ON METHODS OF RECONSTRUCTION

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#### ABSTRACT

The inventory of the methods of reconstruction must be extended so that it should comprise the methods of comparative, internal, graphic and external reconstruction. The scope of each method needs further specifications as well.

### INTRODUCTION

The reconstruction of earlier states and processes, their absolute and relative chronology in the history of a language ranks among the central problems of diachronic linguistics and diachronic phonology in particular. In a wide sense, reconstruction is synonymous with diachronic linguistics. In a narrower sense, reconstruction means techniques, or methods, of recovering earlier forms of a language. Traditionally, there are distinguished two methods of reconstructions: comparative (CR) and internal reconstruction (IR). However, the wide range of the technical means used in diachronic linguistics cannot be reduced only to these two methods. In addition to CR and IR there are theoretical as well as practical reasons for distinguishing the methods of graphic and external reconstructions (GR, ER). GR is in fact distinguished by Lehmann /1, pp. 63-81, 83/ when he discusses the use of written records as one of the methods of determining linguistic change. Milewski

/2,pp.137-138/ distinguishes the "traditional philological method based on comparative analysis of old texts", whichkakin to GR. Birnbaum /3, p.97/ singles out ER, which as the first method of diachronic linguistics is differentiated between his three fundamental types of reconstruction as based on extraneous linguistic elements (borrowings, loan and foreign words, non-native proper names, etc.).

## GRAPHIC RECONSTRUCTION

In the case of alphabetic writing, GR is the most reliable method among all the possible methods of reconstruction. GR is especially effective when based on what is called phonemic alphabets (as opposed to morphophonemic alphabets), in such languages as Old Greek or Old English. The essence of GR is in establishing the graphs and the graphemes, the relationship between the graphs and the sounds, between the graphemes and the phonemes in the language of the texts under analysis (cf. the use of spelling evidence when establishing the sounds and phonemes of Old, Middle and Early Modern English, as in /4/). Thus alphabetic writing provides the most valuable evidence for the inventory and distribution of sounds and phonemes in a language at a certain stage of its development. Moreover, graphic evidence helps reconstruct sound changes and their chronological order, However much

Graphic evidence may be used in reconstructing paradigmatic and syntagmatic. segmental and prosodic, phonological and phonetic systems and changes, but such evidence is more scarce and less reliable for reconstructing prosody and phonetics. The loss of phonemes and oppositions is almost immediately reflected in spelling by indiscriminate use of formerly contrasting graphs, or by the use of one symbol instead of several initial ones, or by reverse spellings. The rise of phonemes and oppositions is usually reflected in spelling by the creation of new graphs, or by a contrastive use of two available graphs. though writing in this case is more conservative. Spelling usually reflects purely syntagmatic changes. Yet it is necessary to bear in mind that some phonological changes, both paradigmatic and syntagmatic, are not attested by spelling at all. First of all, this is true of many mutually related sound shifts which lead to replacement of oppositions and correlations (cf. the Great Vowel Shift. or the replacement of the consonantal correlation voiced vs. voiceless by the correlation fortis vs. lenis in Modern English. /4. §§ 194-196. 199/). Yet even in such cases occasional spellings may occur. indicating sound change of one type or another. Purely phonetic changes regularly are not reflected in writing, yet in special cases writing gives ample evidence of phonetic changes as well. Thus diphthongs as gliding phonemes are regularly spelt with digraphs. The choice of letters for the elements of gliding may indicate phonetic realizations of diphthongs, as well as changes in their phonetic realizations (cf. Old English diphthongs. /4. §§ 153-154/).

depends on what is actually reconstructed.

GR provides important evidence for other methods of reconstruction, so we may say that it precedes IR and CR; on the other

hand, it may equally need a support by evidence provided by other methods of reconstruction.

#### INTERNAL RECONSTRUCTION

IR is based upon the comparison of genetically or structurally related elements from the same language and the same dialect. The method of IR is important in that taking no outside language into account it helps reconstruct earlier sound elements and patterns (quite recent and prehistoric ones as well) together with most important data concerning the distribution of the sound elements. IR helps establish, however, only relative, but not absolute, chronology. This method takes into account first of all morphophonemic alternations, such as Old English deg dagas(/ee/-/a/, /4, § 112/), fyllan full (/u/ - /u/, /4, § 142/), Modern English was - were (/z/ - /r/). frost - frozen, house - houses (/s/ - /z/), break breach  $(/k/ - /\check{c}/)$ , long - longer (/n/ -/ng/), without regard to morphological classes. In this case the effectiveness of IR depends upon the paradigmatic similarity of alternating phonemes and the possibility to recover the conditioning phonological factors of alternation. The method may be complicated and restricted in its application (cf. such cases as bring brought) and finally made altogether inapplicable by successive changes of sounds and morphenes, and, naturally, complete mergers of allomorphs. One has to admit that sometimes alternations exist as morphological interchanges from the very beginning without any sound change involved (cf. ablaut of the type sing - sang). IR may also be based upon the principle of pattern congruity. Such reconstructions considerably widen the scope and possibilities of IR and they may be no less cogent than those based on alternations (cf.

the different treatment of the "second fronting" in West Mercian and Kentish proceeding from the different patterns of the short vowels of the two dialects, /4, §§ 147-150/). We still remain within the limits of IR when we base our assumptions on relationships between subsystems of the sound structure, e.g., between prosody and segmentics, paradigmatics and syntagmatics, or on interlevel relationships between the sound structure and morphological, syntactical and even semantic patterns, as well as on typological maxims. Typological maxims impose two constraints on reconstruction: the sound changes must be typologically acceptable as processes and the proto-forms and the proto-language must be typologically acceptable in a static sense /5/. This broad treatment of IR is much in accord with Kurylowicz's approach to it /6/.

Ideally speaking, IR should precede CR:in the first place pre-forms and pre-languages are established by means of IR and then the CR of proto-forms and protolanguages is carried out (cf. /7, p.156/.

#### COMPARATIVE RECONSTRUCTION

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The traditional method of CR hardly needs any further elaboration (see, among other works, /8/). It is based upon the comparison of genetically related elements from cognate languages and dialects of the same language. Otherwise it may be said that CR deals with the facts of different dialects of the same language or different languages within the same language family. Moreover, it must be added that a contrastive treatment of evidence from earlier and later stages of the same language should be considered as belonging to the method of CR as well, for such evidence is drawn actually from different linguistic systems. The comparative method has proved to be of special importance in prehistoric reconstructions.

# EXTERNAL RECONSTRUCTION

ER may be based on linguistic and nonlinguistic data. Linguistic data may be provided by language contacts, in the form of borrowings, loanwords, foreign words and names. The interpretation of the descriptions by orthoepists in terms of modern linguistics may also be considered as a procedure of ER based on linguistic data. Non-linguistic data may be provided by archaeology, history, onomatopoeia (e.g., records of animal cries).

#### CONCLUSION

From the methodological point of view, it is important and possible to distinguish and define more exactly four methods of reconstruction: GR, IR, CR and ER. Practically, however, it is possible to achieve reliable reconstructions only as a result of a combined use of several methods of reconstruction. In a sense it is true that there is no "method of internal reconstruction as distinct from a method of comparative reconstruction" /9, p.116/, or from any other method of reconstruction.

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