

Achievement and accomplishment encoded by Polish verbal prefix: a formal approach

This paper defines an aspectual system encoded by Polish verbal prefixes and proposes its formal description in the framework of topology and combinatory logic showing how the diachronic relation between preposition and prefix contributes to aspectuality.

Slavonic aspect is considered as an opposition between the imperfective and perfective form of a verb. Traditionally, this category is seen as purely grammatical one and thus encoded by inflectional morphemes (suffixes). It follows that linguists refuse aspectual character to verbal prefixes as they are leading to lexical derivation. And if some positions let the prefixation enter the aspectual door, this is under the condition that prefix does not change the meaning of the basic imperfective verb.

Verbal prefix marks perfective aspect (with exception to some verbs basically perfective). The traditional semantical interpretation of this application refers to the completion of the ongoing process. We argue in this paper that aspectual category can be seen in the broader sense if we provide a strong metalanguage for its description.

Let us consider the examples below:

- (1) *Jan pisał^{IMPF} list*
write.PAST letter
'Jan was writing a letter...'
- (2) *Jan **na**pisał^{PERF} list*
on-write.PAST letter
'Jan has written the letter'
- (3) *Jan **do**pisał^{PERF} list*
Jan to-write.PAST letter
'Jan has finished writing the letter'

In the classical view, only the prefix *na-* 'on' in (2) could be considered as aspectual marker as it does not change the meaning of the verb *pisać* marking merely its 'completion'.

The aspectual description we propose, takes into account all prefixes applicable to a verb. Such point of view supposes that the definition of 'completion' has to be re-examined. First of all, the meaning of the prefix originating from the preposition does not necessarily express the end of the process (like in 2) but it can mean one of its phases (the completion of the end, like *do* 'to' in 3). Secondly, aspect is not limited to the verb only, but it concerns all terms of the predicative relations. Consequently, at the same time as the process has been completed, the object (in 2 and 3) has been modified.

The simultaneous completion of the process and object modification (or a place changing – for the verb of movement) we shall call an *achievement*. The simultaneous completion of the process and the changing of the agent's states we shall call an accomplishment (*zatręsknić* 'to have missed', *przejsć się* 'to have gone for a walk').

We propose a formal description of aspect by means of topological intervals. On the other hand, the combinatory logic permits to show the compositional character of aspectual operators at different levels of representation. These formalisms clearly contribute to compare aspectual category cross-linguistically allowing to develop the rules for natural language processing in applications like time ontologies or temporal and spatial information retrieval.