DEVOICING OR STRENGTHENING OF LONG OBSTRUENTS IN GREENLANDIC*

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It is a characteristic feature of Modern West Greenlandic that long nonnasal consonants are voiceless, whereas these have short voiced counterparts in the case of continuants. Seen in isolation this distribution is suggestive of spontaneous devoicing of long obstruents, but on the basis of evidence from dialects and from old spellings it is suggested that there may be an old "strengthening" process (segmentalization) underlying this modern feature of voicelessness.

I. INTRODUCTION: THE OBSTRUENT PATTERN

It is a well-known characteristic of West Greenlandic Eskimo that this type of Eskimo (unlike North Alaskan Inupiaq, for example) has complementarity of voiced and voiceless fricatives, short fricatives being voiced and long ones voiceless (in the new Greenlandic orthography, which is used in this paper, g and r symbolize voiced velar and uvular continuants, and gg and rr their long voiceless counterparts, whereas the corresponding labial set is distinguished orthographically as v versus ff). In accordance with the principle of feature distribution just stated we find that voiced fricatives are automatically replaced by voiceless segments in environments where they are long by

true gemination (or by assimilation), e.g. iga- 'to cook' - iggavik or igaffik 'kitchen', neripput 'they ate' - nerripput 'they shared a big meal'.

Morphophonemically, this apparently straightforward pattern is complicated in that long and short fricatives regularly participate in deviating alternation sets. Although the short (voiced) fricatives v, g, r and the long (voiceless) fricatives ff, gg, rr all occur quite frequently in West Greenlandic, the source of a long geminate fricative does not necessarily appear synchronously as a short fricative, nor does a consonant which appears synchronously as a short fricative necessarily remain fricative under gemination. We rather find a preponderance of alternations between a "weak grade" short alternant and a "strong grade" long alternant. Diachronically, this has to do with weakening process, as appears a.o. from the pioneering comparative studies of Hammerich and Bergsland. As for old short fricatives, the normal situation for g and r was to be lost intervocally, the result being that geminate gg and rr frequently alternate with zero (cf. naggat 'end' derived from naa- 'to end'; unarrat (old) pl. of unaaq 'harpoon shaft') rather than with g and r. On the other hand, a large number of new occurrences of voiced fricatives arose by lenition of old short stop consonants in intervocalic position, whereas stops were preserved when geminated or occurring in clusters. In this way we get a number of alternations between v and (p)p, cf. kujavarpog 'has moved further to the south' vs. avannarparpoq 'has moved further to the north' (-var- vs. -par-), and particularly between g and (k)k, r and gg (cf. aalisagaq 'fish' - pl. aalisakkat; ujarak 'stone' - pl. ujaqqat). In a number of cases, finally, we encounter old short stop consonants which have been preserved, i.e. protected from lenition, in the position after the first (single) vowel of roots (cf. Bergsland 1955, p. 12), this position after the first mora being in general a "strong" position. Such short stops, then, engage in alternation with long stops if they stand (or used to stand) in the just mentioned strong position (cf. napavoq 'is in upright position' - napparpaa 'puts it in upright position'; nukik 'strength' - nukkiropq 'forces himself, uses his strength'; niaqoq 'head' (as suggested by Bergsland probably from *nayquq) - pl. niaqqut).

In the dental or (with a more adequate labeling) coronal series of obstruents there is the complication that West Greenlandic exhibits two sibilants, which are voiceless even when short. One is a plain s, the other has a more retracted point of articulation. In the (new) orthography they are not distinguished, and they are actually kept distinct only in a geographically limited area (within which they are expected to merge eventually). Both s-phonemes occur phonemically long and short, but in cases of morphological alternation involving gemination the regular and frequently occurring patterns are: (a) short plain s alternating (like j) with the long affricate ts (cf. nasaq 'cap' - pl. natsat), (b) zero alternating with retracted ss (cf. iluliaq 'iceberg' - pl. ilulissat).
The development of the sibilant subsystem is a very complex issue, which is much debated in current work. In the present context it may suffice to mention that in forms such as nasaq the plain s derives from a former affricate, in some other forms from a stop consonant *t, and that the retracted s derives from a voiced (post)alveolar or palatal fricative. All of this is supported by the retention of the older state of affairs in other Eskimo languages or dialects. What is suggested by authoritative linguistic reconstructions (based above all on Bergsland's work, cf. Bergsland 1959, 1966) is that the proliferation of voiceless sibilants in West Greenlandic is a secondary phenomenon. It is noteworthy that we have within this subsystem a genuine instance of seemingly unconditioned, spontaneous devoicing of a fricative taking place also if the fricative is phonetically (and phonemically) short, viz. in numerous forms such as isi 'eye', aasaq 'summer', puisi 'seal' (all with the retracted s).

Finally, West Greenlandic has also a lateral l, which switches manner of articulation and crucially enters the obstruent pattern under gemination (see later), although the nasal sonorants geminate without any change in manner of articulation, cf. ameq 'skin' - pl. ammit with a voiced nasal in both cases.

II. GEMINATION AND DEVOICING

Consonant gemination as a kind of syllable strengthening process is a very old feature of Eskimo. It is shared by the other dialects of the Eastern (Inupiaq) branch of Eskimo, and as pointed out by Bergsland its previous existence also in the Western (Yupik) branch may be inferred even though the quantity pattern which still survives in Eastern Eskimo was eventually replaced by a very different quantity pattern in Yupik (with drastic changes such as shortening of old geminates and secondary processes of new gemination or lengthening affecting both consonants and vowels). On this point, then, the dialects of the Eastern branch are more archaic. On the other hand, the old pattern must obviously have involved straightforward alternations of single and geminate consonants with the same manner of articulation, unlike the situation in Modern West Greenlandic, where - as already stated - we have a complex situation with four types of manner alternation accompanying gemination, viz.

(i) zero alternating with long voiceless fricative
(ii) short voiced fricative alternating with long voiceless fricative
(iii) short voiced fricative alternating with long voiceless stop
(iv) short nasal or stop alternating with long nasal or stop (without change in voicing).

 Whereas the fricatives in set (iii) must be assumed to have acquired voicing as a corollary of lenition of old stops, com-
parative evidence is unanimously in favour of voicelessness being a secondary feature in sets (i) and (ii). Voicelessness in these sets is, in a dialect geographic perspective, a feature which is highly characteristic of Greenlandic.

In North Alaskan Inupiaq, for instance, there is alternation between short and long voiced continuants in cases corresponding to those above. Since the voiceless member of each pair is obviously secondary compared to the voiced one, there is overwhelming evidence both from internal reconstruction and from dialect comparison of a Greenlandic sound change replacing voiced by voiceless articulation under certain conditions involving length. It is very natural that Greenlandic Eskimo is often mentioned as evidence in support of the claim that there is a universal tendency for long fricatives to become voiceless by a spontaneous sound change.

There are some inherent difficulties with the assumption of spontaneous devoicing, however. It is true that one may well expect voicing to be hampered if there is a long interval of strong constriction, as in true fricatives (because most of the pressure drop then takes place across the oral constriction instead of taking place across the glottis, as is necessary for sustained vocal fold vibrations), but the voiced continuants in contemporary Greenlandic are not all that fricative. This, of course, does not prevent us from assuming that these sounds used to be strongly fricative obstruents, at least in their geminate versions (this is consistent with their articulation in North Alaskan Inupiaq). Still, one may ask why across-the-board devoicing - if it is such a natural process - should happen only in Greenlandic, considering that there is no direct evidence that the fricative articulation in old Greenlandic was particularly favourable to devoicing.

It is a much more serious challenge to the devoicing hypothesis that the voiced-voiceless alternation occurs also with the lateral 1, as in ukaleq 'hare' - pl. ukallit (where 1 is a short voiced lateral or slightly flapped sound, and 11 a long voiceless lateral fricative). All evidence suggests that this is "from the start" a true lateral consonant, and it differs morphophonemically from the ordinary fricatives in that there is just one alternation set, viz. (voiced) 1 - (voiceless) 11, i.e. no alternation involving either zero or a geminate stop in (Central) West Greenlandic (in cases such as atserpaa 'signs it' from ateq 'name' and -(l)erpaa 'pro­vides it with sth.' the 1 enters the process by which ts arises, but compare analogous examples such as imaq 'content' - immerpaa 'fills it out').

If we wish to understand the diachronic developments underlying such voiced - voiceless alternations as v - ff, g - gg, r - rr, and indeed 1 - 11, in Greenlandic, there are three different sources of insight. The first is comparative evidence from other types of Eskimo outside Greenland, and above all around the Bering Strait, where more archaic phonologies are found. We have seen already how this is suggestive of
spontaneous devoicing of long obstruents and even of the long lateral in Greenlandic. Let us consider now what the other types of evidence have to tell.

The dialects of Greenlandic Eskimo proper have until quite recently received little (if any) attention in comparative Eskimo studies. By and large the central dialect of West Greenlandic has been taken to be representative of Greenlandic Eskimo as a whole. Textbooks on Greenlandic have contributed to this notion of Greenlandic as being more or less one dialect by hardly mentioning the issue, but part of the reason is that there has been a lack of adequate and manageable descriptions of other dialects and a lack of concise dialect geographic surveys. The pioneering work with regard to phonological dialect surveys was done by Petersen (1969/70, 1975) less than two decades ago (also cf. the expedient survey in Fortescue 1983).

If we look at Petersen's chart of phoneme correspondences it is noteworthy that the voiceless fricatives ff, gg, rr of West Greenlandic are matched by stops in the northermost (Upernavik) and southernmost (Cape Farewell) fringe areas of West Greenlandic and in the East Greenlandic dialect. Voiceless ll is matched by a stop in southernmost West Greenlandic and in East Greenlandic. To be strictly correct, exception must be made for some instances in which the easternmost Inuit dialects had a voiceless lateral already before the specifically West Greenlandic devoicing; in these instances East Greenlandic has developed (t)s directly from the old voiceless lateral, example: East Greenlandic atsinaaq, West Greenlandic allunaaq 'rope, string' from something like *aklunaaq with ll symbolizing the voiceless lateral.

The stop consonant reflexes in these Greenlandic dialects far off Central West Greenlandic are straightforward for gg and rr, which are matched by kk and qq, respectively. As for ff, Upernavik and East Greenlandic have pp, but Cape Farewell has dorsal kk (rf is matched by qq). As for ll, East Greenlandic has tt (now often written "dd"), but Cape Farewell has a supra-dental affricated stop which is phonemically distinct from tt. These discrepancies (which can be explained) are not at issue here; the general observation to be made is that there are two main categories of reflexes of old long non-nasal sonorants in Greenlandic: (a) as long voiceless continuants and (b) as long stops with or without affrication. As a sweeping statement we may say that West Greenlandic exhibits the former, East Greenlandic the latter, although the fringes of West Greenlandic largely side with East Greenlandic.

How does this tie in with the explanation of voiceless ff, ll, etc. in West Greenlandic as being due to spontaneous devoicing? If one insists that we have such devoicing in the West Greenlandic examples it is appropriate to search for an unrelated explanation for the development in East Greenlandic, for it does not seem particularly convincing that the newly developed long voiceless continuants spontaneously went on and became stops (although such a further shift cannot be excluded).
There is certainly no evidence that the development from old voiced geminate continuants to stops ever went through anything like the stage encountered in modern Central West Greenlandic. On the other hand, it would seem utterly strange for Greenland to have two basically different processes affecting the long voiced continuants considering how unaffected these consonants are in most of the remaining Eskimo area. Neither of the two alternative approaches being overwhelmingly attractive, the situation invites a diachronic hypothesis according to which the Greenlandic dialects as a whole share a strengthening of some kind of the old voiced geminates into a series of reflexes which provide a natural starting point for both of the ultimate developments: into voiceless fricatives and into stops.

Here the third source of evidence comes in, viz. spellings in old Greenlandic sources.

III. OLD GREENLANDIC SPELLINGS

The first truly systematic and phonetically interpretable transcription of Greenlandic Eskimo (and of Eskimo in general) was the one developed by Samuel Kleinschmidt around the middle of the 19th century and used even today, though the new orthography of 1973 is gradually taking over. There is a considerable bulk of sources before Kleinschmidt, but the (17th and) 18th century sources have not been much utilized in diachronic phonology because of glaring inadequacies with regard to such features as length, the distinction between velar and uvular stops, and the rendering of vowel qualities. Nevertheless, there are very important insights to be gained from this early material, and this is very much true with respect to the question of what happened to the old voiced geminates in Greenlandic.

With regard to voicedness or voicelessness of fricatives the earliest useful sources from the second half of the seventeenth and the first half of the eighteenth century (i.e., sources which in part antedate, in part postdate Hans Egede's arrival in Greenland in 1721) are clearly suggestive of voicedness of both short and long fricatives. For example, in a 1654 word list preserved in manuscript (of P.H. Resen's Danske Atlas) from the 1680ies we find short intervocalic fricatives rendered as v, g, r in accordance with modern orthographical usage: Ivirning (now: ivianngit with plural -t) 'breasts', Agago (i.e. aqagu) 'tomorrow', Kameresin (i.e. qimerissat) 'eyelashes', though deviant spellings also occur. As for the long intervocalic fricatives, we find such spellings as b, g(j), gg corresponding to ff, gg of the modern orthography. Sibian (siffiaq, or rather siffiat 'your-') 'hip'. Sigju (i.e. sigguk) 'trunk', Naggesung (i.e. nerrersooq) 'inclined to eat a lot' (in the old source translated as Essen, i.e. 'to eat').
Although the earliest spellings are understandably inconsistent they definitely suggest that the long (geminate) consonants in such cases were not voiceless fricatives (the old evidence is very conflicting with regard to *rr*, however, which was sometimes spelled *ch* etc., probably to indicate the rasping quality of the uvular fricative which was more audible when it was a long segment). It is, on the other hand, impossible to see from spellings such as those illustrated above whether the long segments were fricatives or lax (voiced) stops. Offhand the (for a long time dominant) spelling *b* or *bb* for modern *ff* seems strongly suggestive of realization as a bilabial stop which, however, must have been different from the "true" stop consonant /p/ (the latter is mostly rendered as *p* or *pp* in old sources). If that is true, the same might be expected for the long velar segment and possibly for the long uvular segment. This would be in agreement with the later reflexes in East Greenlandic (though not with the reflex /kk/ for */vv/* in the Cape Farewell dialect), but it would be hard to reconcile such an interpretation with the fact that these long segments started out as fricatives and have fricative reflexes in modern West Greenlandic. A development voiced fricative > stop > voiceless fricative seems too farfetched to deserve consideration. It seems much more likely that the long labial fricative sounded too different from the labial fricatives occurring in Danish or German to warrant a symbolization such as *v* or *w*; in all probability this long fricative was articulated as a narrow unrounded (slit-articulated) bilabial fricative which to a Danish or German ear sounded more like a voiced *b* than a *v* or *w*.

The orthography of the manuscripts and published works following after the colonization in 1721 is of course characterized by considerable improvements, but there are no dramatic changes in the rendering of the fricatives. It is noteworthy that as late as the beginning of the nineteenth century Otho Fabricius in his dictionary (Fabricius 1804) gives spellings such as "Sabbiorbik v. Sagviortarbik" for what is now spelled saffior-(tar)fik 'forge' (Fabricius also: 'anvil'). His vacillation here and elsewhere between *b(b)* and *gv* reflects a dialect difference in the pronunciation of the Greenlandic labial fricative as pointed out by Petersen, the spelling *gv* representing a South Greenlandic labialized velar fricative (cf. the development of */vv/* into /kk/ in the Cape Farewell dialect mentioned above). What is interesting in the present context is that neither of the alternative spellings is suggestive of voicelessness (since the letter *f* would be the obvious way to indicate voicelessness according to its use in Danish). It is hard to know to what extent this seemingly very conservative transcription reflects stability in the phonology and to what extent it just reflects loyalty towards an orthographical tradition for which the early word lists of 1654 may have played a considerable role.

But in any case, the spelling *gv* was not customary before Fabricius entered the scene with his special knowledge of the
southern Frederikshaab (Paamiut) dialect, so the odds seem in favour of the assumption that voicelessness of such long segments or clusters postdates the beginning of the nineteenth century.

For the long velar fricative the spelling is regularly gg (which also occurs along with g to represent the short voiced velar fricative); it is only with the uvular point of articulation that the spelling is suggestive of a specific (strident or voiceless?) manner of production of the fricative when long (cf. the remark on earlier spellings above). For the long uvular Fabricius has such spellings as Nørvak 'calf (specifically of caribou)' (now spelled norraq) with a diacritic mark on r to distinguish it from the short uvular of such forms as toråjuvoq (now: torajuvog) 'is certain of aim when shooting'. Similar spellings occur until Kleinschmidt's orthography settles on rr vs. r by the middle of the nineteenth century.

If we turn now to the lateral continuant the spellings of the 18th and 19th centuries are much more suggestive of a phonological development. The preferred spelling in early sources is l or ll (consonant doubling did not serve to indicate length in pre-Kleinschmidt orthography), no matter whether the lateral is long or short, but only in instances where the consonant or cluster was voiced. Clusters appearing at that time with a voiceless lateral were spelled differently, as seen from numerous, more or less consistently used spellings with tl or kl in Paul Egede's dictionary of 1750.

As for clusters with a preceding velar, those with a voiceless lateral were spelled with kl (sometimes ktl), e.g. Aklunak 'rope, string' (now allunaaq; with early voicelessness as evidenced both by dialects west of Greenland and by the East Greenlandic reflex atsinaaq mentioned earlier) as against Segluvok (now salluvoq) 'he lied'. With a preceding uvular the apparent voiceless-voiced distinction is mostly expressed by rtl or rkl vs. rl, as in Törtlorpok (now torlorpog) 'called out', torkluluanga (i.e. torlulavaanga in modern spelling) 'he was calling for me' versus Korlórpok (i.e. gorlorpog) 'poured down (e.g. through a funnel)'. In cases where there is etymologically no labial, velar, or uvular preceding the lateral, the long lateral (or dental stop plus lateral?) is expressed in either of two ways, viz. tl contrasting with l (or ll), as in Itlerbik (now illerfik) 'chest', versus Sillit 'whetstone' (also occurring with the spelling Silili in 17th century lists). The former spelling is particularly well attested with affixes such as -tlar... 'forcefully' or contemporative -tlu- (only sporadically -(l)lu-; -tlu being the regular post-consonantal alternant) both of which occur in numerous illustrative phrases in Paul Egede's dictionary (1750), as against other words with -l- or -ll-.
Examples are, on the one hand: Usitlarau (now usillaaraaq) 'is generally heavily loaded', torart-lugo (now toraarluugu) 'heading towards it', on the other hand: -ngilet (with indisputable gemination due to plural inflection) as attested in several forms such as ajungilet (i.e. ajunngillat) 'they are good (literally: not bad)', and perfective stems with gemination such as Aularpok or aularpok (now aallarpq) 'he left' (derived from the stem *aula- 'to move'). There can be no doubt whatsoever that tl and 1(l) reflect two formerly contrasting long items.

Although the spellings involving the expected voiceless lateral are not phonetically transparent they can be construed to indicate that there was either a fully developed stop segment in the beginning or a tendency toward such "segmentalization". This would off-hand explain the East Greenlandic reflex /ts/ as a modification of a cluster */tl/. As for the forms with an expected voiced lateral the evidence is overwhelmingly in favour of a plain, long voiced segment in 18th century Greenlandic.

Eventually, however, spellings with -dl- take over though exhibiting some confusion with -gl- (eventually written -gdl-). Fabricius (1804) writes sidlittor 'whetstone', Aularpok for 'he left', etc., a type of spelling which is virtually (totally?) nonexistent in Paul Egede's dictionary of half a century earlier. There is reason to believe that this signals a development of a stop segment in the beginning of the long lateral, i.e. "segmentalization" in a straightforward sense.

It is hard to determine when exactly the voiceless clusters merged with the voiced ones since Greenlandic orthography through the ages is characterized by considerable loyalty towards earlier spellings of individual words. Variant spellings in Fabricius (1804) such as tròrdlorpok = tròrklorpok for Egede's Törtlorpok are suggestive of ongoing merger around 1800. Taken together with forms such as iklerbìk 'chest' for Egede's Ítlerbík the above example suggests that "kl" tended to be generalized (due to spurious etymologizations, or because of sporadic development of a velar before the long lateral?) as the way to render the voiceless lateral. It is less likely that the variant spellings with "rl", "rdl" indicate a development from voiceless long lateral to voiced lateral. Rather, they may be indicative of the opposite, viz. that clusters stemming from a long voiced lateral, or from a stop plus a voiced lateral, were being devoiced thus obviating the need for distinct spellings of those clusters that already had a voiceless lateral.

By this merger "dl" came to symbolize a voiceless lateral, mostly with a preceding stop consonant symbol. This usage was generalized by Kleinschmidt, and in some cases he combined the
tendency to use a velar symbol in front of the lateral with
the use of "dl" to symbolize voicelessness, spellings such as
igdlerfik resulting from this fusion of earlier usages. Klein­
schmidt, however, distinguished between vd1, td1, and dgl to
indicate what is now a plain long voiceless lateral, although
it is not clear to what extent this was based on phonetic re­
ality. (The "g" in igdlerfik cannot be a priori excluded as
a spontaneous development, a differentiation of some kind,
but the "v" in Kleinschmidt's avdla 'other' must be totally
erroneous. A check of labialization of consonant clusters in
an archaic type of Upernavik dialect which otherwise has pre­
served quite many instances of labialization, gave a negative
result for this word as expected on comparative grounds, and
Kleinschmidt's spelling is glaringly at variance with Fabri­
cius' Adla half a century earlier.) One must fully subscribe
to Bergsland's characterization of Kleinschmidt's spellings
of such complexes as being "often without etymological founda­
tion" (1955, p. 2).

IV. CONCLUSION

The orthographical evidence strongly suggests that the voice­
lessness of the long lateral developed not as spontaneous de­
voicing but as "segmentalization" (differentiation of the con­
tinuant into stop plus continuant). The next step was devoic­
ing of all such clusters with an initial stop, and, finally,
as a quite late process which has not yet been completed in
all dialects, the clusters underwent regressive assimilation
(irrespective of their origin as a cluster or as a geminate).
The last step in this development is well attested on inde­
pendent grounds since simply all consonant clusters have under­
gone it (with the exception that ts has remained an affricate,
and that the cluster initial uvular of clusters such as r1, rf, etc. has left a trace affecting the preceding vowel).
Thus, the only weak link in this explanation is the contention
that clusters of stop plus voiced lateral became fully voice­
less. Is such devoicing inherently more likely than spontane­
ous devoicing of a long intervocalic lateral? I think it is.
The conditions for devoicing of the lateral would presumably
be favourable after a (possibly voiceless) stop, particularly
since one may expect a more fricative articulation immediately
after a (homorganic) stop than elsewhere.

Taking a well-known word such as illu 'house' (the source of
the term igloo), we may now follow the development of an old
cluster. The contention is that the spelling forms occurring
over time should be taken essentially on face value: we start
with a cluster "gl" in the oldest sources, as etymologically
expected (P. Egede: Iglo), then in the 19th century comes the
spelling with "gdl" indicating possibly both segmentalization
and devoicing (this is the spelling found in Kleinschmidt,
but actually not invented by him, cf. that Steenberg 1849 has
igdlo though his spelling is otherwise completely pre-Klein­
schmidtian), and today we have the new spelling "ll", reflect­
ing complete assimilation and merger of voiced and voiceless
clusters (so that the voiceless lateral can be taken as an allophone of /1/ in modern West Greenlandic). - Although the old spellings have been almost ridiculed, they may not have been far off the mark, and if the new orthography is scorned by some Greenlanders because of spellings such as "11", which allegedly fail to indicate the special character of the long lateral, this controversy reflects the strange fact that the digraph "dl" had come to mean "voiceless lateral" although it probably started out as a straightforward and indeed adequate marking of segmentalization (cf. the pronunciation of words such as kalla ("kadla") in various West Scandinavian languages and dialects).

With regard to such segmentalization and subsequent devoicing and assimilation interesting support may be found in the observations of Holtved (1952) on the Polar Eskimo dialect, where he reports about variant forms with regard to stop plus lateral (as in illu 'house') - exhibiting more or less exactly such a chain of development under way (and apparently compressed into a short time span, as would also have been the case with West Greenlandic some 100-200 years ago).

The old spelling evidence for West Greenlandic is sadly non-informative with respect to the various fricatives dealt with earlier, but it is tempting to generalize from the above explanation of how the lateral devoiced and suggest that such segmentalization into voiced and eventually devoiced affricate-like clusters occurred also in other instances (spellings such as bb, gg do not at all rule out the possibility that there was a change from long narrow fricative to stop plus homorganic fricative without change of orthography). The only cluster for which the spelling evidence is clearly in disfavour of this interpretation, is /rr/. Spellings such as kr, which might be expected in case there were segmentalization, are conspicuously absent, so maybe we must reckon with spontaneous devoicing here (which is not very surprising, considering the natural tendency for uvular frication to involve much stridency).

It must probably remain an open question whether the long labial and velar fricatives were segmentalized into stop plus fricative or just developed very narrow allophones favouring spontaneous devoicing. The virtue of the former assumption is that it permits a generalized account for old clusters as well as old long continuants (involving fricatives and the lateral, though apparently with the uvular taking a separate course, as it does rather generally in Greenlandic phonology), and that it provides a basis for deriving the West and East Greenlandic forms rather directly from a common denominator (the old long */11/ of aallarpooq going via the common base /dl/ or /tl/ to East Greenlandic /tt/ by progressive assimilation only, and to West Greenlandic voiceless /11/ by progressive devoicing assimilation followed by regressive articulation with regard to all other features).
Such "generalizability" is certainly no proof that the truth about these developments has been disclosed; for one thing, the alleged common denominator accounting for the strange developments in East and West Greenlandic may be at best a matter of drift, meaning that the two dialects before moving apart have passed independently through related or even identical steps of change (which may not at all have been simultaneous in the two areas, cf. the related but much belated developments in 20th century Polar Eskimo, or the now ongoing regressive cluster assimilation in Canadian Eskimo which, as it were, repeats the development of West Greenlandic a century ago).

Much is totally unknown about the earlier stages of the Greenlandic language, and especially with regard to phonology this is true even of the historical period. If progress is to be made it requires the combination of comparative expertise and painstaking philological analysis of the old sources so outstandingly reflected in Bergsland's work, going hand in hand with utilization of recent explorations in Greenlandic dialectology. The present paper just outlines one of the controversial topics on which Greenlandic diachronic phonology is so rich.

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