

Glottochronology and Lexicostatistics **Starostin's method: Past and Present Perspectives**

Glottochronology, developed by Morris Swadesh in the 1950s, many times served as a subject to a sharp criticism. The series of critical works ([Fodor 1961], [Bergsland and Vogt 1962], [Chrétien 1962] etc.) had brought into question both its basic assumptions (Swadesh's postulates) and mathematical apparatus till it seemed to be completely discredited. Since then a lot of attempts to modify glottochronology have been made. One of them, proposed by the Russian linguist Sergei Starostin, gradually developed into a holistic approach towards not only glottochronology but also lexicostatistics in whole.

In his works S. Starostin detects two chief reasons, explaining the inadequacy of the glottochronological method in most cases:

1. Regarding of borrowings, contained in basic lists (BL), as lexical replacements (or as cognates) in glottochronological calculations (thus exclusion of eleven Danish, three Swedish and two German loans from Riksmal's basic list convincingly resolves Bergsland and Vogt's controversy).

2. Incorrectness of the analogy between radioactive decay and lexical replacement. Starostin reconsiders the 3rd and the 4th Swadesh's postulates by bringing forward the following improvements:

a) A word in contrast to a neutron can become 'older' and the probability of its retention in BL diminishes with the course of time. Thereby the rate of replacement is not a constant, but increases in direct proportion to time.

b) Different items of the BL are not homogeneous by their stability and have different retention rates. Therefore words should be replaced in turn, beginning with the least stable and going on to the more stable. This causes the average rate of divergence to slow-down, as the most stable items progressively dominate in the wordlist.

As shown in Starostin's works, these improvements made it possible to obtain much more reliable datings than those of classical glottochronology. On the other hand, S. Starostin himself pointed out several shortcomings of the method such as:

1. A contradictory nature of the introduced improvements, which is hardly can be interpreted according to the present conception of language development.

2. Objective problems with synonyms and loanwords in compiling the wordlist.

3. Impossibility of any statistical procedure both in glottochronology and lexicostatistics.

In this paper a thorough examination of Starostin's method will be given. On its basis, we will try to reveal the main reasons of the imperfections, mentioned above and several others. After this a new approach (alternative to 'root glottochronology') towards the modeling of lexical processes in comparative-historical linguistics will be proposed and considered.