

ASPECTUAL COMPOSITION: NEW EVIDENCES

PHILIP I. DUDCHUK
Moscow State University

1. THEORETICAL ISSUE OF THE TALK.

The formal semantics introduced the idea of compositionality suggested first in (Frege 1892) into researches of the aspectual meanings of a clause. The theories of the aspectual composition (Krifka 1986, 1992, 1998; Verkuyl 1999, 2001, 2002; Filip 1999; Partee 1995; Dowty 1988, 1991) showed that the telicity feature of a clause is derived from the similar features of its constituents. They appear to be the feature of the quantification of the internal object and the eventuality type of the verb (dynamic or stative). The classic approach in (Vendler 1967) suggests that the whole set of aspectual features is determined for each verb in the lexicon, and the idea of compositionality makes the modern theories differ from the Vendlerian one.

Predication (1a) is atelic, and (1b) is telic, this fact is proved by the tests with durative adverbials.

(1) English

- a. John ate [apples]_[-QUANT] {for three hours/*in three hours}.
- b. John ate [the apples]_[+QUANT] {*for three hours/in three hours}.

Such a changing of telicity feature as in (1) seems not to be able to be explained in terms of Vendler's aspectual classes. In the compositional framework it is argued that this changing takes place because of the difference between quantificational features of internal objects in (1a) and (1b). Nowadays there are two the most elaborate theories: the PLUG theory developed by Henk Verkuyl and the mereological approach of Manfred Krifka. These theories analyze the quantificational properties of the internal object differently. Now I will expose the main ideas of the two theories.

1.1. THE PLUG THEORY, HENK J. FERKUYL (1999, 2001, 2002).

The main assumption of the theory is that each constituent of the predication is provided with a feature that is able to change its value and may be either positive or negative.

Thus each of the predicate's arguments is provided by the [α SQA] feature opposition, 'specified quantity of A', where A is the denotation of the head noun. Such NPs as *a house*, *two houses*, *the houses* are [+SQA], and such ones as *houses*, *milk* are [-SQA].

The verb is provided with the [α ADDTO] feature opposition, additivity of the situation described by the verb; normally, non-stative (dynamic) verbs are [+ADDTO], dynamic verbs are [-ADDTO] specified.

Finally, on the VP and the whole predication there is [\pm T] feature, the terminativity that indeed provides the telicity of the predication. Thus in Verkuyl's theory the structure of the predication is as on Figure 1.

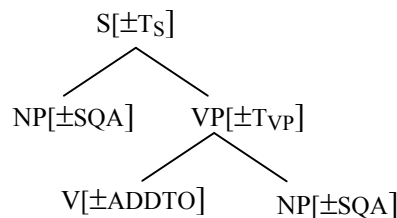


FIGURE 1

The value of [\pm T] feature is not obtained in the very beginning (like other features in the tree), but is calculated from daughter nodes by the Plus Principle (Verkuyl 2001: 23): *the value of [\pm T_S] feature is positive iff the values of all other features in the tree are positive.*

1.2. MERELOGICAL APPROACH, MANFRED Krifka (1986, 1992, 1998).

M. Krifka captures the difference between telic and atelic predicates and predications by means of the notions *cumulativity* and *quantization*. His theory is called *mereological approach*.

Predicate is cumulative if it is additive, i.e. whenever it applies to the entities x and y , it also applies to the sum $x \oplus y$. If the predicate does not possess this property, it is quantized.

(i) additivity

$$\text{ADD}(P) \equiv \forall x \forall y [P(x) \wedge P(y) \rightarrow P(x \oplus y)]$$

Although the cumulative predicates have the property of divisivity: a predicate is divisive iff whenever P applies to x , then it must also apply to any x' that is properly included in x .

(ii) divisivity

$$\text{DIV}(P) \equiv \forall x \forall x' \subset x [P(x) \rightarrow P(x')]$$

The examples of cumulative predicates: *voda* (rus. 'water'), *apples*, *du sucre* (fr. 'sugar'), etc. The examples of quantized predicates: *the apples*, *dom* (rus. 'house'), *a cup*.

In fact, the events appear to be in the same way. The verbal predicate *speak* is cumulative, because it is true that if the events e is *speak* and the events e' is *speak*, that $e \oplus e'$ is also a speaking. On the other hand, the verbal predicate *flash* is quantized, because the event $\text{flash} \oplus \text{flash}$ is not a flashing.

So, Krifka formulates the following generalization: *a predicate is atelic iff it is cumulative; a predicate is telic iff it is quantized*.

The further researches required the adopting of the notion *incrementality*. A predicate is incremental if it stands in one-to-one relation with its arguments. Thus, the event *eat apples* is incremental, because when someone eats apples, each part of this situation corresponds to a part of apples that are eaten at the moment. When the whole denotation of the argument *apples* disappears, the situation will be naturally terminated. The internal object (*apples*) is called the *gradual patient* (Krifka 1986, 1992), or the *incremental theme* (Dowty 1988, 1991).

Finally, the principle of the aspectual composition is formulated:

An episodic verb (in sentences denoting single eventualities) combined with a quantized Gradual Patient argument yields a quantized complex verbal predicate, while with a cumulative Gradual Patient argument it yields a cumulative complex verbal predicate (Filip 1991: 94).

2. DATA. The aspectual composition in French, German and in the most part of Turkic and Nakh-Dagestani languages is similar with the English one; the fact is illustrated in (1).¹

(2) French

a. Jean a=mangé [les pomme-s] { *3 heures / en 3 heures }
Jean AUX=eat DEF apple-PL { for 3 hours / in 3 hours }
'Jean ate the apples.'

b. Jean a=mangé [des pomme-s] { 3 heures / *en 3 heures }
Jean AUX=eat INDEF apple-PL { for 3 hours / in 3 hours }
'Jean ate apples.'

However, there are languages the data of which cannot be analyzed by the theories exposed in the section 1 and requires the further elaboration of the theories. In Russian the interaction of the telicity and quantization features is not the same as in English: if a Russian predication is quantized, its internal object is subjected to the *universal quantification*. Thus, in (3) NP *jabloki* ('(the) apples') is specified "by context" (SQA = Specified Quantity of A – (Verkuyl 1999)).

¹ GLOSSES AND ABBREVIATIONS. ACC = accusative, ATI = atelic interpretation, AUX = auxiliary verb, DEF = definite article, DUR = durative, f = finite stem, INDEF = indefinite article = IPFV = imperfective, o = objective conjugation, PF = perfective, PL = plural, PLo = plural of the object, PST = past, s = subjective conjugation, TI = telic interpretation.

- (3) on s-je-l [jablok-i]_[+SQA]
 he PF-eat-PST apple-PL
 'He ate the apples.'

The upgrade of the theory was suggested by H. Verkuyl. He supposed that in Russian the scope of the perfective prefix is the whole VP, including the internal object. M. Krifka offers another solution: the prefix is analyzed as a lexical quantifier the scope of which is the incremental theme. But the both approaches seem to fail to explain the obtaining of (4).

- (4) Russian
- a. Boris **po**-risova-l kvadrat-y.
 Boris PF-draw-PST square-PL
 'Boris drew squares.'
- b. Boris **pro**-pe-l pes'n-i vesj den'.
 Boris PF-song-PST song-PL all day
 'Boris sang songs all the day.'
- c. Boris s-jed-a-l každij d'en' tarelk-u fasol'-i. **ATI**
 Boris PF-eat-IPFV-PST every day plate-ACC been-GEN
 'Every day Boris ate a plate of beans.'

In (4a) there is a prefix *po* on the VP but it does not provide any telicity, but seems to be the function that takes a part of an event.

In (4b) the situation is about to be the same as in (4a) but *pro* with the scope over the VP requires the object *every day*.

In (4c) we have a set of subevents *eat a plate of beans* that is interpreted as atelic. The discussion of these problems was provided by S. Tatevosov (2002 and 2003).

Besides, in Hungarian the verbal prefix applies to the incremental theme and subjects it to the universal quantification as illustrated in (5d) where the NP of the internal object is not specified and so is not quantized.

- (5) Hungarian
- a. almá-k-at evett
 apple-PL-ACC eat.PST.s
 'He ate apples.'
- b. az almá-k-at ette
 DEF apple-PL-ACC eat.PST.o
 'He was eating the apples.'
- c. az almá-k-at meg-ette
 DEF apple-PL-ACC PF-eat.PST.o
 'He ate the apples.'
- d. *almá-k-at meg-evett
 apple-PL-ACC PF-eat.PST.s

In Nenets the interaction between the properties of the predicate and its arguments is the same as in Russian and Hungarian, the internal object is also universally quantified. However, the telicity is not caused by a prefix like in Russian, but it is atelicity that is caused by durative marker as illustrated in (6b). There is neither operator nor quantifier with the scope over the VP, so there seems to be no knowledge about why a Nenets predication is (a)telic neither in Verkuyl's nor Krifka's terms.

- (6) Nenets
- a. pida knJiga _ tolej-da(-sJ) **TI**
 he book.ACC.PL read.PLo-3SG(-PST)
 'He read the books.'
- b. pida knJiga _ tola-mbJi-da(-sJ) **ATI**
 he book.ACC.PL read-DUR.f-3SG(-PST)

‘He read books.’

3. CONCLUSION. The theories discussed in this talk seem to predict a great deal of facts in different languages. It appeared however that there is some data got in the field that cannot be analyzed by the theories of the aspectual composition. It seems that these theories are to be modified significantly so they predict correctly the telicity of predications in such languages as Nenets.

REFERENCES

- DOWTY, D. R. 1988. Thematic Proto-Roles, Subject Selection, and Lexical Semantic Defaults, ms. (Paper presented at the 1987 LSA Colloquium. San Francisco).
- DOWTY, D. R. 1991. Thematic Proto-Roles and Argument Selection. *Language* 67, 547–619.
- FILIP, H. 1999. Aspect, Eventuality Types and Noun Phrase Semantics. New York, 81–149.
- FREGE, G. 1892. Über Sinn und Bedeutung. *Zeitschrift für Philosophie und Philosophische Kritik*. No. 100, 25–50.
- KRIFKA, M. 1986. Nominalreferenz und Zeitkonstitution. Zur Semantik von Massentermen, Individualtermen, Aspektklassen. Doctoral Thesis, The University of Munich.
- KRIFKA, M. 1992. Thematic Relations as Links between Nominal Reference and Temporal Construction. Sag, I. A. and A. Szabolsci (eds.), *Lexical Matters*, pp. 29–53.
- KRIFKA, M. 1998. The Origins of Telicity. Rothstein, S. (ed.). *Events and Grammar*. Dordrecht/Boston/London: Kluwer Academic Publishers, pp. 197–235.
- PARTEE, B. H. Quantificational Structures and Compositionality. Bach, E. et al. (1995), 541–601.
- TATEVOSOV S.G. 2003. Tipologija vida i ruskij delimitative. (Presentation at the Moscow Typological Society 2003, March 11).
- TATEVOSOV, S.G. 2002. The parameter of actioanlaity. *Linguistic typology* 6, 317–401.
- VENDLER, Z. 1967. Verbs and Times. *Philosophical Review* 56, pp. 143 –160.
- VERKUYL, H. J. 1999. Aspectual Issues. Structuring Time and Quantity. *CSLI Lecture Notes*, 98, Stanford, California.
- VERKUYL, H. J. 2001. A Young Person’s Guide to the Theory of Tense and Aspect, 15-43, 55–75.
- VERKUYL, H. J. 2002. Formal Semantics Course. Lectures delivered in the St. Petersburg State University, pp. 71–109.