

# THE ALLEGED “LENGTHENED” GRADES IN THE ROOTS OF SOME LATIN NOUNS<sup>1</sup>

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## ABSTRACT

The article is concerned with Latin primary deverbative nouns whose lengthened root vowel is non-standard, as follows from the analysis given in Pultrová (2011a). In all the studied cases, the lengthening concerns the words with the roots ending in a voiced occlusive. Building on the analysis carried out in this article, I propose the hypothesis that vowel lengthening is the result of the shift of the original accent from the final syllable to other positions in the word.

## 1. INTRODUCTION

As it is generally known, there are non-standard long root vowels found in some Latin nouns. Besides the much discussed Lachmann’s law, professional literature commented in particular on the issue of instrumental nouns *rēgula*, *tēgula*, *trāgula*.<sup>2</sup> Latin historically oriented grammar books and etymological dictionaries, but surprisingly also Indo-European handbooks, refer in that case to a “lengthened grade”.<sup>3</sup> But in fact, as Sihler (1979: 57) rightly puts it, “nothing in the morphology of PIE would lead us to expect a lengthened grade in a

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<sup>2</sup> Sihler (1979).

<sup>3</sup> Ernout – Meillet (1932), *s.v.* *tegō*; Leumann (1977: 274); Szemerényi (1990: 88); Meier-Brügger (2000: 136); etc. Cf. also Sihler (1979: 157).

root with an *l*-suffix”. Lengthened ablaut grade in general is actually non-systemic, and in any case limited only to a few word-formative types,<sup>4</sup> definitely not including instrumental nouns. It is therefore necessary, as in the case of the said Lachmann’s law, to search for the explanation of the root vowel lengthening no sooner than in Latin history itself.

While working on the monograph on *The Latin deverbative nouns and adjectives*, which aimed at systematic interpretation of how Latin nouns were formed from verb bases, I met with several instances of long vowels in the root for which there is no simple explanation: they do not belong to inherited word-formative types with lengthened grade and the compensatory lengthening is out of question either. At the same time, the conclusion I arrived at when working on my monograph was that quantitative changes in Latin are scarce and they are by no means arbitrary, that is, the *ad hoc* explanations of individual cases are not satisfactory.

In the introduction it is necessary to briefly explain basic methodological approach used in the mentioned monograph, because I draw on its results (and in many instances adjust them): its aim was not to explain the etymological origin of individual words, but to cover original functional and formal characteristics always of the whole word-formative type and on that basis to describe the whole system of deverbative nouns. The original semantic characteristics of a number of word-formative types are hidden in Classical Latin (e.g. there are no apparent differences between individual *nomina actionis*, etc.). To discover the original semantics, the necessary first step was to separate within the given word-formative type the inherited words from the words formed secondarily, analogically. Such analogical formations are present in every word-formative type, even the “most inherited” one, and it holds that (which is actually one of the results of the mentioned monograph) the words thus formed do often not

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<sup>4</sup> For their list see e.g. Beekes (1995: 166).

correspond to the original semantic characteristics.<sup>5</sup> On the contrary, while working exclusively with inherited forms, the semantic characteristics often can be clearly and almost unexpectedly revealed. The separation of inherited and analogical formations within one word-formative type, however, is not trivial. It is necessary to build on the results of comparative linguistics, the reconstructions of relevant word-formative types, monitoring whether the particular Latin formation corresponds to the reconstruction when taking into account of Latin sound laws.<sup>6</sup> This approach not only enables us to distinguish (obviously, not always unequivocally) between inherited and analogical formations, but may in some cases lead to adjustment of sound laws. Generally speaking, it may contribute to an attempt to purge historical grammar books of Latin from minor, not generally valid rules and exceptions to these rules that we can find there. Often they issue precisely from the fact that the secondarily formed formation is treated as inherited. I even consider this to be the fundamental claim that the prism of word-formation be always applied when dealing with phonological problems; i.e. the phenomena should not be studied in individual formations, but must be observed in the context of the whole word-formative type. In other words, the sound development cannot be sufficiently demonstrated on individual Latin

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<sup>5</sup> For example the adj. *nocuus* is, as suggested by its form, secondarily formed from the verb *nocēre*; it has active meaning (“harmful = who/what does harm”), in contrast with the primary adjectives in *-uus*, which have the stative meaning (e.g. *vīvus* = “alive”). Another evidently secondary adjective of the given type *pāscuus* (from *pāscere*) has in turn passive meaning (“used or suitable for pasture”). The difference we can see between the adj. *nocuus* (active, from intransitive verb) and *pāscuus* (passive, from transitive verb), holds true for adjectives formed secondarily, i.e. in Latin itself, in general (see Pultrová 2011a: 36, 47 etc.), but in no case does it hold for inherited adjectives.

<sup>6</sup> For example the IE adjectives in *-to-* are quite unambiguously reconstructed as follows: R(z)-*tós*; e. g. from the root *\*tend-*, “to cut”, the respective adjective would read *\*t̥nd-tós*, which should realise in Latin as *\*\*tēnsus*; but what we actually have in Latin is evidently analogical *tōnsus*.

examples, unless the preceding analysis unequivocally confirms that they are inherited formations.

It must be emphasized that this principle is strictly observed also in the present article (this much in excuse of the lengthy introduction). Despite the fact that it is only the individual words – i.e. the ones relevant for a concrete explanation – that are listed below, standing behind this choice always is a thorough analysis of all excerpted words of the given word-formative type. I do not list them here only because it would be both impossible regarding the scope of the article, and at the expense of the clarity of explanation.

## 2. ANALYSIS

Now let us turn to the topic itself. The following outline presents the nouns and adjectives with non-standard lengthening of the vowel in the root, while it holds that the given nouns cannot be simply explained as analogical formations. In brief: the list of inherited words containing, inconsistently with the PIE reconstruction based on the comparison with other languages, a long vowel in the root, even though in compliance with the up to now formulated sound laws it should be short.

### 2.1. *Subst. rēx*

Latin has only two simple root *nomina agentis*, *rēx* and *dux*. The subst. *dux* corresponds to the reconstructed original mobile paradigm (\**déyk-s*, *duk-és*) with the levelling across paradigm having taken place in a way usual in Latin, that is according to the form of weak cases (thus \**dūx* > *dux* according to *ducis*). Applying the same method, we would expect from the root \**h<sub>3</sub>reg-*<sup>7</sup> to get the root

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<sup>7</sup> All the reconstructions in this article are cited according to LIV.

substantive *\*\*rex, regis*,<sup>8</sup> while in fact we have *rēx, rēgis*. The long root vowel in this substantive and in others derived from the same root<sup>9</sup> lead in the past to the attempts to offer another reconstruction of this root; e.g. Sihler (1977) proposes *\*reh<sub>1</sub>g’-*, but this reconstruction was not accepted nor it would have solved the situation: it would mean to accept that – unlike in the case of *dux* – the analogical levelling took place in favour of strong cases (*\*rēh<sub>1</sub>g’-s, \*rh<sub>1</sub>g’-és* > *rēx, \*\*ragis* > *rēgis*), which would completely deviate from the system. The substantive *rēx* then, if we follow a standard reconstruction, exhibits a secondary lengthening of the root vowel.

## 2.2. *Subst. lēx*

Beside the agent root nouns there are two paradigms of action root nouns reconstructed for the protolanguage: 1) acrostatic with the root in *o*-grade in strong cases and *e*-grade in weak cases, and 2) with mobile accent, with the root in *e*-grade in strong cases and zero-grade in weak cases. These paradigms are semantically not clearly distinguishable.<sup>10</sup> Latin nouns of this type may thus reflect either full grade or zero-grade (= the forms of weak cases of the respective types). These two types (without a clear semantic distinction between them) comprise all Latin substantives of this type, with the exception

<sup>8</sup> Here and below (and also above in the note 6), by two asterisks I mark the forms that should have developed from the generally accepted reconstructions according to the formulated sound laws, but that in fact do not exist.

<sup>9</sup> E.g. *rēgula* (see below 2.4), *rēgnum*.

<sup>10</sup> Cf. e.g. Rieken (1999: 13); the nouns of the first group should allegedly be *nomina rei actae*, the nouns of the other group *nomina actionis*. In reality, at least judging from the Latin material, *nomina actionis* and *nomina rei actae* are difficult to distinguish one from another. According to Rix (1979: 736), the root nouns of the second type (feminines) are generally the oldest type of PIE action nouns (Schindler 1972, however, considers the first type of the root nouns with *o*-grade to be older than the other).

of one:<sup>11</sup> *lēx*, *lēgis* (root \**leg*'-). The long *ē* in the root defies it being simply classed with one of these paradigms.

### 2.3. *Subst. sēdēs and ambāgēs*

This word-formative type, feminine nouns in *-ēs*, gen. *-is*, belongs to the most complicated of all deverbative nouns. Apparently it is a merger of the two originally different word-formative types, the nouns with passive characteristic (the type *struēs*, “a heap = that has been piled up”), and the simple denominations of actions (which may commonly turn into concretes) with no further specific characteristic, simply denoting the action or state in a way that the respective root does. The same characteristic (or, rather, the absence of one) applies also to root *nomina actionis*, from which these substantives may have actually been derived.<sup>12</sup>

With regard to the unclear reconstruction of this word-formative type we have to take into consideration the two possible forms of the root: with *e*-grade or with zero-grade. However, two substantives

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<sup>11</sup> A special case is also the subst. *vōx*, by mistake not included in the monograph Pultrová (2011a). LIV gives the root in the form \**wék*<sup>w</sup>-. If reconstructed correctly (the number of various irregularities in derivation from this root of individual formations does raise doubts), then the root action noun should either have the form 1) \**wók*<sup>w</sup>-s, gen. *wék*<sup>w</sup>-s > \*\**vox*, *vecis* > \*\**vex*, *vecis* (unless the rounding of the vowel in the neighbourhood of labial consonants had stepped in the process – then the result would have been more likely \*\**vox*, *vocis*, but with the short vowel), or 2) \**wék*<sup>w</sup>-s, gen. *w<sub>e</sub>k*<sup>w</sup>-és > \*\**vex*, *vecis* (with the same possibility of rounding the vowel). That the long *ō* in Latin substantive is secondary and apparently relatively late is suggested by the denominative *vocāre*.

<sup>12</sup> For the inflection of the root nouns is absolutely identical with the inflection of the subst. in *-ēs*, with the exception only of nom. sg. This case is in root nouns the place of sound changes (reduction of consonant clusters) and by doing so in fact deviates from the paradigm, which Latin “does not like too much” (e.g. the root noun to the verb *sedeō* would have the nominative \*\**sēs* etc.). The change in nominative, and thus the transition from the root nouns to the nouns with suffix is thus absolutely understandable and simple.

correspond to neither of them: *sēdēs* (\**sed-*) and *ambāgēs* (\**h<sub>2</sub>eg-*). They both show lengthening of the root vowel.

#### 2.4. Subst. *rēgula*, *tēgula*, *trāgula*, *coāgulum*

Some other representatives of this word-formative type, i.e. instrumental nouns with the suffixes *-ulus*, *-ula*, *-ulum*,<sup>13</sup> could be perhaps considered secondary deverbatives (i.e. derived from an already “complete” Latin verb), e.g. *cingulum* from *cingere*, *ferula* from *ferre* etc., but it is not the case of those nouns written in the heading, because they would then have to have the form of \*\**regula* (*regō*), \*\**tegula* (*tegō*), \*\**trahula* (*trahō*) and \*\**coagulum* (*coagō*) or \*\**cōgulum* (*cōgō*). At the same time, we cannot speak about a lengthened ablaut grade – first, from the comparatistic point of view it does not have any sense here (see the first paragraph of the present article); second, at least in the case of the subst. *trāgula* the Latin result would have to be different: \**d<sup>h</sup>rēg<sup>( )h</sup>-* > \*\**trēg-*.<sup>14</sup>

It is commonly held that Latin nouns in *-ulum*, *-ula*, *-ulus* are substantivized adjectives in *-ulo-*.<sup>15</sup> In fact, the only pair of a substantive and an adjective from the same base in Latin is *strāgulum* – *strāgulus*, and the semantic characteristics of these two word-formative types differ so much<sup>16</sup> that such interpretation must be

<sup>13</sup> In Latin, instrumental nouns are formed also by adding other suffixes: *-bulum*, *-culum*, *-strum* and others (for a complete list see Pultrová 2011a: 124ff.).

<sup>14</sup> I leave aside the problematic development of the initial \**d<sup>h</sup>-* in *t-*. In the case of the subst. *coāgulum* the development is not quite clear of the potential group \**-h<sub>2</sub>ēg-* (> *-ēg-* or *-āg-?*).

<sup>15</sup> For example Brugmann (1906: 373); Leumann (1977: 313); Hackstein (2003: 55).

<sup>16</sup> Adjectives in *-ulus* have active meaning and denote a typical quality of the subject (“who often does something”), with slightly negative undertone in some cases. Adj. *strāgulus* = “used as bedding” is the only adjective with this suffix that does not correspond to this characteristic – it more accurately belongs with the adjectives of purpose, which (unlike in e.g. Czech, the type *kropiči*) do not

rejected, as it is rejected by Nielsen (2004) and Sihler (1979), the authors of the treatises on Latin instrument nouns. According to Nielsen, the Latin instrument noun-suffix *-ulum* is a mere conditioned variant of *-culum* (< PIE *\*-tlo-*); in other words, Latin suffixes *-culum/-cula* and *-ulum/-ula* are in complementary distribution. In his article, Sihler addresses in particular the nouns of the type *rēgula* with lengthened root vowels. As he correctly states, there is absolutely no foundation for the lengthened grade, and thus it must be assumed that the lengthening of the vowels here is as late as Latin. The most probable explanation is that the suffix had originally been a complex one and that the compensatory lengthening to compensate for the reduction of the consonant group took place. The question is, therefore, what the suffix originally looked like: Sihler excludes *\*-sl-*, because the reduction of this group in contact with velars would yield a different result (*-Vl-*, with long vowel), and suggests *\*-d<sup>h</sup>l-*. Nielsen (2004) partly agrees and partly criticizes Sihler's suggestion. She agrees in that it is the compensatory lengthening after the consonantal cluster's having been reduced due to which the long vowels in the words concerned must have occurred. However, she rejects as unmotivated the assumption that the mentioned cluster should be the one with the group *\*d<sup>h</sup>l*. She herself offers to reconstruct the suffix *\*-tlo-* in these nouns, or to regard them as diminutives; completely contrary to the normal way in Latin she thus presumes progressive assimilation *-G-tl- > -g-kl-* (instead of the considerably more probable regressive assimilation *-G-tl- > -k-tl-*).

If we accept the hypothesis that the lengthened vowel is the result of compensatory lengthening here, then we have to, in my opinion, agree with Sihler that the most probable suffix here would be *\*-d<sup>h</sup>l-*. In the present case, however, taking the broader context into consideration, I personally do not consider the basic thesis about the compensatory lengthening completely unequivocal. It is conspicuous, and Nielsen herself notes it, that the nouns discussed are derived from

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constitute any productive word-formative type in Latin. Thus it is most likely itself a secondary derivative from the instrumental noun, not vice versa.



roots that are subject to the so-called Lachmann’s law in Latin, and that in these word bases we more often meet the derivatives with – in Nielsen’s words (2004: 212) – “irregular ablaut” (cf. in the present article: *rēx*, *ambāgēs*, *coāgulum*).

Although it is not quite unambiguous (with regard to the fact that many representatives of this word-formative type may, even though do not have to, be regarded as secondary derivatives: *capulus* – *capiō*, above mentioned *cingulum*, *ferula* and others), it is more probable to reconstruct their root as unstressed, that is in zero grade, and the suffix as stressed (cf. e.g. the mentioned *strāgulum* from *\*sterh<sub>3</sub>-*; no representative of this word-formative type defies this interpretation – the only questionable one is the subst. *repāgula*, see below). What we witness here is the lengthening of the vowel in the originally zero-grade syllable. Attempting this reconstruction, we must add among the non-standardly lengthened representatives of this word-formative type also the subst. *repāgula*, whose root could otherwise be, as it is and out of context, understood to have originated from the full grade *\*peh<sub>2</sub>g-*.

### 2.5. Subst. *collēga*

Subst. *collēga* is a representative of a relatively productive word-formative type of *nomina agentis* – the compounds with the suffix *-a* (e.g. *agricola*, *perfuga*, *advena*, *indigena* etc.). Concerning the meaning, they are identical with root compounds (of the type *artifex*, *obses* etc.), sharing also that the second element of the compound does not exist separately in the given form (as a simplex). This is also why already Saussure (1909) offered an opinion that the compounds ending in *-a* are originally nothing else than the root compounds from *set*-roots (i.e. CeC/RH). This interpretation, however, is not generally accepted.

As already said, this is a relatively productive type; within its frame there exist relatively many analogically formed compounds. It is not

quite clear how they were prototypically stressed: the type *-fuga* testifies to zero-grade of the root,<sup>17</sup> *-gena*, on the other hand, to the full one (even though it is far from definite here), while the other representatives may be reconstructed both ways; related (or originally identical?) root type has definitely zero-grade root (*iūdex*, *iūdicis*). Thus in no case can we think of a lengthened ablaut grade in the subst. *collēga*; what is the most probable here is again the lengthening of the originally zero-grade syllable.

## 2.6. Subst. *indāgō*

Subst. *indāgō*, “encirclement”, is a representative of the unproductive type of action nouns with the suffix *-ō*, *-inis*. It includes also the subst. *prōpāgō* = “seedling, offspring, generation”, *compāgō* = “fastening” and *aspergō* = “the action of sprinkling, a spray”. The latter two are apparent secondary compounds, from *aspergere* and *compingere*, respectively (here, however, with the form clearly analogical to the subst. *prōpāgō*). Subst. *indāgō* and *prōpāgō* seem to be primary derivatives.

Latin substantives ending in *-ō*, *-inis* (including *-dō*, *-dinis* and *-gō*, *-ginis*) correspond – albeit it is not clear at first sight – to the original hysterodynamic paradigm (< *\*-én*, *-ŋ-és*).<sup>18</sup> In such case their root would have been in zero-grade and what would have taken place there was the lengthening of the originally unstressed, zero-grade syllable.

<sup>17</sup> Also the subst. *aurīga* is in better accord with this explanation: the long *-īg-* is more easily explained as having originated directly from *\*-i-h<sub>2</sub>g-* than through a non-standard contraction *\*-i-ag-* (< *\*-i-h<sub>2</sub>eg-*) > *-īg-*.

<sup>18</sup> Since the proof of this assertion would unduly extended the length of this article, I will confine myself here to referring to Pultrová (2011a: 147f.), where I summarize the instances of realisation of the original stressed suffixal *e* as Latin *ō* (as an example, let us cite here at least the suffix of comparative, gen. *-iōr-* < *\*-ĵés-* – proterodynamic paradigm).

### 2.7. Subst. *contāgiō*

Subst. *contāgiō* belongs with the few *nomina actionis* derived by the suffix *-iō*, *-iōnis*. Leumann (1977: 365) sees the nouns of this type as neologisms, which they in their majority undoubtedly are;<sup>19</sup> Brugmann (1906: 312), on the contrary, says that in regard to the ablaut relations this word-formative type must be already Proto-Indo-European. In the group of words of this word-formative type there evidently are also primary derivatives, as they do not correspond in form to the respective verb: *condiciō*, *diciō* × (*con*)*dīcere*, *contāgiō* × *contingere*. The substantives *diciō* and *condiciō* have the root in zero-grade;<sup>20</sup> the root of the subst. *contāgiō* does at first sight look as full-grade (\**teh<sub>2</sub>g<sup>(ʷ)</sup>*-), but with regard to what has been said in preceding points and with regard to absolutely undisputable zero-grade root in (*con*)*diciō*, the zero-grade (\**th<sub>2</sub>g<sup>(ʷ)</sup>*- > *tag*-) and its secondary lengthening is more probable here as well.

### 3. RESULT INTERPRETATION

Could there be found a common characteristic of the above listed nouns with the non-standard lengthening? One characteristic feature is evident at first sight: the lengthening concerns the root syllables ending in a voiced occlusive. But that alone does not suffice – there are many inherited words with the root ending in a voiced occlusive, whose root vowel is short, e.g. (from the roots listed on our list) *teg(u)men*, *agmen* and such.

Another characteristic feature seems to be (in some cases it is sure, in others possible or probable) the fact that the syllable that is the place of the lengthening was originally a syllable in zero-grade. In

<sup>19</sup> For example *obsidiō* = “a siege, blockade” (from *obsidēre*), *occidiō* = “slaughter, massacre” (from *occidēre*), etc.

<sup>20</sup> Also the form of the suffix indicates that these words are apparently originally mesostatic (*-ō*, *-ōnis* < \**-én*, *-én-s*; see above the note 18).

contrast, the above mentioned non-lengthened derivatives *agmen*, etc. were stressed on the root, and thus the root syllable reflects full ablaut grade.

But, does such lengthening make any sense? Here, a minor digression is necessary. In my earlier work<sup>21</sup> I dealt with the question of establishing the Classical Latin accent and articulated the following theory: Classical (ante)penultimate accent in nominal inflection<sup>22</sup> reflects very accurately the Proto-Indo-European accent, regarding that:

- The accent of the original static paradigms remained in its original position (with the exception of barytonesis – see the third bullet point);
- The original mobile paradigms became static, i.e. their accent became columnar (which is a general Late Proto-Indo-European tendency);
- Barytonesis took place, i.e. the shift of accent from the last syllable toward the beginning of the word (this concerns hysterodynamic, but mainly mesostatic paradigms, e.g. \**dh<sub>3</sub>-tós* > *dátus*).

The last mentioned rule is the key one in the question we are trying to approach in this article. In all the words/word-formative types written above under the points 2.1-7, what did or could have taken place was indeed the shift of accent from the last syllable to the root, originally unstressed, and thus zero-grade syllable:

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<sup>21</sup> Pultrová (2010), extended version Pultrová (2011b).

<sup>22</sup> In verb inflection, however, the situation is different. Very briefly: Latin verbal system is, unlike the nominal one, very innovative compared with the Proto-Indo-European. There was not much left indeed from the original system – the only inherited paradigms in Latin are the present indicative and imperative. Therefore no general continuity in accentuation is to be assumed (with the exception of the very inherited paradigms that, conversely, do show continuity). Like in Greek, in verb system in Latin a new type of accentuation was established, namely recessive accent, with the limitation on three last syllables.

1. gen.<sup>23</sup> *\*h<sub>3</sub>reg-és* > *\*reg-és* > *rég-is*
2. gen. *\*leg'-és* > *\*leg-és* > *lég-is*
3. gen. *\*sed-és* > *\*sed-és* > *séd-is*; *\*-h<sub>2</sub>g-és* > *\*-ag-és* > *(amb-)ág-is*<sup>24</sup>
4. gen. *\*h<sub>3</sub>reg-léh<sub>2</sub>-s* > *\*reg-lā-s* > *\*rég-lā-s* (> *\*régulās*; after having taken the ending *-ī* then *\*régulāī* > *\*régulai* > *régulae*; the anaptyxis of *-u-* could have of course taken place after the new ending have been taken, the relative chronology is unclear here); in the same way also *\*teg-léh<sub>2</sub>-s* > *\*teg-lā-s* > *\*téglā-s* etc.; similarly *\*-h<sub>2</sub>g-lí* > *\*-ag-lí* > *\*-ág-lī* > *coāgulī*; more complicated is the case of *trāgula*, as the derivation from the root *\*d<sup>h</sup>reg<sup>(,)h-</sup>*, as it is reconstructed in LIV, is in any case non-standard
5. gen. *\*-leg'-éh<sub>2</sub>-s* > *\*-leg-ās* > *(col-)lég-ās* (and then the adoption of the ending *-ī* same as above in *régula*)
6. gen. *\*-h<sub>2</sub>g-ŋ-és* > *\*-ag-n-ís* > *\*(ind-)ág-nis* (> through anaptyxis *indāginis*)
7. gen. *\*-th<sub>2</sub>g<sup>(,)</sup>-ién-s* > *\*-tag-iōn-s* > *(con-)tág-iōn-s* (> through anaptyxis *contāgiōnis*)<sup>25</sup>

<sup>23</sup> The genitive is used as a representative of weak cases according to which paradigms are formally levelled in Latin (and not only there).

<sup>24</sup> Strictly speaking also this Latin form should be marked by an asterisk, as the word is recorded only in the plural.

<sup>25</sup> The anaptyxis in the ending is well explicable here, because the group *ns* would otherwise get lost, yielding the form ending in *-iōs*, unacceptably deviating from the system. Nevertheless, it must be admitted that relative chronology, as it is introduced here, is chosen intentionally so that it is in accord with our hypothesis – it may have of course been another one and then it would be at variance with our theory: *\*-th<sub>2</sub>g<sup>(,)</sup>-ién-s* > *\*-tag-iōn-s* > *-tag-iōn-is* – in that case there would be no reason for the shift of the accent. And it must be added that this solution agrees with the definitive form: *contāgiōnis*. Nevertheless, this cannot be considered to be an unambiguous counter-argument, since this five-syllable word is actually pronounced with two accents (whether we call them primary and secondary, or else) and that on the penultimate can correspond to the original secondary one: nom. *contāgiō*, gen. *contāgiōnis*.

Put explicitly the theory suggests the following: during the shift of accent from the last syllable toward the beginning of the word, the latter was lengthened if it ended in a voiced occlusive.

Let us verify now whether this rule applies for the whole file of deverbative nouns excerpted for the monograph Pultrová (2011a). In particular, let us check:

1. Whether we can find in the file such nouns that are provably inherited, have a root ending in a voiced occlusive in zero-grade, while no lengthening takes place there;
2. Whether, on the contrary, non-standard lengthening, not explicable in a usual way (compensatory lengthening, etc.) does not take place in the syllables of other type (non-zero-grade, or ending in another sound than voiceless occlusive).

Ad 1) In the whole file of the excerpted deverbative nouns and adjectives we found the following:

- a) The compounds *prōdigus*, *flōrilegus*, *foedifragus* and similar; *dēses* and *obses*; *rēmex*; *nāvigium* and similar (Pultrová 2011a: 43ff., 46f., 72, 88ff.). In all these cases (prototypically – individual words could be analogical) the accent stood in all probability on the first element of the compound, and thus the shift of accent from the last syllable on the root one did not take place.
- b) Adj. *sagāx* and *tagāx* (Pultrová 2011a: 52). The stressed suffix did not form the last syllable in weak case (*sag-āc-is*), therefore the shift of accent from the last syllable on the root one did not take place here either.
- c) Adj. *agilis* and *fragilis*. The adjectives in *-ilis* were apparently stressed on the suffix, thus the shift of accent should apply. But adj. *agilis* could be formed secondarily to *agō* (like major part of these adjectives), adj. *fragilis* is probably not inherited either (*\*b<sup>h</sup>rg<sup>(ʰ)</sup>-lís* > *\*\*forklis* or *\*\*for-lis* > *\*\*follis*?).
- d) Subst. *herifuga*, *perfuga*, *trānsfuga* – with regard to the character of the first element of the compound secondary derivatives (*perfuga* from *perfugiō*).

- e) Subst. *fuga*. The only really problematic case: PIE action nouns in  $-ā$  ( $*-eh_2$ ) are reconstructed with  $o$ -grade in the root. The Latin *fuga* (unlike *mora* and probably also *cūra*), however, apparently corresponds to zero-grade same as the Greek  $\varphiυγη$ . Either it is a noun formed secondarily (possibly under the influence of Greek), or a serious counter-example to our theory.
- f) Subst. *classis* belongs to the word-formative type with proterodynamic paradigm, i.e. gen. *classis*  $< *klh_1-d-téj-s$ .<sup>26</sup> Relative chronology thus must be the following: 1) the change  $*dt > ss$ , 2) the shift of accent from the last syllable, here without the lengthening, as the root syllable would not in the given moment end in a voiced occlusive (which would also explain the forms *sessus* and related forms).
- g) Subst. *lignum* may have had, or, more likely, probably had the root in full grade as *dōnum*: *dōnum* = passive „what is given”, *lignum* = passive „what is picked up”.
- h) *Legiō*, *regiō* – both substantives could be secondary derivatives from *legō* and *regō*, respectively, as are most Latin representatives of this word-formative type.

Ad 2) What can be taken into consideration are perhaps only the root subst. *pāx*, *lūx* ( $*peh_2k'$ -,  $*lewk$ -), but as was already said above (sub 2.2. *lēx*), the root action substantives have double paradigm, and here it could be acrostatic, that is with the root in full grade (in contrast with e.g. *daps*, gen. *dapis*  $< *dh_2p-és$ , or – possibly – *lēx*). A similar case is the subst. *rūpēs* with the root  $*rewp$ - (see above sub 2.3. *sēdēs* and *ambāgēs*).

If the proposed theory proves valid, we could also add the following substantives of the type *sēdēs/ambāgēs*, whose root ending in voiced occlusive has a long vowel in Latin, but which, with respect to the

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<sup>26</sup> Following the up to now articulated sound laws in Latin the group  $*klh_1$ - should yield *klā*-. It seems, however, also on the basis of other examples, that this particular sound law, i.e. CRH  $>$  CR $\bar{a}$ , is to be restricted to open syllables.

form of the root, could as well be a reflex of the full grade: *compāgēs* (\**peh<sub>2</sub>g'*-), *caedēs* (\**kh<sub>2</sub>eǵd*-), *lābēs* (LIV does not give the root, according to Schrijver 1991: 163 \*(*s*)*leh<sub>2</sub>b*-), *tābēs* (\**teh<sub>2</sub>*- + labial enlargement?). Two substantives of the same word-formative type exhibits clearly zero grade of the root, but they have an enlargement of the root of not quite clear origin: *clādēs* < \**k<sub>l</sub>h<sub>2</sub>*- + dental enlargement, *strāgēs* < \**str<sub>h</sub>3*- + velar enlargement.

Beside that we can consider including into the list of the adj. *fūtilis* < \**g<sup>h</sup>ud-lís*, where there occurs a not quite standard loss of voicing. The group *dl* is highly unstable in Latin, in that much that it does not occur at all in Latin vocabulary in Classical Latin; grammar books commonly speak about assimilation *dl* > *ll*, but such assimilation is attested to only in the root initial (*longus* < \**dlong<sup>h</sup>os*) and on the seam between prefix and root (i.e. it is the consonant of the prefix that assimilates). For semantic reasons, such fundamental change of the root form in a deverbative compared to its base verb (*fud*- > *ful*-) is apparently not possible and this is why only a partial assimilation took place here (besides, there are records of similar assimilation *dr* > *tr*, see Leumann 1977: 198).

Last but not least, the whole group of so called “Lachmannesque” participles in \**-tó-*, whose accented suffix forms the final syllable in Latin, could be explained the same way. The loss of voicing in the root occlusive would thus be the result of a simple, quite common assimilation.

The verb “to explain” used in the preceding paragraph is of course highly exaggerated. Admittedly, this article presents the facts based on the material that has been merely gathered together and it is now for a specialist in phonetics to relevantly judge whether the described change, i.e. the lengthening of the syllable accompanied by the shift of accent thereon, with the limitation to the syllables ending in a voiced occlusive, makes any sense at all. From a lay point of view, a different process would probably make better sense, i.e. that for some reason the vowel in the syllable with a voiced occlusive would lengthen first, and then the sequence of a long syllable – a short final syllable with



accent would become unsustainable, provoking a shift of accent. This process, however, cannot be presumed here: first, because in such case the originally full-grade syllables (*tegmen*) would lengthen as well; second, the shift of accent (judging from the position of accent in Classical Latin) is not limited to voiced occlusives. Therefore: the first and generally valid step must have been the shift of accent from the final syllable (barytonesis) and, concurrently, the lengthening of the originally unstressed root vowels preceding a voiced occlusive must have taken place. If the lengthening was not concurrent with the shift of accent, but chronologically succeeded, it could not then be restricted to the originally zero-grade syllables, because the difference would mostly not be discernible between an originally accented (*tégmen*) and unaccented (*\*t<sub>e</sub>g-léh<sub>2</sub> > \*tég-(u)la*) root syllable. It remains but to repeat an appeal to theoretical phoneticians to review the proposed theory built on concrete material.

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