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THE VOICELESS VOWEL IN LAPP AGAIN

This article is an attempt to re-examine the much-discussed voiceless vowel in Lapp. It has already been pointed out that a similar "voiceless vowel" exists in Icelandic¹, Faroese², and several Swedish³ and Norwegian⁴ dialects, where it is now usually referred to as preaspiration (the term voiceless vowel goes back to Lundell; it was also Lundell who invented the sign [ɔ̥] for it). As regards Lapp-Scandinavian contacts, the crucial question is whether the voiceless vowel is a phonetic borrowing

¹ For a summary of views on Icelandic preaspiration see: A. С. Либерман, Преаспирация в исландском языке. — Скандинавский сборник XIV, Тарту 1969, pp. 106—122; *idem*, Reconstruction of Icelandic Prosody. — Science in Iceland, Vol. 2, 1970, pp. 37—38.

² O. Werner, Aspiration und stimmlose Nasale/Liquide im phonologischen System des Färingischen. — *Phonetica*, Vol. 9, 1963, Nos 2—3, pp. 79—107.

³ J. A. Lundell, Det svenska landsmålsalfabetet. — Nyare bidrag till kännedom om de svenska landsmälen ock svenskt folkliv I 1879 2, p. 86; *idem*, Grundlinjer till praktisk fonetik, Stockholm 1910, pp. 38, 52; B. Hesselman, Sveamålen och de svenska dialekternas indelning, Uppsala 1905, pp. 10—11; H. Westin, Landsmålsalfabetet för Jämtland och Härjedalen. — Bidrag till kännedom om de svenska landsmälen ock svenskt folkliv XV 1897 3, p. 32; A. Karsten, Kökarsmålet, Ljud- och formlära, Helsingfors 1891, pp. 29—30; J. Reitan, Vemdalsmålet. Med oplysninger om andre herjedalske mål, Oslo 1930, pp. 67—72; O. F. Hultman, Efterlämnade skrifter. Andra delen. — Skrifter utgivna av Svenska Litteratursällskapet i Finland 274, Helsingfors 1939, § 243, 299, 333; S. Wallström, Studier över Norrlands språkgeografi med utgångspunkt från Arjeplogmålet, Uppsala 1943, pp. 32—34; K.-H. Dalstedt, Isländsk dialektgeografi. — *Scripta Islandica* 9, Uppsala 1958, pp. 28—29. (All the above-mentioned works treat of preaspiration in Swedish dialects; those enumerated below contain some data on preaspiration in Standard Swedish.) A. Noreen, Vårt språk. Nysvensk grammatik i utförlig framställning, första bandet, Lund 1903, pp. 400—401; G. Millardet, Insertions de consonnes en suédois moderne. — *Revue de phonétique*, 1-er t., 1911, fasc. 4, pp. 309—346; P. Verrier, Observations sur les insertions de consonnes en suédois moderne. — *Revue de phonétique*, 2-ème t., 1912, fasc. 1, pp. 78—79; H. A. Rositzke, Epenthetic Consonants in Swedish. — *The Journal of English and Germanic Philology*, Vol. XXXIX, 1940, No. 4, pp. 473—485; A. С. Либерман, Преаспирация в шведском языке. — Ученые записки Калининского государственного педагогического института им. М. И. Калинина, т. 54, Калинин 1969, pp. 153—173.

⁴ J. Storm, Norsk Lydskrift. — *Norvegia*, 1-te bd., Kristiania 1908, p. 150; *idem*, Ordlista over lyd- og formlären i norske bygdemaal. — Skrifter utgit av videnskapsselskapet i Kristiania 1919, II. Hist.-filos. Klasse, nr. 3, Kristiania 1920, p. 59; R. Iversen, Senjen-maalet. Lydverket i hoveddrag. — Skrifter utgit av videnskapsselskapet i Kristiania 1912, II. Hist.-filos. Klasse, nr. 4, Kristiania 1913, pp. 24—25; H. Christiansen, Gimøy-Målet. Fonologi og orddannelse. — Skrifter utgitt av Det Norske Videnskaps-Akademi i Oslo 1932, II. Hist.-filos. Klasse, nr. 3, Oslo 1933, § 138; M. Oftedal, Jærskje okklusivar. — *Nordisk Tidsskrift for Sprogvidenskap*, 14-de bd., 1947, pp. 229—235; H. Wolter, On Preaspirated Stops in a Norwegian Dialect. — *Proceedings of the Fifth International Congress of Phonetic Sciences*, Basel—New York 1965, pp. 594—597.

in Lapp⁵, or an entity perhaps related to but not borrowed from Scandinavian, or even not related to it at all.

It is hardly possible to answer this question unless we know with some degree of certainty the function of the voiceless vowel both in Lapp and in Scandinavian dialects. There exists a rudimentary theory of phonic interference (part of the general theory of languages in contact)⁶, and there have been found some of the conditions preventing or facilitating (if not conducting to) phonemic transfer, but it is senseless to discuss whether this or that "sound" can be taken over by one speaking community from another. For this reason, before we go into the special problems of Scandinavian and Lapp let us examine the sound string [V'C] (V and C stand for any vowel and consonant, and the apostrophe designates preaspiration or a glottal stop) from a general phonological point of view.

It is readily seen that preaspiration or a glottal stop can be irrelevant. A case in point is Standard English, where there exist numerous words like *what*, *not*, etc. with a glottal stop. Some time ago the occurrence of a glottal stop could betray the speaker's origin (it was a flagrant Cockney-ism) or at least indicate the unofficial manner in which the conversation was held, but now it practically does not perform any function at all. The same may be true of preaspiration. In the Stockholm variety of Swedish, as described by Millardet and Rositzke (see footnote 3), preaspiration occurs in most long-vocalic words, but it is of no semantic or stylistic importance. In all such cases the question arises as to the function of preaspiration or a glottal stop prior to their loss of relevancy.

In theory, preaspiration can be a distinctive feature of the preceding vowel. In this case [V'C] will be viewed as a sequence of an aspirated vowel and a consonant; thus, pharyngalization is supposed to be a relevant feature of Tuvian⁷ and some other languages. The term *preaspiration* has been coined by those who insist on especially intimate ties of ['] with the following consonant. Trubetzkoy analysed the sequence [V'C] in several Indian languages of America as a vowel + a preaspirated plosive.⁸ A similar analysis was offered by Haugen for Modern Icelandic⁹.

But ['] may be an allophone of some phoneme. The first phoneme that suggests itself is /h/, and no wonder that [h] is the most usual phonetic sign for preaspiration, but ['] can be also taken for an allophone

⁵ This is the opinion of L. Posti. See L. Posti, On the Origin of the Voiceless Vowel in Lapp. — Svenska landsmål och svenskt folkliv, 76—77-te årg., 1953—1954, pp. 199—209; *idem*, On the Origin of the Finnish Word *Silakka*. — Studia Fennica XII 1965, pp. 58—65 (see esp. p. 63).

⁶ See for example: E. Haugen, The Analysis of Linguistic Borrowing. — Language, Vol. 26, 1950, No. 2, pp. 210—231; U. Weinreich, Languages in Contact: Findings and Problems. — Publications of the Linguistic Circle of New York, No. 1, New York 1953, p. 22 (cf. E. Haugen's review of this book in "Language", Vol. 30, 1954, No. 3, pp. 380—388); U. Weinreich, On the Description of Phonic Interference. — Word, Vol. 13, 1957, No. 1, pp. 1—11; R. Filipović, Phonemic Importation. — Studia Romania et Anglica Zagrabienia 1960, num. 9—10, pp. 177—189; B. Trnka, On Foreign Phonological Features in Present-day English. — In Honour of Daniel Jones, London 1964, pp. 185—190.

⁷ Of the numerous works on Tuvian pharyngalization see especially: A. Ч. Кунаа, Звуковая система современного тувинского языка, Кызыл 1957, pp. 23—25.

⁸ Н. С. Трубецкой, Основы фонологии, Москва 1960, p. 175.

⁹ E. Haugen, On the Consonant Pattern of Modern Icelandic. — Acta Linguistica, Vol. 11, 1941, fasc. 2, p. 102; *idem*, The Phonemics of Modern Icelandic. — Language, Vol. 34, 1958, No. 1, p. 72.

of a vowel (cf. Hamp's analysis of Ket).¹⁰ Equally plausible is the analysis according to which preaspiration or a glottal stop are interpreted as independent phonemes: a consonant (cf. *hamza* in Arabic), or a vowel (cf. the term *voiceless vowel*).

No less enticing possibilities open up before a prosody-minded phonologist. Indeed, a glottal stop or preaspiration can be a junctural phenomenon (as it probably is in the Swedish dialect of Vemdalén), a manifestation of length (this treatment has been suggested for a glottal stop in Lettish¹¹), or a dynamic accent (a *stød*, as in Danish):

An investigator faced with so many variants must apparently know some rules which would justify his choice. These rules are complicated and seldom sufficient, and their discussion can be no part of the present article, but the long list of variants given above will serve two aims: firstly, it will warn us against simple alternatives pretending to exhaust the problem, e. g.: Is the voiceless vowel in Lapp an independent phoneme or a distinctive feature of some consonants? Clearly, it may be neither this, nor that, but something quite different. Secondly, it will supply us with a phonological key to the question of the alleged Lapp borrowing from Scandinavian. If the borrowing under consideration actually took place, it was not just a carry-over of a voiceless vowel ("a sound") from Scandinavian to Lapp, but inclusion into the system either of a new series of aspirated vowels or preaspirated consonants or only of one new phoneme, or it might be an old phoneme (/h/ for example) that extended its distribution, etc. That is why it is so important to know what is preaspiration in modern Scandinavian languages and dialects and what it was at the epoch of ancient Lapp-Scandinavian contacts.

As we have analysed Scandinavian preaspiration elsewhere (see footnote 1), we shall only give the main conclusions here. Preaspiration in Icelandic (Icelandic is taken as the most characteristic case) differs greatly from all the phonemes of this language, for neither its length, nor the place of articulation is relevant for it. It is worthy of special note that Icelandic preaspiration is realized not only as [h], but also as [x], [ç], and perhaps even as [f], depending on the preceding vowel and the following consonant. Besides, the stress peak seems to fall on it. There is thus enough ground to believe that preaspiration in Icelandic is part of its prosody; it is, most probably, a syllable accent related to the Danish *stød*. In Swedish and Norwegian dialects, where the prosodic system of two syllable accents reigns supreme, preaspiration is rather a junctural phenomenon (relevant or irrelevant, as the case may be). The proximity of preaspiration to the *stød* becomes the more evident the farther back we trace its origin. Even at present Icelandic preaspiration has almost the same distribution as the *stød* in the West Jutland dialect of Danish. We may safely conclude that at the time of ancient Lapp-Scandinavian contacts the voiceless vowel (alias, preaspiration) in Scandinavian was a relevant acute accent.

The most detailed descriptions of the voiceless vowel in Lapp belong

¹⁰ E. P. Hamp, Notes on Ket Phonemics. — UAJb. XXXII 1960, p. 131. On Ket pharyngalization see: Г. К. Вернер, К фонологической интерпретации ларингального смычного в кетском языке. — ВЯ 1969, № 1, pp. 85—97; А. С. Либман, Слоговая акцентуация кетского языка. — Лингвистические исследования. АН СССР. Институт языкознания (Ленинградское отделение), Ленинград 1970, pp. 371—389.

¹¹ For a detailed discussion of the glottal stop in Lettish see: Вяч. В. Иванов, О прерывистой интонации в латышском языке. — Rakstu Krājums Veltījums Akadēmiskim Protesoram Dr. Jānim Edzelinam viņa 85 dzives un 65 darba gadu atcerei, Rīga 1959, pp. 133—148.

to Hasselbrink.¹² In the first of them he deals with the dialect of Vilhelmina (Västerbotten), in the latter with some neighbouring Lapp vernaculars from southern Tärna to the very frontier of Jämtland (Sweden) and Vefsn (Norway). In his book (1944) Hasselbrink analysed the voiceless vowel as an allophone of /h/. According to him, the voiceless vowel (transcribed as /h/) is realized in different sounds: notably, as a pharyngeal [h], a palatalized [h], and a velarized [h].¹³ The occurrence of this or that variant depends mostly on the influence of preceding vowels, but the following vowel affects its realization as well. Though Hasselbrink viewed all the embodiments of the voiceless vowel as modified pharyngeal fricatives, he stated that in some positions a [ç]-like sound was heard, in others a bilabial [f], etc., so that characterizing them as different [h]'s turned out to be quite an illusion. Hasselbrink was fully aware of this fact and said that by [h] he understood various fricatives which were hard to identify but whose on-set reminded him of a voiceless vowel.¹⁴ It issues from Hasselbrink's data that preaspiration in Swedish dialects of Lapp precedes fortis consonants (both short and long) and affricates.

In his article of 1965 Hasselbrink gives a more detailed phonological analysis of preaspiration in Lapp. He singles out strong and weak plosives in Southern Lapp; distinction in voice in the two rows is, according to him, irrelevant. The strong consonants are subdivided into preaspirated and postaspirated, for they stand in complementary distribution. In all aspects of principle Hasselbrink's analysis is not unlike Haugen's. Some solutions of minor importance also resemble those offered for Scandinavian languages: thus, he takes the off-glide of voiceless /l m n/ for /h/. Quite in conformity with the predominating tradition, he only considers the alternative: a distinctive feature of the posterior consonants or an allophone of /h/? The latter solution he now finds possible but undesirable, for transcribing preaspirated consonants as /hp ht hk hc hč/ would result in numerous complications.¹⁵ Unfortunately, he does not mention what sort of phonological complications he means.

I have dwelt in some detail only on Hasselbrink's works, for they contain a phonological approach to the problem; in the excellent descriptions of Lapp by Finnish phoneticians the functional properties of the voiceless vowel have not been accorded even preliminary treatment.

It is rather obvious that the voiceless vowel in Lapp is not an independent phoneme or an allophone of some phoneme, and a proof of this lies in the wide spectrum of its realizations. The phoneme may be realized in a number of widely diverging sounds, but all of them must have some property in common which distinguishes them from the allophones of any other phoneme. The only common feature of [h], [x], [ç], [f] is that they are fricatives, but it cannot serve as distinctive, for [s] is also fricative (to mention just one argument).

Neither is the voiceless vowel a distinctive feature of the following consonants. If we take an Icelandic word like *detta* [de'da] 'to drop, fall', we shall see that the syllable boundary divides preaspiration and the

¹² G. Hasselbrink, *Vilhelminalapskans ljudlära*, Uppsala 1944, pp. 102—104; *idem*, *Die Konsonanten im zentralen Südlappischen unter dem Einfluß von Akzent und Silbenstellung*. — *UJb.* 36 1965, pp. 82, 95—98, 101.

¹³ G. Hasselbrink, *Vilhelminalapskans ljudlära*, pp. 102—104.

¹⁴ *Ibid.*, p. 81.

¹⁵ G. Hasselbrink, *Die Konsonanten im zentralen Südlappischen unter dem Einfluß von Akzent und Silbenstellung*, p. 101.

post-vocalic /d/.¹⁶ The same situation seems to prevail in Lapp, and we can infer that the voiceless vowel does not enter into the consonant as its integral part. This conclusion holds even better for Lapp than for Icelandic, because in Lapp the voiceless vowel can precede affricates, and preaspirated affricates as separate phonological entities are very improbable. Again, it would be hardly correct to set up a series of aspirated vowels in Lapp, for such vowels would never occur unless followed by consonants. The voiceless vowel in Lapp seems to belong to the whole string [V'C], and it is, in all probability, a junctural phenomenon.

It is our contention that a similar medial juncture in the dialects of Sweden and Norway goes back to an acute syllable accent. The past of the voiceless vowel in Lapp is lost in almost complete darkness, but, as we shall see, the possible historical ties between the voiceless vowel and word prosody in Lapp are not to be neglected.

It is common knowledge that the history of preaspiration in Lapp is almost always incorporated into that of alternating grades (*Stufenwechsel*). Distribution of the voiceless vowel in the dialects of Lapp presents such a motley picture that there has never been anything like a uniform theory expressing the connexion between the voiceless vowel and some definite grade of alternation (for a survey of opinions see Ravila's work of 1932).¹⁷ It is not clear in what positions the voiceless vowel could originally occur and where exactly long consonants came in in the process of its rise. It is customary to trace the voiceless vowel to some epenthetic glide before long consonants¹⁸ or to a vocalized onset of old long consonants.¹⁹ Ravila (who supports the latter point of view) believes that old long consonants once split into two parts, now represented by the voiceless vowel and a plosive respectively. In this way Ravila accounts for the voiceless vowel preceding a short consonant; according to his reconstruction, a preaspirated short plosive always goes back to a long consonant, the voiceless vowels in all other positions (new-long consonants included) being traceable to analogy and such-like processes. The way of arguing is quite similar with those studying the origin of Scandinavian and Lapp preaspiration: the latter, as well as the former²⁰, prefer to look for their main cue in the phonetic development of long plosives or long vowels.

But it is possible to attack the problem in a different way. Of interest is a recent attempt at reconstructing the history of Lapp preaspiration by Schlachter.²¹ Since Schlachter's reconstruction is based on E. Itkonen's theory, we shall briefly review the corresponding pages of Itkonen's book.

¹⁶ Cf. М. И. Стеблин-Каменский, Исландское передвижение согласных. — Скандинавский сборник II, Тарту 1957, p. 208.

¹⁷ P. Ravila, Das Quantitätssystem des seelappischen Dialektes von Maattivuono (= MSFOu LXII), Helsinki 1932, pp. 18—19.

¹⁸ F. Äimä, [Review of] Ravila's "Quantitätssystem". — FUFAnz. XXI 1933, pp. 81—82; cf. P. Ravila, Der sog. stimmlose Vokal im Lappischen. — UAJb. XXVIII 1956, p. 184.

¹⁹ P. Ravila, Das Quantitätssystem des seelappischen Dialektes von Maattivuono, p. 22; *idem*, Der sogenannte stimmlose Vokal im Lappischen, p. 185.

²⁰ Cf. C. J. S. Marstrander, Okklusiver og substrater. — Nordisk Tidsskrift for Sprogvidenskab, 5-te bd., 1932, pp. 294—295; В. В. Кошкин, К вопросу о преаспирации в исландском языке. — Ученые записки Ленинградского государственного университета, № 308, Серия филологических наук, вып. 62, Ленинград 1961, pp. 41—42; P. Naert, La différenciation des consonnes en corrélation en islandais et en iéroyen. — Orbis, t. XVIII, 1969, No. 2, p. 430.

²¹ W. Schlachter, Lappisches im lappischen Stufenwechsel. — Münchener Studien zur Sprachwissenschaft 1954, H. 5, pp. 5—7.

According to Itkonen²², a closed syllable in Lapp was originally stronger than an open one. He posits the law by which intensity-peaks in a Lapp word must have originally tended to be as wide apart as possible. Consequently, the vowel preceding a closed (strong) syllable must have had a peak on its initial mora (hence the modern weak grade), whereas the vowel preceding an open (weak) syllable got its accent on the second mora (hence the modern strong grade). The stress on the first mora, according to Itkonen, caused the weakening of the postvocalic consonant and gave rise to weak contact; conversely, in the strong grade the postvocalic consonant came to be reinforced, which resulted in the rise of strong contact. Though the dependence of the consonant's intensity on its distance from the peak is too complicated to be summed up in such a simple formula (as a matter of fact, a long consonant may represent both the lengthening of the series *x*, i. e. *xx*, and the normal grade of *xx*), we shall abstain from discussing other factors which might determine the development of syllable-final consonants in Lapp, for Itkonen's reconstruction interests us only in so far, as it promotes a better understanding of the prehistory of the voiceless vowel.

Schlachter starts from the proposition that owing to an overall increase in intensity, there appeared in Lapp, in the series *x*, numerous words with weak contact in the strong grade. He maintains that this unnatural situation could be obviated in two ways: if a short grave consonant was followed by a relatively sonorous sound, the total intensity of strong contact came to be extended to it, and it underwent lengthening; but if the following consonant was voiceless, a sort of buffer sprang up which allowed the whole amount of air to be expended. According to Schlachter, preaspiration in all other positions is due to analogy.

Such hypotheses as the ones advanced by Ravila or Schlachter can never be proved. They posit processes very loosely connected with the phonological system of the language: their causal mechanism is purely phonetic, but they can sometimes serve as first approaches to more concrete phonological theories. The latter retain the core ideas of the earlier hypotheses to explain the facts whose concatenation has been brought to light before. Schlachter is practically the first to consistently use the history of alternating grades for tracing the origin of the voiceless vowel, and I believe that this prosodic orientation is the most valuable part of his reconstruction. Though speculative, it still opens the way for further historical comparisons between the voiceless vowel in Lapp and Scandinavian preaspiration.

It is obvious that all parallels between preaspiration in Scandinavian languages and Lapp must be drawn with utmost caution. In Germanic there is no grade alternation of the Lapp type, and, consequently, Scandinavian languages lack the main phonological feature, presumably operative in the rise of the voiceless vowel in Lapp. In his work on the sound systems of Northern languages, Wagner²³ almost takes it for granted that there are alternating grades in Modern Icelandic. But is it not too bold an attempt to explain away the peculiarities of Icelandic by means of a rather arbitrary solution?

It will have been seen that relations within a modern word in Lapp strongly resemble those within an Old Germanic syllable, as they are

²² E. Itkonen, *Struktur und Entwicklung der ostlappischen Quantitätssysteme* (= MSFOu LXXXVIII), Helsinki 1946, pp. 11—12.

²³ H. Wagner, *Nordeuropäische Lautgeographie*. — *Zeitschrift für celtische Philologie*, Bd. 29, 1964, H 3/4, pp. 225—298.

глухой гласный к заимствованию из скандинавского. Для этого необходимо прежде всего установить фонологическую нагрузку сравниваемых явлений в обоих ареалах, ибо споры о заимствовании никак не определенного «звука» в основе своей беспредметны. По ряду причин глухой гласный («преаспирацию») скандинавских языков следует, видимо, отнести к просодическим явлениям: резким слоговым акцентам (в исландском и фарерском) и стыку (в шведском и норвежском). Саамский глухой гласный тоже, скорее всего, реализует внутрислоговой стык. Трудно себе представить заимствование просодемы, т. е. элемента, особенно глубоко включенного в фономорфологическую ткань языка, причем с сохранением исконной функции. Однако близость между слоговой структурой древнегерманских языков (по реконструкции С. Д. Кацнельсона) и словесной структурой протосаамского (по реконструкции Лагеркранца) наводит на мысль о неслучайности сходства между саамским глухим гласным и скандинавской преаспирацией. Встают вопросы о существовании древнесеверного языкового союза или о внутреннем германо-саамском языковом родстве, но для ответов на них пока нет достоверных данных.