

Vowel harmony or harmonic classes?

Theoretical base of the present work relies upon the idea there are no special phonotactic *rules*, in the sense of rules as strict prescriptions of phoneme combinations that can on no account be overridden in the newcoming words. There are either *phonetic* or *morphological* rules.

Phonetic rules are automatic rules of allophonic complementary distribution depending on the context, and normally native speakers do not realize them. These are rules indeed - allophones of different phonemes in the segment chain depend on each other and can't be replaced by other allophones. It's well-known, that these rules are very much connected with the possibilities of human articulation, on one hand, and on the human perceptive abilities, on the other.

Morphological "rules" are remnants of the previous stages of the phonological systems and of the former phonetic rules that used to work once in the language. Their historical character is proved by the fact that in later derivatives and borrowings these rules lose their imperative character. So, morphological rules are not rules in the strict sense of the word, they are but stable trends in the system which potentially can be nevertheless overridden.

We claim that there's no intermediate level between these too - there are no strict and firm combination rules for *independent* phonemes (not for allophones), that can never be overridden. When an allophone becomes separate phoneme, it automatically receives certain independence in the system and that's why it can be used independently of it's usual context in the segment chain for shaping new borrowings and derivatives.

Of course there's a certain vague period of allophonic change into phoneme, but if to look carefully at the system, especially at the borrowings, one can usually find evidence if a certain segment is still an allophone or already an independent phoneme, which in the overwhelming majority of the is still used only in certain positions - the heritage of the recent allophonic status - but has already gained power for enlarging its combination abilities. For example, in Gouro, one of the South Mande languages (Côte d'Ivoire) sonorants used to have oral and nasal allophones, depending on the adjacent oral/nasal vowels in the syllable. But different variants of the orthography for this language were being created by the French language speakers, and in French oral and nasal sonorants are separate phonemes. So, French scholars tried to distinguish them in gouro as well, which already created a very powerful premises for the beginning of phonologisation process in this language. Though, it was not of course an imperative that phonologisation would necessarily happen. And in original gouro words we can't find any exceptions. But among the latest borrowings one finds such examples as the word *lāmū*¹, originating from the French *lame* 'blade', with an oral vowel after a nasal consonant. This gives us quite solid grounds to believe that the turning point of phonologisation has been already passed.

If we look from this point of view to the so-called vowel harmony existing in the Finnic languages, it proves to be purely morphological. Even in Finnish where it seems to be the most consistent there are examples even in the original words where back vowels follow the front ones (*merta* 'sea.Part'). There are no firm automatic phonetic rules any more in the system, that would prescribe the appearance of front or back vowels in the word, depending on the first vowel in the chain. And if we consider the borrowings which show the living tendencies in the language, we won't be able to formulate any clear rules for their distribution (for example, the word *analyysi* may add both *ä* and *a* as Partitive suffixes). Though, for Finnish, and also for some other Finnic languages, a distinction between the two word classes, depending on their structure, is still relevant - not so much for the phonology itself, but for the

¹ Middle tones are marked over the vowels.

morphonology, namely for the rules of adding one of the two affix variants which usually differ by either front or back vowel.² If we take, for example, Votic (Jõgõperä dialect), the morphonologic affix variants here can be opposed not only by vowels, but also by the means of velar *ʔ* and palatal *ʲ* (cf. *maa-ʔ* ‘land-Adess’ vs. *järve-ʲll* ‘lake-Adess’). “Frontness” is marked in this language, comparing to “backness”, first of all in the morphonological sense - to add the “front” affix variant, the stem shouldn’t contain any back vowels and velar *ʔ*. For example, *elä-mä* ‘live-Sup’, *tüttö-ä* ‘daughter-Part’, but *suva-ma* ‘love-Sup’, and also *tüttärikko-a* ‘girl-Part’ (where word-formative suffix can still be distinguished on the synchronic level, though the border between suffix and stem is not clear enough) and *pääsko-a* ‘swallow-Part’ (where word-formative suffix can synchronically be no more distinguished). The claim that such compatibility is pure morphonological and not phonetic (automatic) is supported by the fact that there exists later suffix *-ka/-ga-* (Comitative) which doesn’t have any front variants and is added to both “front” and “back” words - not only *pääsko-ga*, but also *tüttö-ga*.

The term ‘vowel harmony’ may confuse because it implies phonetics, and here is more to do with morphonology. This term may be thus applied to this system only metaphorically, and metaphors are not a very useful quality for the terms. Trying to define this phenomenon more carefully, we would better propose a term “harmonical class”. Votic formative stems (root+derivational suffixes) can be divided into two morphonological classes, depending on their syntactic abilities. Namely, if for a particular affix there exist 2 morphonological variants, the harmonic class value of a particular formative stem tells us which variant should be chosen while inflecting the word. But if there’s only one affix variant, then we just add it, no matter, if it “harmonically matches” the word or not. If the word is not inflective, namely, it doesn’t add affixes, we can never tell, which class it belongs to, and in fact there’s no need for it (for example, words like *veel* ‘yet’, *enn* ‘before’). Then, there’s no need to distinguish between “back” (containing only back vowels and velar *ʔ*) and “neutral” (containing vowels of different rows, such as *pääsko*) stems³, because they both add the same affixes.

We somehow need to name these two classes. The most accurate and the least metaphorical way would be just to ascribe numbers to them - first class (unmarked) and second class (marked). The terms “back” and “front” classes are too inexact and too metaphoric, taking into account that not only vowels but also *ʔ* and *ʲ* participate in shaping of these two classes. That’s why numbers seem more preferable for us.

“Vowel harmony” is no living (phonetic) phenomenon at all in this language (as in other Finnic languages as well). When phonologists try to describe the rules of it, they need to use very sophisticated models. They divide vowels themselves into three categories - “back”, “front” “neutral”, which is already not a pure phonologic division, because there’s no such a term in phonology as “neutral vowels”. Then they need to distinguish between different kinds of word formatives, some of which “switch” the vowel row from front into back (like the suffix in the word *tüttärikko*). If we add numerous Russian borrowings in Votic here, the picture will become even more unclear. It seems to us, that there’s no use of trying to calculate any phonological rules here, because once *ä*, *ö*, *ü* and *õ* [y] vowels became separate phonemes in Votic, they gained independence and furthermore, due to the processes in the language itself and also to the borrowings, have got such types of combinations that are not present in the basic vocabulary. And it’s just due to the chance, that *a*, *o* and *õ* can be found in the such derivational suffixes, which don’t have “front” variants, and thus are able to “switch the row” and suffixes with *ü* always have a twin variant with *u*, so *ü* is unable to “switching”.

² Both “front” and “back” variants may also each have two variants with either weak *t* or strong *tt*, but it’s out of the question in present paper.

³ As it’s done in the work Markus E.B. Tipologija morfemnogo varjirovanija (na materiale morfonologičeskikh sistem govorov vodskogo jazyka)”. M., 2006, where we also took some Votic examples from.