

## Some Issues of Syntax and Semantics of Verbal Modifications<sup>\*</sup>

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### 1 Résumé – Abstract

The classification of verbal modifications proposed by Panevová (1974-75, 1987) is revisited. The main criteria of the classification of verbal modifiers into the class of inner participants (arguments) and free adverbials used in the Functional Generative Description since the 70-ies are repeated and some groups of modifiers are analyzed from this point of view. In this contribution the groups of modifiers called here Obstacle, Mediator and Difference, which do not fit any of these two classes, are analyzed; they share some features of inner participants and some of free adverbials. Their intermediate position is reflected by an introduction of the class of quasivalency modifiers. The issue of the position of other modifiers (up to now understood as inner participants) on the scale “valency - quasivalency - free” is open for further discussion.

Dans cet article, nous réexaminons la classification des modifications verbales proposées par Panevová (1974-75, 1987). Après avoir repris les principaux critères de classification des modificateurs verbaux utilisés depuis les années 70 par la Description Générative Fonctionnelle pour distinguer la classe des participants internes (arguments) de celle des compléments adverbiaux libres, nous analysons certains groupes de modificateurs selon ce point de vue. Nous proposons ensuite une analyse des modificateurs nommés ici Obstacle, Médiateur et Différence qui ne peuvent être rangés dans aucune des deux classes. Ils partagent à la fois certains des traits propres aux participants internes et certains des traits propres aux compléments adverbiaux libres. Nous rendons compte de leur position intermédiaire par l'introduction d'une classe de modificateurs quasi-valenciels. La question concernant la position des autres modificateurs (considérés jusqu'à présent comme des participants internes) sur l'échelle « valence – quasi-valence – compléments libres » est ouverte à la discussion.

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<sup>\*</sup> The research reported in this contribution was carried out within the project LN00A063 (Centre of Computational Linguistics), supported by the the Ministry of Education of Czech Republic.

## 2 Keywords – Mots Clés

verbal modification, valency, quasivalency, inner participant, free adverbial, government, dependency

modification verbale, valence, quasi-valence, participant interne, complément adverbial libre, gouvernement

## 1 Topic and motivation

In Panevová (1974, 1987) some criteria were proposed for the classification of verbal modifications in a dependency syntax framework. We were stimulated by some ideas formulated by Tesnière (1959), Bierwisch (1963) and Helbig (1971; the formal framework we work with is the Functional Generative Description (see Sgall, 1967, Sgall et al., 1986), within the development of which our classification of verbal modifications, e.g. the theory of valency, has been formulated. However, during the extended studies of valency with the aim of building a Czech valency dictionary (see Lopatková et al., 2002), we have collected some empirical data the consistent description of which will influence the further development of the above-mentioned theoretical background. Some of them will be presented and discussed here.

## 2 Criteria used for the classification of verbal modifications

At the very beginning we used a taxonomy of the semantic counterparts of sentence members depending on verbs (i.e. objects and adverbials) as are described in handbooks on Czech syntax (Šmilauer, 1947, Kopečný, 1958 and others). This served as a starting point for the classification of them into two classes:

(A) some of them are compatible (in principle) with any verb, and, moreover, they can be repeated with a single occurrence of their governor

(B) some of them can be combined only with particular verbs, which must be listed; moreover, they can occur only once with a particular verb token.

We have called class **(A) free adverbials** (modifiers), e.g. local, direction, manner, extent, temporal, cause, aim, condition, concession etc. They correspond more or less to Tesnière's "circumstants" (i.e. circumstantials, in English). Their features will be demonstrated by the English, Czech and Russian examples (1), (2) and (3), respectively:

(1) In France (*Local*) John lives in Paris (*Local*)

(2) Na přednášky (*Direction*) chodí na Karlovu univerzitu (*Direction*)  
[lit. For lectures he/she goes to Charles University]

(3) Ivan умеет играть на рояле (*Instrument*) то́лько правой рукой (*Instrument*)  
[Ivan can play a piano only with his right hand]

Class (B) has been called **(inner) participants**. They correspond more or less to Tesnière's "actants" (E. participants). For Czech, five participants were determined and they were called using the semantic labels: Act(or/Bearer), Pat(ient), Addr(essee), Eff(ect), and Orig(in), see examples (4), (5) and (6):

(4) John (Act) brought sandwiches (Pat) to his colleagues (Addr)

(5) John (Act) made a canoe (Pat) out of the log (Orig)

(6) John (Act) made a log (Pat) into a canoe (Eff)

We demonstrated in the contributions quoted in Sect. 1 that the dividing line between (A) and (B) is not identical with a boundary between valency and non-valency members. Some free modifications from class (A), as is very well known, have a valency character; they are obligatory and their respective governors must be listed (see the Czech and Russian examples (7) and (8), resp., where Manner and Direction, respectively, fill a valency slot of the verb):

(7) Ivan se chová brutálně (*Manner*)<sup>1</sup>  
[Ivan behaves brutally]

(8) Ivan napravljaetsja v shkolu (*Direction*)  
[Ivan is going to school]

On the contrary, all members of class (B), called inner participants, are considered as valency members (either obligatory or optional with a particular lexical item). The position of Actor/Bearer (corresponding to Tesnière's first participant) in this group was discussed several times. Tesnière claimed that there are verbs without any participant; subjects in sentences as in French *Il pleut.*, *Il neige* are called by Tesnière "pseudosubjects", cf. Czech examples (9), (10), where no such "pseudosubjects" are even present:

(9) Pršelo. [It rained]

(10) Sněží. [It is snowing]

However, most Czech verbs have the "first participant" (Actor/Bearer) in their verbal frame, so that it would be more effective to list the exceptional verbs without Actor/Bearer, while for other participants we need a positive list of their respective governors.

As was mentioned above, the extended work in the field of valency of verbs, especially in the recent period connected with the building of a syntactically annotated corpus (Prague Dependency Treebank, see e.g. Bémová et al., 1999, Böhmová – Hajičová, 1999), opened some issues concerning modifications which do not fit the criteria described above for the subdivision into classes (A) and (B). We want to present these issues here and propose a preliminary solution for them (in Sections 3 and 4).

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<sup>1</sup> There is a difference between the Czech verb *chovat se* and its English counterpart *behave*. The Czech sentence \**On se chová* [*He behaves*] is ungrammatical, while its English equivalent is not.

### 3 Are two classes of verbal modifications sufficient?

The main differences between classes (A) and (B) were described in Section 2. Several other features of them can be added: For class (A), the free character of these adverbials is reflected not only by the fact that they are compatible with any verb (if some ontological restrictions do not constraint this grammatical compatibility), but their morphemic form is not usually predicted by their governor. The syntactic relation between a verb and its free modifier is expressed by the relation called in Russian linguistics “*primykanie*” (adjunction). It concerns both valency and non-valency (free) modifications, see (11), (12) (*Locative* is valency in (11), non-valency in (12)) :

- (11) Jan směřuje do Prahy/ za Prahu/ mimo Prahu  
[John is going to Prague/ out of Prague/ outside of Prague]

- (12) Matka odpočívá v ložnici/ na zahradě/ u moře/ mimo město  
[Mother is having a rest in the bedroom/ in the garden/ by the seaside/ out of the town]

There is another feature connected with a particular free modification: It is their semantic (not formal) nature what constitutes this specific subclass of the modification. In *Stalo se to 1. března/ po 1. březnu/ před 1. březnem* [It happened on March 1<sup>st</sup> / after March 1<sup>st</sup> /before March 1<sup>st</sup>] three subclasses of temporal modification are all answering the question *When did it happen?*, the distinctions among them are of a semantic nature. In Czech constructions and their English counterparts such as *psát perem* [to write with a pen], *psát na psacím stroji* [to write on the typewriter], *leťt leťtadlem* [to fly by a plane] the semantic nature of the Instrument (Means) modifier are rendered by different morphemic forms, which are determined neither by the head nor by its modifier, but, rather, by the semantic connection between instrumentality of the noun involved and the semantics of a particular verb.

Group (B), i.e. that of participants functioning as valency members in all their occurrences, can be characterized also by the syntactic relation called government (*rekce* in Czech, *sil'noje upravlenije* in Russian); these dependents are governed, i.e. their case form is predicted by their governors and they are semantically "empty" (without alternatives). With verbs having only two participants in their respective frames, the syntactic (grammatical) functions of noun cases (according to Kuryłowicz, 1949) are present. The semantic interpretation of the Patient in *uklidit kuchyň* [to clean the kitchen] and *vykopat jámu* [to dig a hole] as Objective and Result, respectively, is based on the knowledge of lexical semantics of the two components. We use the labels Actor/Bearer and Patient as counterparts of Tesnière's 1<sup>st</sup> and 2<sup>nd</sup> “actants”, respectively. However, if a verb has more than two participants, then the semantics of the third (fourth) one must be taken into account. The morphemic forms are governed again by the verb, but concrete (adverbial, semantic) cases (according to Kuryłowicz, op.c.) usually occur in them, see (13) to (16):

- (13) Otec (Act) koupil synovi (Addr) auto (Pat)  
[Father bought a car to his son]

- (14) Otec (Act) koupil od bratra (Orig) synovi (Addr) auto (Pat)  
[Father bought a car from his brother to his son]

- (15) Otec (Act) rozložil staré auto (Pat) na součástky (Eff)  
[Father disassembled an old car into parts]

- (16) Otec (Act) složil auto (Pat) ze starých součástí (Orig)  
[Father assembled a car from the old parts]

Though the interpretation of the Patient (as Objective in (13) and (14), a type of “destroyed” Objective (called sometimes Destructive) in (15) and Result in (16)) differs, this is not due to the semantics of the Accusative form of the noun *auto* [car], which in fact is shared by all sentences, but it is due to the lexical items involved.

We would like to stress that the semantics of the grammatical cases is mixed and depends on the meaning of the governor and of its modifier, while the semantics of the concrete cases is much clearer.

In the sequel, we demonstrate the existence of three groups of modifications which partially share the features of class (A) and partially those of class (B). They are governed (as class (B)), but, their semantics seems to be clear and homogenous for the whole group (as in class (A)). This concerns the class of modifications that we have tentatively called Obst(acle) (Section 3.1), Med(iator) (Section 3.2) and Diff(ERENCE) (Section 3.3).

**3.1** The prepositional group *o* + Accusative with verbs like *zakopnout* [to stumble], *uhodit se* [to strike oneself], *bouchnout se* [to hit oneself], *zranit se* [to injure oneself], *píchnout se* [to prick oneself], *bodnout se* [to stab oneself] is governed by the verb. In handbooks on Czech syntax this type is classified as Means (Instrument), but it has undoubtedly a special (not exactly “instrumental”) semantics, see (17), (18a) and (18b):

- (17) Jan zakopl nohou o stůl  
[John stumbled over the table with his leg]
- (18a) Matka se píchla nůžkami  
[Mother pricked herself with the scissors]
- (18b) Šípková Růženka se píchla o trn  
[Sleeping Beauty pricked herself on a thorn]

In (17) *noha* [the leg] is a proper means (Instrument), while the construction *o stůl* [over the table] is not. In (18a) *nůžky* [scissors] functions as an instrument in the proper sense, its semantics includes the semantics of handling this instrument (which includes its movement). In (18a) manipulation with scissors is supposed, while in (18b) the referent of the same noun stays fixed (see also Apresjan, 2001). The feature of an unconscious action is typical of (18b), while in (18a) the action can be either conscious or unconscious.

For the semantics of “fixed instrument” (expressed by the prepositional group *o* + Accusative) we propose to introduce a new label, **Obstacle**. A sample of its governing verbs is given above. All verbs listed in this sample imply unconsciousness of the action. We agree with Apresjan’s view (op.c.) that the feature of unconsciousness is not a question of the splitting of the lexical meaning of the verb concerned.

The verbal modification of Obstacle shares the following features of the group (B), inner participants:

- (i) it occurs with a limited class of verbs

- (ii) it is governed by its head
- (iii) it cannot be repeated with a single verb occurrence.

However, this type of modification shares also the following feature of class (A), free modifiers:

- (iv) it has a specific semantics, though it is governed.

Up to now, we have found only one Czech verb with obligatory Obstacle (*zavadit* [*to brush against*];) with other listed verbs the Obstacle is optional.

**3.2** The Czech prepositional group *za* + *Accusative* is described in syntactic handbooks as a kind of Instrument, as well, see (19), (20), (21):

- (19) Otec přitáhl kluka levou rukou za ucho  
[Father has drawn boy's ear by his left hand]
- (20) Když jsem odcházel, zatahal mě soused za rukáv  
[When I was leaving, the neighbour pulled my sleeve ]
- (21) Jan přivedl psa za obojek  
[John brought the dog by its collar]

Examples (19) to (21) demonstrate that the semantics of this prepositional group is far from the pure instrument, though semantically it keeps a similar role. While a pure instrument is used by the Actor of the action directly, here the instrument is a part of another entity (the ear belongs to the boy in (19) and as such it is used for drawing the boy). In (19) the instrument proper is present (*ruka* [*hand*]). The Actor uses his own hand as a means to reach the boy, and he uses the boy's ear as a **Mediator** for reaching him. Like Obstacle, the Mediator shares some features of class (B) and some of class (A). Unlike Obstacle, we have not yet found any verb with an obligatory Mediator.

**3.3** The prepositional group *o* + *Accusative* combined with the comparative of adjectives or adverbs and also with some verbs is usually classified as a type of extent modifier, see examples (22) to (25):

- (22) Inflace se zvýšila proti roku 2000 o několik procent.  
[The inflation has increased in comparison with year 2000 by several percents]
- (23) Náš tým zvítězil o dvě branky  
[Our team won by two goals]
- (24) Jan zvítězil v závodě o prsa  
[John won the race by a hair's breadth]
- (25) Postupte o dva schody výš  
[Move two steps higher ]

There is no interference between extent modifiers and the modifier of **Difference**. The general characteristics of the extent in the examples (22) to (25) is a high or a low degree, nothing

more (e.g. the loss in (23) could be understood either as high or as low depending on the qualities of the playing teams). The Difference, on the contrary, specifies the extent precisely. At least two entities are compared here, though one of them is more or less implicit (the inflations in the current year and in 2000 are compared in (22), the scores of two teams participating in a match are compared in (23), John's rivals are understood in (24) as the other entity and the difference between them (or one of them) is explicitly expressed by the Difference modification).

With this type of modifiers we can observe again the sharing of some features with (A) and (B) classes of modifiers. This type of modification has not been found as obligatory, but only as an optional type of modification.

## 4 Conclusion

Obstacle, Mediator and Difference, modifying verbs, adjectives and adverbs, described in 3.1, 3.2 and 3.3, respectively, fulfill some criteria determined for inner participants (arguments) and some criteria used for the characterization of free adverbials (adjuncts). They are compatible with limited classes of governors (verbs, forms of adjectives and adverbs), and thus they must enter the valency frame of their respective heads; they cannot be repeated with a single occurrence of their governor. They are related with their heads by a government. These features are typical for inner participants. On the other hand, though they are governed, they have very specific semantics, which we have tried to describe in Section 3; they are not semantically as empty as it is common with the core valency members Actor/Bearer and Patient, and they are optional much more often than obligatory (as is the case with the verb *zavadit* [*to brush against*]), which brings them close to adjuncts (free modifications).

As a result of the syntactic and semantic analysis of the three types of verbal (adjective, adverbs) modifiers, we have introduced the notion of **quasivalency modifiers**. We have described three modifications of such type (Obstacle, Mediator, Difference); but there are other cases which might be subsumed under the quasivalency relation between head and modifier (see Lopatková et al., 2002). Some of the noun modifiers seem to be of this nature as well.

The consequences of this observation will be reflected in the theory of valency in Functional Generative Description. Quasivalency modifiers will be listed in valency frames as their obligatory or optional members. They are not repeatable, therefore they cannot be generated by recursive rules. Moreover, their intermediate position between valency and non-valency members re-opens a more serious question: Do Addressee, Effect and Origin belong to the class of valency or quasivalency modifiers? The answer to this question will be a matter of further studies and discussions.

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