ON FOUNDATIONS OF HISTORICAL PHONOLOGY

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ABSTRACT

Investigation of historical phonology of a language group may include several cycles each consisting of five stages. Main problems concern the correctness of phonological solutions for source languages and the typological reliability of reconstructed phoneme systems and phonological changes. Perspectives of predictive historical phonology are discussed.

INTRODUCTION

Historical phonology stems from the so-called historical phonetics. Despite its name, historical phonetics, actually, had to manage without any objective phonetical data about most languages whose history was dealt with. On the other hand, several historical phoneticians of the prephonological period possessed a remarkably good understanding of the possible directions of sound changes, of the conditioning role of the sound system in particular sound changes, and of the variant/invariant relationship. Hence it makes no sense to try to draw a strict borderline between historical phonetics and historical phonology on the basis of different authors' terminology. What is far more significant, is the existence of cycles and natural stages of investigating the historical phonology of related languages.

1. STAGES OF HISTORICAL INVESTIGATION

Ideally, any exhaustive study of the historical phonology of a set of related languages (e.g. of a language family) should begin from investigating groups of closely related languages (the first cycle) and then unite these groups and more remotely related languages step-by-step into bigger groups in order to repeat the procedure until all the related languages are included. Each such cycle consists at the utmost of five stages.

(1) Establishing for each positional (paradigmatic) class of phonemes (consonants or vowels) or phoneme sequences its set of correspondences on the basis of the cognate set of the language group.

(2) Reconstruction (a) of positional phoneme classes of the protolanguage *L of the language group on the basis of the correspondence sets and (b) of the consonant and vowel systems of *L on the basis of the reconstructed positional classes.

(3) Reconstruction of lexical items of the protolanguage *L in terms of the reconstructed phonemes on the basis of the cognate set.

(4) Reconstruction of the sets of ordered phonological changes necessary to derive all positional phoneme classes and all phoneme sequences of each language L of the language group from those of the protolanguage *L.

(5) Building a family tree or a family-tree-based net for the language group on the basis of ordered phonological changes.

The interrelations of a cognate set and of the five stages are presented on the following scheme:

Note, however, that any further stage of a cycle may cause corrections at some earlier stage.

2. PROBLEMS OF PHONOLOGICAL RECONSTRUCTION

The quality of an investigation depends on several factors:

(a) on the choice of the most realistic phonological solution for each related language (on a stage preliminary
Nevertheless, only a reliable reconstruction can be correct although there are no correctness criteria for reliable reconstructions. Still among several competing reliable reconstructions one may prove to be more reliable than the others. In any case, a complicated language like Estonian has many phonological solutions. Most of them are wrong and thus may serve as a source of a wrong history.

2.2. In reconstructing a phoneme system, every correspondence must be treated as a phone whose functional properties are unknown. Hence, an exhaustive set of phoneme correspondences should not include correspondences established on the basis of suspicious or ambiguous cognates. Inclusion of suspicious or ambiguous cognates and aberrant correspondences in the data body covered by reconstructions would probably falsify the history. There are, however, cases where the initial environments of observable correspondences have been lost. In such cases the reliability of reconstructions depends first of all on the number of correspondences covered by reconstructions on condition that no relatively big cognate set is ignored, e.g., the set of Pernian (Pino-Ugric), i.e., Proto-Permic (the 1st row) and Proto-Udinese (the 2nd row). The number of the vowels of the first syllables in Table 2, a and e, are corresponding, respectively, to §2.1 and to §2.2. The number of the vowels of the second syllables in Table 3, a and e, are rising mid vowels. For each correspondence, the number of the vowels is indicated. The number is underlined if the correspondence occurs in the stem-final position.

### Table 1

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<th>Naol</th>
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In Table 1 vowel and consonant length is indicated by means of upper diacritics, cf. (in the increasing order): (a) short vowels; § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § § Section 1.2.1 Se 101.2.1 Se 101.2.3 Se 85

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### Table 3

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This table shows the number of attested correspondences whose number of attested correspondences whose correspondence occurs in the stem-final position.
Estonian, on the other hand, reveals no tendency to lengthen the initial components of diphthongs even when they have a relatively short final component (in quantity 2). North Estonian dialects rather represent different stages of lowering of the final components u and i under the influence of the quality of the following consonants.

3. PREDICTIVENESS IN HISTORICAL PHONOLOGY

Apparently, establishing the necessary conditions of changes like those discussed in 2.3 is a task of historical phonology. Such a task, in a nature, that historical phonology must become predictable at least in the weak sense of predictiveness: it must be capable of estimating the possibility or impossibility of one or another change. Doubtless, predictive historical phonology has higher requirements for the quality of synchronical phonological studies than does the current synchronical phonology. Synchronical phonology can often well manipulate any data of a local dialect or a standard language having only an impressionistic knowledge of manner and place of articulation. Predictive historical phonology needs considerably more concrete knowledge. One must be able to satisfactorily characterize the differences of "the same phoneme" (a) in different positional classes of the same language or dialect and (b) in similar positional classes of different languages or dialects. Nevertheless, collecting the relevant data on different phonological changes and their prerequisites is a task of typology rather than historical phonology. Hence, phonological typology must change from a branch that eagerly deals with collection and classification of both correct and incorrect impressionistic data into one that carefully checks up the correctness of the data it manipulates. The perspective of predictive historical phonology demands that the role of abduction in phonological changes must be reviewed. Abductive changes, singled out by H. Andersen, are claimed to be unpredictable [5]. Actually there are maybe only two classes of unpredictable phonological changes: (a) sporadic and (b) those conditioned by speech disorders of a prestigious member of a little language community. The most striking examples of abductive change are rather chains of entirely natural single changes. The output of other examples of abductive change still contains features known from the input stage of the change. Such changes result from the effect of a set of universal tendencies whose actual number, scope and structure is still unknown. E.g.:

1. The number of phonological rules in a grammar tends to be minimal.
2. The domain of a phonological rule tends to be minimal.
3. The phonological complexity of a phoneme sequence (syllable, stress group, word) tends to vary periodically.
4. The number of phonemes in a phoneme system tends to be minimal.
5. The length of allomorphs of a language tends to be minimal.
6. Phoneme mergers tend to follow the principle of minimal articulatory efforts.

The first three tendencies are, probably, consequences of the tendency to minimize the volume of brain work. Thus it is more economical to memorize frequent inflectional forms and phrases than to compose them again and again. Tendencies (4) and (5) have partially opposite effects: tendency (5) may cause an increase both in the number of phonemes and in homonymy. As these tendencies act persistently they must be considered both in historical and synchronical phonology.

REFERENCES