

## Event structure and lexical semantics in a scalar approach to actionality

[Submission for the main session, subdomain of theoretical perspectives and actionality/Aktionsart]

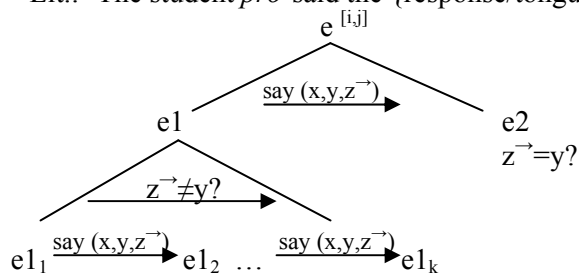
Scalar approaches to the description of temporal progression of events and its impact on the entities denoted by verbal arguments have contributed greatly to the understanding of fine-grained aspectual characteristics of change-of-state predicates (Jackendoff 1996, Hay et al. 1999, Kennedy & McNally 2005, Kennedy 2007, etc.). Given that the verb, in and by itself, almost never lexicalizes a scale, the contribution of its arguments becomes essential for defining the change expressed by the predicate. However, scalar properties of the nominal arguments are still largely unaccounted for; they are usually treated as pragmatic or referential attributes (Kennedy 2010, Hay et al. 1999, Kagan 2013) and not as syntactically relevant lexical-semantic features.

The model of Dynamic Event Structure, framed within the Generative Lexicon theory (Pustejovsky 2013, Mani & Pustejovsky 2013, Pustejovsky & Moszkowicz 2011) aims at filling in this gap. It claims that the *qualia relations* (basic parameters of lexical meaning, such as function, origin, internal constituency and semantic class, cf. Pustejovsky 1995) define the nature of nominal scales and determine the way they interact with the aspectual information provided by the verb. This model structures the event in identifiable phases or subevents; states and processes can represent independent events or be combined to derive complex events (transitions). Within each phase, it allows to track the change of a scalar attribute over time, by representing it as a sequence of states related to time points or intervals, and by assigning and reassigning values to the variable referring to this attribute. State-to-state transitions are brought about by *programs* encoded by the verb and the relevant arguments. The program is iterated until a *test* is satisfied, i.e. until the telos or a weaker temporal boundary of the event has been reached. The role of nominal semantics is two-fold: it provides the gradable dimension and serves as a *test* for the event completion.

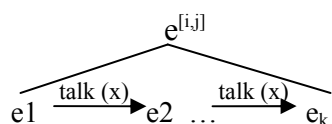
We argue that this compositional and lexically-oriented approach can be applied to analyze scalar properties of Russian Aktionsarten. The meaning of derived prefixed verbs can be accounted for by postulating an underspecified and unique meaning for the prefix and reducing the variability in its interpretation to the difference in the base verb semantics and how it is combined with the meaning of the relevant arguments, in particular their scalar attributes. Such an approach should specify 1) which element (the verb, a compulsory argument, an adjunct) provides the scale of change, 2) what is the completion test determining at what point on the scale the event stops, 3) what is the relation of change with the temporal dimension, which is inherently scalar.

In order to illustrate this approach, let us consider the following examples of the verb *progovorit'* 'pro-say/talk' and a simplified representation of their Dynamic Event Structure. The base verb *govorit'* is a manner verb (Levin & Rappaport-Hovav 2011), therefore it cannot provide the scale by itself. As most *pro-* verbs, *progovorit'* is usually ascribed to two different Aktionsarten: terminative (when it denotes a completed event with a theme object, as in (1)) and perdurative (when it denotes a non-culminating event limited to a certain time period, as in (2)).

- (1) *Student progovoril {otvet/skorogovorku/molitvu} (za sčitannye sekundy).*  
Lit.: 'The student *pro*-said the {response/tongue twister/prayer} (in a matter of seconds)'



- (2) *Studenty progovorili {do utra/čas/vsju noč}.*  
Lit.: 'The students *pro*-talked {till morning/one hour/all night}'



The predicate in (1) is an extended transition, a process followed by a change of state. It has a creation or reproduction meaning, which emerges as a consequence of the identity of qualia values of ‘talk/say’ and ‘response/tongue twister/prayer’: the latter are informational objects generated by the ‘say\_act’. Two kinds of scales are combined: an ordinal scale, which drives the incremental change (gradual creation of a response, denoted by the incremental argument  $z^{\rightarrow}$ ) and a nominal scale encoded by the direct object (y), against which the completion of the event is measured (the event stops when  $z^{\rightarrow}$  becomes an answer).

In (2) there is no test specifying the telos, the direct object merely refers to the length of the interval [i,j], during which the event occurs. Since there are no scalar properties available for measurement, time takes on the role of last-resort scale (cf. Součková 2004): the structure of the situation does not depend on it (there is no distinguishable difference between phases of the event corresponding to different time points), it merely determines its overall duration.

This approach also allows accounting for scalar properties of the so-called lexical uses of Russian verbal prefixes, which are considered to alter the meaning of the base verb beyond its aspectual features.

- (3) *Student progovoril vse den'gi.*  
 ‘The student spent all the money on talking (on the phone)’
- (4) *Student progovoril vsju lekciju.*  
 ‘The student talked through the lecture’

The scalar properties of (3) and (4) are strikingly similar to (1) and (2). The predicate in (3) resembles (1) in that it is an extended transition, although its interpretation is not as straightforward as in the latter case. The scale is provided by the direct object *money*, and the reference to the event of spending is retrieved from its qualia structure: money is used to pay for an artifact or an event (here, the ‘talk’ event). ‘Talk’ is a manner predicate modifying the implicit change-of-state ‘spend’ event. (4) is like (2) except for the fact that the time interval delimiting the talking corresponds to the duration of the event ‘lecture’. The ‘talk’ event annuls the intended goal of the lecture (‘be listened’, encoded in the telic quale of ‘lecture’), hence the implicature of ‘missing the goal of the event, not performing as expected’.

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