and they can derive new words from an existing ‘foreign word’. These elements evidently play role in the speech perception, so the morphology must render an account of them – like the unproductive morphemes.

After the listing of the typical endings, a possibility arisen for the presentation, classification and making a condition of each stem and suffix alternation.

Apart from the vowel quantity change in the stem there are the following stem and suffix alternations:

At the end of (phantom) stems there are $s \sim t$ (*páciens : pacientúra*), $sz \sim t$ (*káosz : kaotikus*), $k \sim c$ (*praktikus : prakticista*) és $t \sim c$ (*restriktív : restrikción*), and $o \sim e$ (*pátosz : patetikus*) alternations, $er \sim r$ (*méter : metrikus*) elision, vowel epenthesis which can be regarded as a linking vowel (*ekvátor : ekvatoriális*, *spontán : spontaneitás*), as well as before the *-ista*, the *-izmus*, the *-isztikus* and the *-iánus* endings several elisions in the end of stems (*finnugor : finnugrista*, *szóló : szólnista*; *Arisztotelész : arisztotelésiánus*, *Konfucius : konfucióánus*; *bolsevik : bolsevizmus*), and some orthographical deviations (*Petrarca : petrarkista*).

There are both lexically and morphophonologically determined alternations among the endings.

The alternation *-ens* : *-áns* (e.g. *konzulens : konzultáns*, *disszidens : emigráns*) and a parallel one *-encia* : *-ancia* are lexically determined.

The morphophonologically determined alternations of the endings, in the order of the environment (not the lexical form of the stem, but the actual allomorph is relevant):

- after *a*: *-ál* → *-l* (*matúra : maturál*), *-izál* → *-tizál* (*séma : sematizál*), *-ális* → *-lis* (*kategória : kategoriális*), *-izmus* → *-tizmus* (*idióma : idiomatizmus*);
- after *e*: *-ens* → *-ns* (*abszorbeál : abszorbens*);
- after *é*: *-ista* → *-tista* (*porté : portretista*);
- after *i*: *-ista* → *-sta* (*akvárium : akvarista*), *-izál* → *-zál* (*evangélium : evangelizál*), *-ikus* → *-kus* (*oratórium : oratorikus*), *-atív* → *-tív* (*definiál : definitív*);
- after *ó*: *-ózus* → *-zus* (*ambíció : ambiciózus*);
- after *ió*: *-ista* → *-nista* (*evolúció : evolucionista*), *-ál* → *-nál* (*partíció : particionál*), *-ális* → *-nális* (*kompozíció : kompozicionális*), *-izmus* → *-nizmus* (*perfekció : perfekcionizmus*);

- after *u*: -éria → -téria (*bizsu* : *bizsutéria*), -átum → -tum (*statuál* : *statútum*), -atív → -tív (*attribuál* : *attributív*, but *szituál* : *szituatív*), -áció → -ció (*prostituál* : *prostituáció*); excluding after *stru*: -atív → -ktív (*konstruál* : *konstruktív*), -áció → -kció (*instruál* : *instrukció*);
- after *uk*: -átum → -tum (*produkál* : *produktum*);
- after *p*: -zis → -szis (*szeptikus* : *szepszis*);
- after *t*: -átum → -um (*fermentál* : *fermentum*), -átus → -us (*inzultál* : *inzultus*);
- after any vowel -tika → -etika (*gén* : *genetika*), -tikus → -etikus (*teória* : *teoretikus*).

The testing of the productivity of the endings can stimulate further research into several constructs (logatons, foreign words in relation, stems without giving the impression of foreignness). Chiefly questionnaire (well-formation tests, construction of sentence, etc.) should give a good possibility for this kind of survey.

2.2 The second case study offers a possible analysis of the handling of the morphophonological character of the Hungarian imperative. This section presents each suffix and stem alternation, separately the phonologically and the lexically determined ones.

An important observation: the \emptyset allomorph of the imperative suffix induces the same stem alternations as the physically realized ones.

The *t*-ended verbs mean the headstone of the analysis of the imperative, this is the most frequented subtopic in the literature, too (cf. e.g. Szabó 1951; Tompa 1961: 490; Jakab 1967; Velcsóvné 1968: 172; Szilágyi N. 1980: 124–6; Olsson 1992: 157–9, 208; Siptár 1994: 252–3; K. Balogh 1995). The most exciting one among these is the group of the long palatal vowel or non-sibilant consonant + *t* ended verbs (and the verb *tát*), because they can have more analysis. For example it may be supposed that there are no stem alternations among them, but the *t* in the end of the stem and the -*s* allomorph of the imperative suffix fuse (AkH. 1984: 77; Kugler 2000: 93). However this is in contradiction with the fact that the imperative suffix in the singular 2nd person imperative determined short verb forms appears purely as a \emptyset : *rakd*, *tedd*, etc., because if the *s* were imperative suffix indeed in the *fűtsd*, *bontsd*, etc. forms, this rule –which is valid for all the other verbs – would be violated. On the other hand, if it is assumed that the *cs*-ended one is the imperative allomorph of the stem (K. Balogh 1995: 32; Kiefer 1998: 218), the analysis does not violate more general rules. This conclusion is easily acceptable

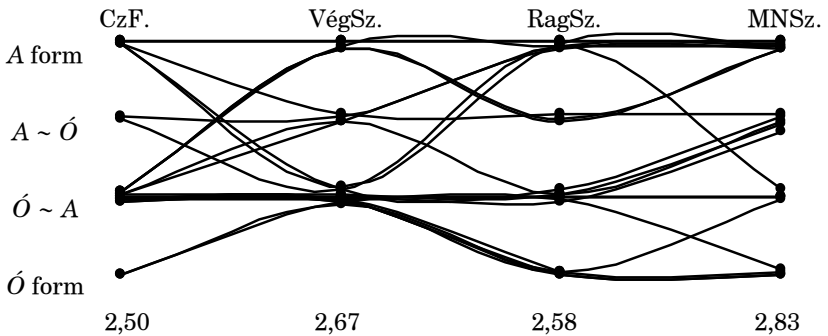
for the spoken language, but in the visible language a contradiction can be perceived with the above facts. However this contradiction is only apparent: in the so-called Protestant spelling used in a former era of the Hungarian orthography the phone [t̃] had *ts* letter-combination as a sign (cf. Kniezsa 1952: 14; Fábíán 1967: 57–67). This could be inherited to the present as the appearance of the principle of parsing.

In the light of this, it is not really useless to analyze e. g. the word form *bonts*. The imperative suffix joins to the *boncs-* [boŋt̃] allomorph of the *bont-* stem (like always to the sibilant-ended stems) at the form of the consonant in the end of the stem (in this particular case [t̃]). The form shown in spoken language is obtainable from the [boŋt̃] + [t̃] > [boŋt̃:] form finally with the [boŋt̃:] > [boŋt̃] shortening; in the word form *fűts* [fy:t̃:] this shortening will not proceed naturally. Therefore the *ts* letter(-combination) can represent three different thing: i. /t̃/ = [d̃ʒ] in the singular 2nd person imperative determined short verb forms (*bontsd*, *fűtsd*); ii. /t̃t̃/ = [t̃] in the non-sibilant consonant + *t*-ended imperative, but not singular 2nd person determined short verb forms (*bonts*); iii. /t̃t̃/ = [t̃:] in the long palatal vowel + *t*-ended imperative, but not singular 2nd person determined short verb forms (*fűts*). In the light of the analysis the ‘logical’ written form would be in case i. *boncsd*, *fűcsd*, as well as in cases ii. and iii. *bonccs* and *fűccs*.

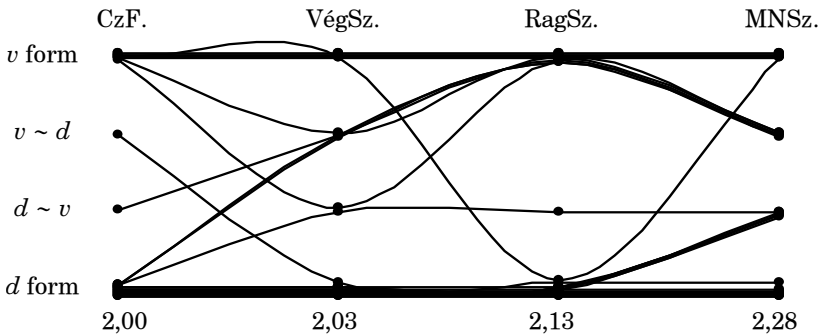
2.3 The third case study outlines the **diachronic changes of the stem types** in the last 150 years, and its **synchronic oscillations** (based on dictionaries: CzF., VégSz., RagSz., as well as text-corpus: MNSz.). This is a real mirror of the morphology of the affixes, because the survey points out this phenomenon shows numerous analogies with the **productivity of affixes**.

Each stem type can be ranged into four classes characterized as open or closed, as well as the stable and unstable feature-pair. Among this the oscillators get into the focus of the analysis:

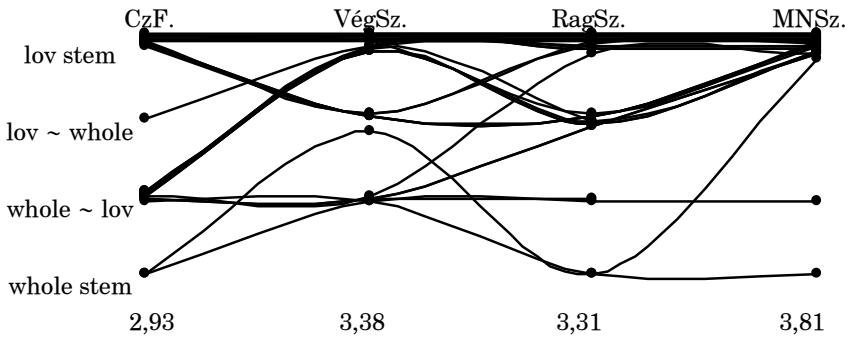
1. In the domain of **the quality and quantity changing nominal stems** the dictionaries and the (partly) prescriptive grammars register fission of word forms, however this is not or limitedly provable on the basis of text-corpora. In this type of stems the oscillation seems to increase, and in a startling way, the suffixation seems to shift towards the open linking vowel.



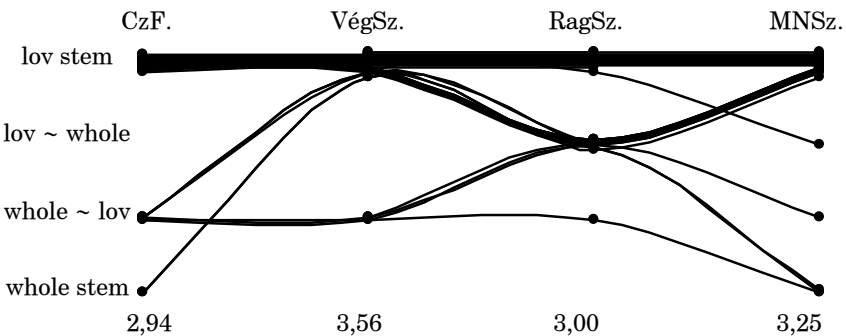
2. In the domain of the **sz, d (and v) verbal stems** the sphere of application of the *v*-ended allomorph gets ever tighter because of the perishing of the historic past. On the other hand, it is observable that the stems which before did not possess *v*-ended allomorph recently have been growing *v*-ended forms, parallel with the oscillation of the stems which before did possess *v*-ended allomorph – consequently, the mixing of the two stem types has clearly started. The parallels with the *sz, z (and v)* verbal stems cannot be raised on the level of usage, this must be caused by the low number of items.



3. In the domain of the **nominal lack-of-vowel stems** it is observable only that the activity of the lack-of-vowel (lov.) allomorph increased in the examined period to the disadvantage of the whole stem.



4. This is not affirmable about the **verbal lack-of-vowel stems**, because in its domain the stable lack-of-vowel stems dominate. It can arise in connection with them that a kind of phonological determination comes after the previous lexical determination, but this hypothesis is not provable by data from the usage.



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