

ON THE LACK OF PALATALISATION BEFORE -END- IN THE PLURAL OF ICELANDIC NOMINALISED PRESENT PARTICIPLES SUCH AS LEIKANDI¹

Summary. This paper discusses the velar pronunciation of the root final segments in the plural of the Icelandic nominalised present participles; e.g. in leikend-, the plural of leikandi "actor". Since k(k) and g(g) are pronounced palatal before e in other old words (e.g. in akkeri "anchor"), the velar pronunciation of leikend- and similar words requires an explanation. I see in the non-application of the palatalisation rule (while that rule operated before e, it is by no means certain that it still does) to leikend- and similar words the effect of Kiparsky's phonological universal ("Neutralization processes apply only to derived inputs") as modified in Orešnik 1979 (substrings crucially involving word-derivational morpheme boundaries are not derived inputs). Thus the /k^{pl}+e/ of leikend- is not a derived input, and the palatalisation rule, a neutralisation process, does not apply to it.

In Icelandic, there are quite a few nouns in -andi, almost all derived from verbs, e.g. leikandi m. "actor", derived from leika "to act", Verðandi f. the name of one of the norms, from verða "become" (Jóhannesson 1927:18-19). Nouns in this group that are masculine (i.e. the majority) and admit of both the singular and the plural, are inflected as leikandi in (1), q.v. (Gudmundsson 1922:77).

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The printing process used for the present number of the journal has made it necessary to disregard the usual rules for dividing words at the end of a line.

(1)	N. Sg.	<u>leikandi</u>	Pl.	<u>leikendur</u>
	G.	<u>leikanda</u>		<u>leikenda</u>
	D.	<u>leikanda</u>		<u>leikendum</u>
	A.	<u>leikanda</u>		<u>leikendur</u>

It can be seen from (1) that the derivational suffix of these nouns is -and- in the singular, -end- in the plural. The -end- of the plural displays a peculiarity: if it is immediately preceded by k(k) or g(g), the sounds that these graphemes stand for are pronounced velar (Guðfinnsson 1946:41). Examples: leikendur (Southern [-k-], Northern [-k^h-], huggendur [-k:-], eigendur [-ɣ-]). The expected pronunciation would be palatal ([c^h, c, j]): other words of the same age as the leikendur type² display the palatal pronunciation of k(k), g(g) before e (Ófeigsson in Blöndal 1920-24:XXI-III), e.g. kefja [c^h-] "suffocate", akkeri [-hc-] "anchor", 1.p.sg. geng [c-] of ganga "go". (I have not any OLD examples of Vge or of gge outside the leikendur type.) Thus palatalisation of velar obstruents HAS taken place generally before e, just as before Old Icelandic i, í, ý, ÿ, ø, œ, ei, ey, j, and this is the generally accepted opinion among the scholars (Noreen 1923:190). The fronting of the velar obstruents was due to the application of a palatalisation rule, except in the cases in which the palatality of the obstruent had been lexicalised.³

The purpose of the present paper is to suggest a historical explanation for the lack of palatalisation of the root final obstruents in the leikendur type.

2 The expression THE LEIKENDUR TYPE refers to the plural forms of such nominalised masculine present participles in -andi as contain a velar obstruent immediately in front of the derivational suffix -end-.

3 There is evidence for progressive palatalisation in old Icelandic as well (Noreen 1923:191). This matter will be disregarded in what follows as irrelevant to the issue at hand.

I suggest that the lack of palatalisation of the root final velar obstruents in the leikendur type is due to the phonological universal which limits the application of the so-called (non-automatic) neutralisation processes to the so-called derived inputs. This universal was proposed by Kiparsky 1973, and will be called Kiparsky's universal in what follows. Here I repeat my description of the universal given in Orešnik 1979: 225-26 almost verbatim:

Kiparsky 1973 formulated the phonological universal (2a) and an alternative stronger statement (2b), qq.v.

- (2) (a) Neutralization processes apply only to derived forms.
(b) Non-automatic neutralization processes apply only to derived forms.

To illustrate the universal, I shall briefly repeat one of Kiparsky's own examples, namely the Finnish rule $t \rightarrow s / _i$. This rule/process is neutralising in the following sense: it creates an output, namely s before i, which is also present in the input of the rule, i.e. which exists at the stage of derivation immediately preceding the application of the t-to-s rule. (Example of underlying s before i: nousi impf. of nousta "stand up".) The rule applies (a) across a morpheme boundary (e.g. /halut+i/ → halusi "wants, impf."), (b) morpheme-internally, with derived i (e.g. /vete/ → /veti/ → vesi "water"). The rule does NOT apply (c) morpheme-internally, with underlying i (e.g. /koti/ → koti "home").

To account for this state of affairs, Kiparsky introduced the notion DERIVED FORM or DERIVED INPUT, which he defines as follows:

- (3) I will refer to an input which is created either by combining morphemes through derivation or inflection, /.../ or by applying a phonological rule, /.../ as a DERIVED input.

He then combined the notions NEUTRALIZATION RULE/PROCESS and DERIVED FORM/INPUT into the universal (2a). The universal

predicts that the t-to-s rule applies in /halut+i/, where the crucial substring has been created through inflection (the form crucially involves an inflexional morpheme boundary), and in /veti/, where the crucial substring has been created by applying a phonological rule; it does not apply in koti, whose ti is not a derived input in the sense of (3).

The discussion of the notion NON-AUTOMATIC added in (2b) will be postponed until the end of the paper.

In Orešnik 1979:230 I proposed a modification of Kiparsky's universal: it is only to strings crucially involving an IN-FLEXIONAL morpheme boundary and to strings created by applying a phonological rule that neutralisation processes apply. This excludes strings crucially involving WORD-DERIVATIONAL morpheme boundaries from the domain of the neutralisation processes.⁴

- 4 Apparently contradicting my claim that no (non-automatic) neutralisation rules operate across a derivational morpheme boundary are those many instances of derived words in Icelandic and other languages that display what at least on the face of it are the effects of the application of (non-automatic) neutralisation rules at crucial places. Such counterexamples are to be explained away in alternative ways, some of which are listed here (Orešnik 1979):
- (a) In addition to phonological rules which apply to derived inputs (in my sense of the term), there are word-derivational rules (which are partly repetitions of certain phonological rules) whose domain of application is limited to single word-derivational processes. To put it slightly differently, some counterexamples are due to analogy with existing examples of the same type.
 - (b) Some counterexamples may be due to the application of phonological rules at a time when those rules were not yet (non-automatic) neutralisation rules. After that, the changed forms were passed from generation to generation of speakers in toto, because the speakers treated those words as und~~er~~ived. (Notice, however, that failure to recover the underlying shape is extremely unlikely in the nominalised present participles, because of the -and/-end- alternation in the inflexion.)
 - (c) Some counterexamples can be deliberate creations of linguistically minded persons who consciously applied a phonological rule to that subpart of a new derived lexical item crucially involving a word-derivational morpheme boundary.
 - (d) Some counterexamples may be spelling pronunciations of wide acceptance.

My modification of Kiparsky's universal was necessitated by the Icelandic word slafneskur "Slavic". This lexical item contains the consonantal cluster fn [vn]. This cluster is otherwise not found outside Icelandic compound words, because there is a phonological rule in the language changing /vn/ to /pn/, e.g. strong nom. pl. m. hrifnir [-pn-], of hrifinn [-v-] "impressed", has the following derivation:

- | | | |
|-----|---------------|--------------|
| (4) | | (h)ṛIv+In+Ir |
| | vowel syncope | (h)ṛIvnIr |
| | vn→pn | (h)ṛipnIr |

The vn→pn rule is neutralising: it creates consonant clusters that exist in the language also independently of the vn→pn rule. E.g. there is hefna [-pn-] "avenge", whose [-pn-] there is no reason to derive from /vn/, therefore it is here considered lexicalised as /pn/. (Historically speaking, the [pn] of hefna is ultimately due to the application of an older version of the vn→pn rule, viz. vn→bn (Þórólfsson 1925:XXVif.), at a time when that rule was not yet neutralising, i.e. when there were not yet any [bn] in the language.)

The vn→pn rule does not apply to slafneskur, although this word has a morpheme boundary between f and n (seeing that it is a derivative of Slaf-i "Slav": /slav+nesk+Yr/), and its /v+n/ is a derived input in the sense of Kiparsky, see (3) above. To account for this apparent exception I suggested in Orešnik 1979 that strings crucially involving WORD-DERIVATIONAL morpheme boundaries do not eo ipso constitute derived inputs, and therefore neutralisation processes do not apply to them. Cf. footnote 4.

This modification of the notion DERIVED INPUT accounts for the lack of application of the vn→pn rule in slafneskur and, it turns out, for the lack of application of the palatalisation rule in the leikendur type. The situation in the leikendur type is comparable to that of slafneskur. Each deep phonological representation of the words of the leikendur type

contains a root final velar obstruent followed by a word-derivational morpheme boundary, which is in turn followed by /e/, e.g. Southern /leik+end/. At the time that the palatalisation rule still applied before all front vowels (Noreen 1923:190), although it was already a neutralisation process,⁵ the palatalisation rule should have applied to the root final velar obstruent and turn it into a palatal, according to the original formulation of Kiparsky's universal. This must be avoided. My modification of Kiparsky's universal remedies the situation: the string, root final velar obstruent + word-derivational morpheme boundary + /e/, is not a derived input, consequently the neutralising palatalisation rule should not apply to it. It does not, and this is the correct result.

Since when has the palatalisation rule been a neutralisation process? Answer: Since the time when palatal obstruents came into being that were no longer analysed as due to the application of the palatalisation rule. The change of the palatalisation rule into a neutralisation process may thus have happened when the rule was still producing subphonemic palatals only (i.e. when the palatals occurred automatically before the front vowels and *j*, and only there; Jóhannesson 1923:149, 151). Ergo the palatalisation rule may have been a neutralisation process since pre-historical Icelandic. If this is true, we expect not to find root final palatal reflexes in the leikendur type even in the oldest texts. Unfortunately this expectation cannot be verified, because the orthography of the oldest texts did not mark palatalisation of velar obstruents (Noreen 1923:190). However, roughly since the fourteenth century the palatal obstruents have been optionally indicated in at least the following ways before front vowels:

5 The modern Icelandic palatalisation rule has a more limited domain of application, or - to put it differently - numerous exceptions. For a formulation of the modern Icelandic palatalisation rule see Orešnik 1977, where it is assumed that now the palatalisation rule fronts velar obstruents only if they are immediately followed by an inflexional morpheme boundary + /I/.

(1) An i was inserted between the grapheme for the corresponding velar and the immediately following grapheme for the front vowel, except i, í, e.g. kiefia for kefja (Jóhannesson 1923: 149, 151).

(2) An expected g [j] was omitted, e.g. seia for segja (Bandle 1956:128f.).

(3) An expected g [j] was spelled i, e.g. seia for segja (Bandle 1956:128f.).

(4) The diphthongisation of monophthongs was indicated before g [j], e.g. seigia for segja. Historically, the diphthongisation followed the previous palatalisation of [ɣ] to [j] in the chronology (Bandle 1956:46).

(5) The inverted spelling gi for etymological j was used, e.g. nygia for nýja (Noreen 1923:217).

The phenomena listed sub (1-5) above have not been observed in the leikendur type: I am not aware of any spellings such as leikiendur for leikendur, eiendur for eigendur, veiendur or veiiendur or veigendur for vegendur, heygendur for heyjendur. On the basis of this negative fact-finding and on the basis of the modern pronunciation of the leikendur type it must be assumed that the root final velar graphemes in the leikendur type have stood for velars, not for palatals, since the beginning of the (optional) explicit notation of the palatals.⁶

What the state of affairs was even earlier can be only guessed at.⁷

6 The velar pronunciation of the root final segments in the leikendur type is here assumed to be essentially older than the velar pronunciation of k(k), g(g) before e in some other words (e.g. fröken, orgel, bakkelsi).

7 I know of two lines of Scaldic poetry whose inner rhyme involves the g of eigendur and the reliably velar g of fagur: Katrínardrápa 15 eigendr tokv idran fagra, and 50 eigendrna firi idran fagra (Jónsson 1912-15:519, 526). However, these examples are late (Jónsson *ibidem* dates the poem to the fourteenth century; Kålund 1894:128 dates its manuscript, AM 713 4^o, to the first half of the sixteenth century) and therefore not of any use for our discussion.

That the morpheme boundary before -end- in the words of the leikendur type, and generally in the nominalised present participles, is word-derivational (Jóhannesson 1927:18f.), not inflexional, follows from

(1) the fact that only some verbs have nominalised present participles made from them: the formation of the nominalised present participles is not at all so predictable as the formation of those verbal forms whose membership in the inflexional paradigms of verbs is beyond doubt;⁸

(2) the fact that the meaning of the nominalised present participles is in general not predictable from the meaning of the verbs from which they are derived. Rather, the semantic relationship between the verbs and the corresponding nominalised present participles is that usually observed between verbs and the corresponding nomina agentis. Example: leikandi does not cover the whole semantic range of the verb leika (it does not mean "one who does the action of leika in whatever of its meanings"), but only one meaning of leika, namely "act (in the theatre, etc.)". The correct translation of leikandi is "actor" (Zoëga 1951 s.v.).

The circumstance that -and-/-end-, now established as a derivational suffix, changes its form in the inflexional paradigms of the nominalised present participles, is slightly atypical (the typical case being that the derivational suffix remains basically unchanged throughout the inflexion of the word whose part it is), but far from unique. A comparable case is the Classical Greek synchronically unmotivated alternation between the derivational suffix variants -nū- og -nu- in the present and imperfect tenses of the verbs in -nū-mi, e.g. deíknūmi "I point". Quite common is the extreme alternation, in inflexional

⁸ In dictionaries of modern Icelandic, the nominalised present participles have their own lexical entries or subentries.

paradigms, between a derivational suffix and its absence, e.g. Serbo-Croat sg. građan-in- "citizen", pl. građan-.

My explanation of the pronunciation of the root final segments in the leikendur type is based on the assumption that the e of -end- has not been produced by a rule (say, by the i-umlaut rule) from a at least since the palatalisation rule assumed the character of a neutralisation process. For if -end- were synchronically from -and-, -end- would be a derived input in the sense of (3) and in my sense, and the palatalisation rule should apply before its e. Since I cannot prove that -end- is not from -and- synchronically speaking, the above assumption has to be listed among the presuppositions of my explanation.

It has been suggested in passing by Arnason (1978:188) that the lack of the palatalisation of the root final velar obstruents in the leikendur type can be explained as due to the analogical pressure of the root final velar obstruents of the singular case forms (and, I add, in the Icelandic of the past centuries also of the genitive plural in -anda and of the dative plural in -öndum) upon the one-time root final palatal of the leikendur type. While this explanation cannot be discarded, two arguments can be adduced against it:

(1) The assumed pressure of the velar on the palatal is unparallelled in Icelandic, although inflexional paradigms containing the alternation palatal ~ velar abound (for examples see Orešnik 1977); the normal case is that the alternation palatal ~ velar remains intact regardless of the numerical relationship between the two types of segments. (For instance, in the inflexion of the weak masculine nouns such as skagi "promontory", the palatal reflex occurs in one case form, the nominative singular, only, whereas the remaining seven case forms contain the corresponding velar, skaga(r), skögum, yet there is no tendency to replace the palatal of the nominative singular by

the velar of the remaining case forms.)⁹

(2) The explanation of the velar pronunciation of the root final segment in the leikendur type by analogy is ad hoc. On the whole, ad hoc explanations not supported by arguments should be fallen back on only if no principled explanation for the same range of data is available. A principled explanation of this kind HAS been suggested in the present paper.

Point (2) above is also valid for the alternative suggestion made in passing by Arnason (1978:188) that the lack of palatalisation in the leikendur type is ascribable to a special kind of boundary before -end-.

Finally, I have to answer the question as to why the blocking effect of my modification of Kiparsky's universal is not seen in a greater number of derived words than it is. The answer is given in footnote 4, and the following can be added. If Kiparsky's formulation (2b) is taken as a starting-point for

9 If anything it is the palatal segment that gets analogically extended at the expense of the velar one. Cf. the weak masculine noun farþegi "passenger", whose oblique cases should contain [ɛr], but are now at least optionally pronounced with [eij] (Blöndal 1920-24 s.v.).

Another example of the same kind is the nom.pl. Vij (of víg "battle") adduced in Helgason 1977:405 from a seventeenth century manuscript. The form must be due to the analogical extension of the root in vígá, vigin, vigi. The fact that it is only the palatal segment that gets analogically extended, never the velar one, can be understood in the light of the fact that all inflexional paradigms displaying such analogy contain palatal segments followed by /+I/ only (where /+/ is an inflexional morpheme boundary). Palatalisation before /+I/ is an active process even nowadays, and any attempt at introducing the velar segment before /+I/ ends with the palatalisation rule applying to it. Since in old Icelandic palatalisation before /e/ was also an active process, the same result would have obtained in the leikendur type if its velar segment had been introduced from the singular at that time.

the modification of the universal, the notion NON-AUTOMATIC can be invoked to explain why there are no examples of lacking palatalisation rule application across derivational morpheme boundaries in the not so few i-initial derivational suffixes. Kiparsky defined as AUTOMATIC those rules having no exceptions. This definition has been questioned, e.g. by Stampe in Kiparsky 1976:184-85; Stampe advocates the equation, automatic rule = natural rule, in the sense of his own Natural Phonology and of Dressler 1977; that is, rules are more or less natural (rather than natural or unnatural), thus more or less automatic. Also, some parts of a rule can be more natural than others. That Kiparsky's definition leads to spurious results can be shown with the Icelandic palatalisation rule. That rule has only one systematic exception, as far as I know, pointed out by Magnússon 1959:15: saggi, laggi [-k:-] , which are sometimes used in Vestfirðir instead of sagði, lagði = Standard Icelandic sagdi, lagdi, preterite of segja "say", leggja "lay". Is this single exception really enough to change the palatalisation rule from automatic to non-automatic, with the potent consequences that this entails? It seems to be more promising to adopt Stampe's line mentioned above, and assert that palatalisation before /I/ is more natural/automatic than, say, palatalisation before /e/. The advantage of this assertion is that it makes the effects of my modification of Kiparsky's universal predictably absent before /I/ immediately preceded by a derivational morpheme boundary (because palatalisation is automatic before such /I/), but predictably possible before /e/ immediately preceded by a derivational morpheme boundary (because palatalisation before /e/ is non-automatic, more precisely, less automatic, than palatalisation before /I/).

The fact that the palatalisation rule has lost some of its force on the way from old to modern Icelandic (Arnason 1978: 187) does not suffice to explain the leikendur type, at least not under the assumption made in the present paper that the lack of palatalisation in the type is old, that is, from the time that the palatalisation rule was at its peak.

There are quite a few modern words containing a velar obstruent before /e/. For examples see Orešnik 1977. Further I can mention that Stefn Karlsson (per litteras, 1977) pronounces Eggert, ekkert, Rakel with a velar obstruent; in his youth he heard velar g in the geitin of kida-kida-kida-kid, koma geitin call to goats, in Fnjóskadalur (Sudur-Pingeyjarsýsla, North Iceland). These examples are different from the leikendur type in that they do not involve derivational morpheme boundaries. For a suggestion about how such cases are to be treated in modern synchronic grammar, see Orešnik 1977 (and footnote 5 above). The historical explanation, however, is not clear. Most probably the velar pronunciation of the crucial segments in these examples is much younger than the similar phenomenon in the leikendur type (cf. footnote 6). It cannot be understood in the light of the palatalisation rule's gradually having had its domain of application limited in historical Icelandic (Árnason 1978:178), because the improbable implication would then be that words like Eggert, ekkert, Rakel have always contained an underlying velar obstruent although such an obstruent never appears in the surface representations of those words. My tentative guess is that Icelandic now possesses a phonological rule which depalatalises palatal obstruents before /e/, and that that rule is especially potent in substandard Icelandic.

To sum up, the historical development of the palatalisation rule has been as follows. For a time the rule was at its peak (and the leikendur type existed already then), then the rule began losing its force (Árnason 1978:187), limiting its domain of application to velar obstruents before /+I/ (Orešnik 1977), so that naturalised words do not any longer, except by fiat, palatalise velar obstruents before /e/. (Thus arose orgel, fröken, etc.) Finally, an automatic depalatalisation rule came into being that depalatalises palatal obstruents before /e/, and maybe before some other vowels (but only extremely rarely before /I/, cf. saggi, laggi above). The depalatalisation rule has not yet reached all the palatal obstruents before /e/;

for instance, it has only exceptionally operated upon palatal obstruents before accented /e/. The standard language has so far ignored the results of the operation of the depalatalisation rule.

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Povzetek

ODSOTNOST PALATALIZACIJE PRED -END- V MNOŽINI ISLANDSKIH SUBSTANTIVIZIRANIH SEDANJŠKIH DELEŽNIKOV KOT LEIKANDI

V stari islandščini sta se k(k) in g(g) pred svetlimi samoglasniki izgovarjala na trdem nebu. (Trdonebnost je razen v leksikaliziranih primerih podeljevalo t.i. palatalizacijsko pravilo.) Izjema so bile (in so) množinske oblike odglagolskih samostalnikov moškega spola na -andi: leikandi "igralec", množ. leikend-, z mehkonenim k. Palatalizacijsko pravilo torej tu ni delovalo, in sicer po mnenju pisca zaradi fonološke univerzaliije P. Kiparskega, ki pravi: "(Neavtomatični) nevtralizacijski procesi delujejo samo na izpeljane oblike." To univerzaliijo je delno spremenil Orešnik 1979, tako da je iz pojma izpeljana oblika izločil nize segmentov, ki vsebujejo besedotvorno morfemsko mejo in bi imeli ob njej doživeti fonološko spremembo. V leikend- in drugih takih primerih narekujejo morfemsko mejo med leik- in -end- besedotvorne razmere, in čez to mejo torej v stari islandščini palatalizacijsko pravilo ni delovalo, ker je bilo (neavtomatični) nevtralizacijski proces.

Fonološkim spremembam, ki jih opažamo ob besedotvornih morfoloških mejah, so vzrok 1) besedotvorna pravila (tj. analogija po starejših primerkih istega besedotvornega vzorca), 2) fonološka pravila, ki niso (neavtomatični) nevtralizacijski procesi, 3) fiat besedotvorcev, 4) izgovarjava po črki.