

FINNO-UGRIC PROSODIC SUBSTRATA IN THE GERMANIC LANGUAGES AND VICE VERSA

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INTRODUCTION

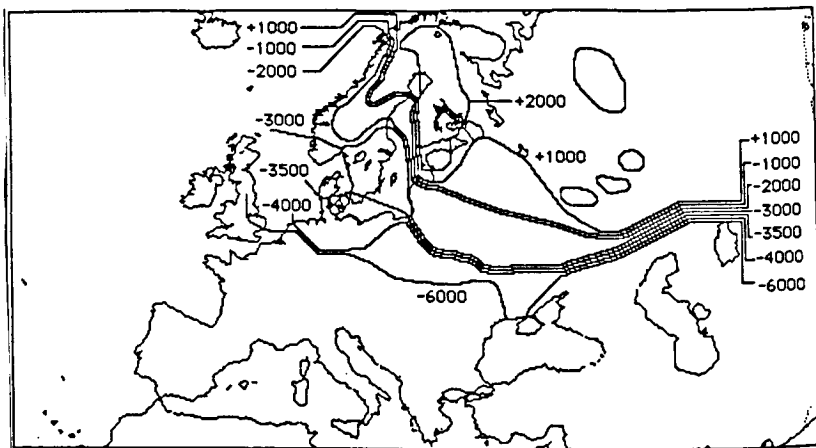
The prosodic area around the Baltic Sea has long been of interest to linguists and phoneticians. The best known presentations of this *Sprachbund* are those of Roman Jakobson and Ilse Lehiste. In this article I return to the old questions and try to give a phonetically and archaeologically oriented solution to the question of how the people of quite different linguistic backgrounds make use of similar tonal and durational features in their speech.

ARCHAEOLOGICAL/HISTORICAL BACKGROUND

One of my starting points is the contention of some modern archaeologists (e.g. Paul Dolukhanov and Milton Nunez) that the languages of the populations of the periglacial zone of the latest Glacial Period in Europe were Uralic. The periglacial zone is roughly equal to the Baltic Sea basin. Accordingly, the original language of the Baltic Sea area was Uralic, later Finno-

Ugric (FU) and later still Finnic. The Indo-European (IE) language arrived in this area with the spread of agriculture (Colin Renfrew's Model) and/or with the warlike Kurgans (Marija Gimbutas' Model). The approximate locations of the language boundary during the last eight thousand years are seen in the map below.

In addition to the gradual spreading of the IE area towards the north, there were a number of IE migrations to the northern and eastern coasts of the Baltic Sea: (1) the Baltic and partly Germanic population of the Battle Axe Culture ca 2500-2000 BC, (2) the Germanic population of the Scandinavian Bronze Culture ca 1400-900 BC, (3) the Scandinavian Iron Age population ca 200-400 AD, (4) the Scandinavian Vikings ca 800-1000 AD, (5) the Swedish population of the Crusade Period to the islands and coasts of Finland and Estonia at approximately 1000-1300 AD, and (6) the Low German and Baltic Hansa traders to the trading centers of Estonia and Latvia at approximately 1200-1600 AD.



TYPES OF LANGUAGE CONTACTS

The contacts have been of two types: either the FU people have gradually changed their language into an IE language, or the IE people have gradually changed theirs into a FU one. The former type of language shift (FU > IE) would have taken place at and near the FU-IE language boundary that has moved from northern Germany and Poland to northern Scandinavia and the southern border of Estonia. The latter type (IE > FU) would have taken place on the coastal areas of Finland, Estonia, and Latvia, where the IE settlers would have assimilated with the local indigenous FU people. The FU > IE type of language shift would have left a FU substratum in the IE languages, and the IE > FU shift would have left an IE substratum in the FU languages. As a result, the original, more or less homogeneous IE protolanguage of northern Europe was split into dialects (which later developed into independent languages) on the basis of the FU substrata left by the indigenous FU population. I believe this is the way Proto-Germanic (perhaps also Proto-Balto-Slavic) separated from Proto-Indo-European and how many of the dialect boundaries of the northern IE languages came about. On the northern and eastern coasts of the Baltic Sea, the Finnic languages were split into dialects according to the strength of the Germanic influence in them.

THE RELEVANT PROSODIC DIFFERENCES BETWEEN FU AND IE PROTOLANGUAGES

There are four relevant word prosodic differences between Proto-Indo-European and Proto-Finno-Ugric:

- (1) free stress in IE, initial stress in FU,
- (2) grave tone in IE, no grave tone in FU,
- (3) foot isochrony in FU, no foot isochrony in IE, and
- (4) vowel harmony in FU, no vowel harmony in IE.

By the term "grave tone" I mean a tonal peak that occurs on an unstressed syllable. The grave tone in the early phase of the development of the Germanic languages occurred on a "long" unstressed syllable. A "long" syllable is here a syllable that has a long vowel or a

diphthong, or which ends in a consonant. "Foot isochrony" refers to the tendency of having each foot (a sequence of two syllables, sometimes of one syllable or three syllables) of approximately equal length. In particular, if the first syllable is long, the second syllable vowel (sometimes the whole second syllable) is short, and vice versa.

STRESS

The Finno-Ugrians learning the IE protolanguage and later some of its daughter languages met a difficulty in pronouncing primary stress on a non-initial syllable and particularly in knowing on which syllable stress should be put in each particular word form. They spoke the IE language with the initial stress of their own FU language. The result was that (1) Proto-Indo-European was pronounced with initial stress in the area of northern Germany, Denmark, and Scania. In traditional IE linguistics this is the main event in the split of Proto-Indo-European into Proto-Germanic and the other IE languages. The Germanic *Akzentverschiebung* or the shift of stress to the root initial syllable is, no doubt, a Finno-Ugric substratum in the Germanic languages.

In connection with the clash of the two language systems and the resulting stress shift, the significance of the first (stressed) syllable increased at the cost of the non-first (unstressed) syllables, and also physically, more energy was now concentrated on the first syllable. This is an expected result: The physical manifestations of stress are usually more conspicuous in a language with phonological stress than in a language with only automatic (demarcative) stress. When stress was moved to the first syllable in Proto-Germanic, the physical manifestations of stress remained more or less unchanged; the change concerned only the place of stress. The result was what is sometimes called "stress enhancement" or "stress concentration". This in turn caused a large number of changes in the segmental phonology of the language. One of the consequences was Verner's Law. The unstressed syllables with a grave accent were perceived to be "too strong", if there was a voiceless obstruent at the beginning of the syllable;

i.e. these syllables did not sound sufficiently unstressed in relation to the initial syllable. To avoid the sensation of a stress peak in a non-initial syllable, the initial voiceless obstruent of these syllables had to be weakened. This took place by weakening the syllable initial voiceless obstruent into a voiced one; in other words the phenomenon of Verner's Law. Later this phenomenon was also introduced into the Finnic languages, when Germanic settlers came to the coasts of Finland and Estonia. The phenomenon there is called consonant gradation (*astevaihtelu, astmevaheldus*). According to this explanation therefore: (1) Verner's Law originated in Proto-Germanic as a tendency of keeping word stress on the initial syllable; for this purpose, certain adjustments had to be made in the voiceless obstruents. (2) When the Germanic immigrants arrived on the coasts of Finland and Estonia during the Bronze Age and Iron Age (ca 1400-900 BC and/or 200-400 AD), they still retained the custom of pronouncing words according to Verner's Law. The immigrants were unable to alter their pronunciation even when learning Finnish and Estonian. The result was that all Finnic languages that had contacts with the Germanic people acquired the same custom (Lauri Posti 1953).

ESTONIAN ACCENTS

The Estonian tonal opposition between Quantity 2 (Q2) and Quantity 3 (Q3) words is manifested as a late versus early tonal peak. The tone of Q2 is often referred to as "rising" or "level" and that of Q3 as "falling". From the point of view of its origin, the Estonian rising/level tone can be associated with the IE and Germanic grave tone. The late peak of the Estonian Q2 words sounds much like an additional pulse after the stressed syllable. The Estonian rising/level tone of Q2 occurs in the forms that originally had a closed second syllable (e.g. the genitive singular still had the suffix *n* as in *linnan*) while the falling tone of Q3 occurs in the forms that had an open second syllable (e.g. *linna-ta* and *linna-han*). In the Germanic languages, it was exactly this long unstressed syllable that was one of the reasons for the use of the grave tone.

The seemingly complicated tripartite durational system of Estonian is an

automatic reflection of the Lappo-Finnic foot isochrony. The old foot isochrony experienced one minor change, however, when the Germanic and/or Baltic immigrants adopted Estonian: they "misunderstood" the scope of foot. Foot was originally defined as the sequence from the beginning of the first vowel to the end of the second syllable vowel; thus the foot was represented, for example, by the underlined portions of the following words. *lina, linnad, linnast(a)*. When the Germanic/Baltic people adopted Estonian, they misunderstood the scope of the foot in that they included the final consonant in the foot (they did this probably because the second syllable consonant really was relevant in consonant gradation of obstruents). Thus in their speech, foot isochrony was different from the original one: If the second syllable was long (if it ended in a consonant) the foot was "too long" and its first syllable had to be shortened: *linnad > linnad*. But if the second syllable was short (if there was no consonant at the end), the first syllable had to be lengthened: *linna(ta) > linna*. The shortening and lengthening was placed on the second mora. Another reflection of the Lappo-Finnic foot isochrony is the shortening of the second syllable vowel after Q3 (e.g. *linnä* and *jammä*).

HALF-LONG VOWEL AND VOWEL BALANCE

A common feature of the languages of the Baltic Sea area is that word forms are divided into two categories, shortsyllables and longsyllables (e.g. *ma.nan* vs. *maa.nan/man.nan*) according to the structure of the first syllable. The phenomenon is based on foot isochrony, here assumed to be of Lappo-Finnic origin. It occurs in the Finnic languages and in the northern dialects of Swedish and Norwegian.

The eastern Finnish and main Estonian type with a mid-long second syllable vowel and the F0 peak on the first syllable represents the oldest type, which I assume to be "original". (b) The south-western Finnish and westernmost Estonian type with a very long second syllable vowel and the F0 peak on the second syllable vowel represents the type that was used by the Swedish immigrants of ca 1000-1200 AD. Their word prosody

was a result of a mixture of the Lappo-Finnic foot isochrony and the old IE/Germanic/Scandinavian grave tone: The second syllable with a half long vowel was interpreted to be "long" and was therefore pronounced with the grave tone.

The vowel balance of northern Scandinavia was originally a purely durational phenomenon and identical with the old Finno-Lappic foot isochrony: the second syllable vowel was relatively long after a short first syllable (e.g. *livä*) and short after a long first syllable (e.g. *bristä*); Kock 1901, p. 91-99. Later the phenomenon became a qualitative difference of vowels because the long and short vowels developed differently (e.g. *livä* and *brista/brist*).

SCANDINAVIAN WORD TONES

Swedish and Norwegian are tone languages that have the tonal opposition of the acute and grave tones. The Scandinavian tones were already present in the phase when practically all Scandinavian words were disyllabic, and when the most relevant demarcation line between two types of words lay between the words with a long/half-long second syllable vowel and those with a short second syllable vowel. The former got the grave tone, the latter did not.

STØD

The *stød* that occurs in the Baltic languages, Danish and Livonian belongs, no doubt, to the prosodic peculiarities of the Baltic Sea area. I have shown elsewhere (Wiik 1989) that the Livonian *stød* is a remnant of an earlier syllable boundary. When a word like *va.lo*, for example, lost its final vowel because of apocope, the physical manifestations of the syllable boundary remained and began to be interpreted as the *stød*. By my definition, the *stød* is an "ex-syllable boundary", i.e. a phenomenon that has the physical manifestations of a syllable boundary, but which no longer is distributionally a real syllable boundary (as it does not occur in the natural position of a syllable boundary, immediately before a CV sequence). The same explanation holds for Danish. It is commonly maintained that the *stød* usually occurs in those Danish words that

earlier used to be monosyllabic (these words usually have the acute tone in Swedish). However, the "old monosyllables" are exactly those words that even earlier (1) were disyllabic and (2) became monosyllables by losing their second syllable vowel. In the earliest phase, practically all words were disyllabic. A radical change took place when the second syllable long vowels were shortened and short vowels deleted; theoretically *man.naa* > *man.na* and *man.na* > *man.n*; real examples of Danish monosyllables with *stød*: Proto-Germanic *staina-* 'stone' and *hurna-* 'horn' > Modern Danish *ste.n* and *hor.n*.

VOWEL HARMONY AND UMLAUT

At the time of the early FU-IE contacts, the Finno-Ugrians had to pronounce words that contradicted vowel harmony. I assume the result was similar to what is happening today when Finns force themselves to pronounce a word contradicting vowel harmony. For example, they often pronounce the difficult loan word *olümpialaiset* as *ölümpialäiset*. Instead of clear front vowels *ü, ö, and ä* or clear back vowels *u, o, and a*, they pronounce intermediate vowels *ü, ö* and *ä*. I assume the same happened when their ancestors acquired Proto-Indo-European/Proto-Germanic thousands of years ago. A simple real example from that period would be that the prehistoric Finns had to pronounce the word *handir*, which contradicted vowel harmony (the harmony classes at that time were essentially *i-e-ä* and *j-o-a*). The result was something like *händir* with two vowels of intermediate quality. Later the intermediate vowels of the first syllable became independent new phonemes, as the complementary distribution of the original back vowels *u, o, a* and the new intermediate vowels *ü, ö, ä* was broken by the mergers in the conditioning unstressed vowels.