

PROBLEMS OF MACHINE MODELING
OF VERB PARADIGM – I

In any of the Georgian language grammars so far the classification of Georgian verb patterns generally follow the Latin grammar model (with the category of voice as a main classifier); that is why it is impossible to identify logical groups of different kinds of verb forms as conjugatory units.

I think it would be better to identify a verb pattern with vowel prefix rather than any of the morphological-syntactic, morphological or semantic categories as a main classificatory unit of verb forms. In its turn, a stem of a given pattern (form) of the verb may involve a few morphological or semantic categories. Therefore, when modeling machine translation of the Georgian language a formal paradigm, constructed according to morphological patterns, must confront a sum of semantic nuances; namely, for paradigm members that are built according to a similar morphological pattern a specific semantic field has to be defined. In such case, it would simplify the development of “understandable” logical formulas / rules/ for a machine (programming).

I believe a complete paradigm of verb should involve not only the forms of conjugation categories (tense, aspect, mood, person and number) but also the forms of the so-called voice, version and contact. The Georgian language verb forms may be grouped into the following five main patterns according to the vowel prefixes: 1. a stem without a vowel prefix; 2. i+stem; 3. u+stem; 4. a+stem; 5. e+stem.

Each of the main patterns has its variants which differ from each other by affixes, for instance: v-i-mal-av, v-i-mal-eb-i, etc. v-a-ñat-av, v-a-ñat-v-in-eb, v-a-ñat-i-var, etc. Each of these variants has its own screeves – forms that are formed by affixes of another rank; these forms differ from each other either by tense, mood, aspect or several semantic categories simultaneously.

It is obvious that vowel prefixes represent morphemes of the same rank, however, at this point in research it is complicated to identify such (similar) grammatical meanings for them that will enable us to discuss the vowel prefixes as markers of one morphological category). In my opinion, formation of verb patterns (construction of forms) with different valency and semantics is a common function of vowel prefixes.

In my previous researches I have presented the Georgian verb forms as a three-level hierarchical paradigm where each pattern of the first level theoretically integrates all patterns of the second level, while each pattern of the second level integrates all patterns of the third level.

The proposed article briefly describes common features of the forms of each level. The scheme of hierarchical interrelationship of verb forms on all three levels could be presented the following way: verb stem > verb patterns > screeves > forms of person and number.

