On the Predicate-Argument Structure: Internal and Absorbing Scope

Igor Boguslavsky

Russian Academy of Sciences
Institute for Information Transmission
Problems, Russia
Universidad Politécnica de Madrid, Spain
igor.m.boguslavsky@gmail.com

Abstract

Valency filling is considered a major mechanism for constructing the semantic structure of the sentence from semantic structures of words. This approach requires a broader view of *valency* and *actant*, covering all kinds of actant-bearing words and all types of valency filling. We introduce the concept of *scope* as a generalization of *actant*: it is any fragment of a Syntactic (SyntScope) or Semantic Structure (Sem-Scope) that fills a valency of a predicate. *Actant* is a particular case of *scope*. We discuss two classes of situations, mostly on the material of Russian, that manifest non-isomorphism between SyntScope and Sem-Scope: (a) meaning α that fills a valency of word *L* constitutes only a part of the meaning of word *L'* (*internal scope*); (b) predicate π is an internal component of the meaning of word *L*; π extends its valency (distinct from valencies of *L*) to words different from *L* (*absorbing scope*).

1   Introduction

This paper is a continuation of a series of publications (Boguslavsky 1985, 1996, 1998, 2003, 2007, 2014, 2016) in which we discuss different types of valency slot filling. Several introductory remarks are in order.

First of all, instantiating valency slots, or, in a different terminology, identifying arguments of predicates, is a major step in constructing the semantic structure of the sentence, because it is the main mechanism of meaning amalgamation, a kind of semantic glue that connects meanings together. This view of valencies implies that the concepts of *valency* and *actant* (or, *argument*) should be interpreted broader than it is often done. Here we follow the tradition of the Moscow Semantic School (MSS), which in its turn, shares these notions with the Meaning – Text theory (Apresjan 1974, Mel'čuk 1974). For MSS, the starting point in defining the concept of valency of a word is the semantic analysis of the situation denoted by this word. The analytical semantic definition of a word, constructed according to certain rules (Apresjan 1995), should explicitly present all obligatory participants of the situation denoted by this word. For a word *L* to have a certain valency slot it is necessary, though insufficient, that a situation denoted by *L* should contain a corresponding participant in an intuitively obvious way. Another condition is that this participant should be expressible in a sentence along with *L* in a systematic way (Mel'čuk 2014). A word or a phrase that denotes such a participant is said to fill (or instantiate) the valency slot and is called an actant.

The range of valency words is not restricted to verbs and nouns. Other parts of speech, such as adjectives, adverbs, particles, conjunctions, and prepositions are equally entitled to be classed as actant-bearing words. Moreover, being non-prototypical predicates, they substantially extend our idea of the inventory of the ways which predicates use to instantiate their valencies.

The next remark is that we are going to speak about valency filling at two representation levels – at the level of the syntactic structure (SyntS) and at the level of the semantic structure (SemS). SyntS is a dependency tree, the nodes of which are lexical units (LU) – lexemes or multiword expressions that function as a whole. In SemS LUs are represented by their semantic decomposition, which is a

complex composed by simpler semantic units (=semantemes) connected, in their turn, by predicate-argument relations.

Let us introduce two interrelated terms. We will call *semantic scope* of *L* in valency α (SemScope(L)$^\alpha$) a fragment of SemS that fills valency α of *L. Syntactic scope* of *L* in valency α (SyntScope(L)$^\alpha$) is a corresponding fragment of SyntS[1]. We will use the term *scope* without any specification when the difference between SyntScope and SemScope is irrelevant. Traditional terms *actant* (*argument*) have a narrower meaning and denote a particular case of *scope*.

In the prototypical case, SyntScope and SemScope are isomorphic (what it exactly means will be explained below). However, this is not always the case. In this paper, we will investigate two important classes of such situations.

The paper is structured as follows. First, we will present the prototypical situation of valency filling (Section 2). In Section 3 we introduce syntactically non-prototypical types of valency filling. Sections 4 and 5 will examine two special cases of non-isomorphism between SyntScope and SemScope – *internal scope* and *absorbing scope*. We will conclude in Section 6.

2 Prototypical Valency Slot Filling

As mentioned above, valency filling is a major mechanism of constructing SemS. According to MSS, to discover the semantic structure of a sentence, one needs, first of all, a dictionary that contains the following information for each scope-bearing word:

(a) analytical definition of its meaning; among other things, it should represent all valency slots (by means of variables);

(b) each valency slot should be assigned the information on how it can be filled; this information includes primarily the data on the syntactic position of the SyntScope in SyntS – whether it is the subject, direct or indirect object, which prepositions or conjunctions are needed to introduce it, and what lexico-grammatical form it can have. In different theoretical frameworks this information is

provided by subcategorization frames, government patterns or similar data structures.

It is understandable, then, that for identifying arguments in the text, besides the dictionary, the syntactic structure of the sentence should also be available.

In the prototypical case, SyntScope and SemScope satisfy certain requirements:

(1) SyntScope:
 i. SyntScope(L) depends on *L* in the dependency structure;
 ii. SyntScope(L) is connected to *L* directly (and not through some intermediate nodes).

(2) SemScope:
 i. SemScope is isomorphic to SyntScope: if SyntScope = A, SemScope = 'A';
 ii. The word meaning is impermeable to predicate-argument relations.

Properties (i) and (ii) of SyntScope are obvious and do not seem to require explanations. Let us comment on the properties of SemScope.

The isomorphism property means that if some fragment A of SyntS is the syntactic scope of lexeme *L*, then the semantic argument of *L* will be exactly 'A' (=the meaning of A). And inversely, if a fragment 'A' of SemS fills a valency of lexeme *L*, then SyntScope(L) will be the fragment A of SyntS whose meaning is 'A'.

The second property states the impermeability of lexeme borders for predicate-argument relations. This property manifests itself in two ways. First, an internal (i.e. not the topmost) element of the semantic definition of *L* cannot be an argument of a predicate that does not belong to the same definition. The contact point for external predicates is usually the topmost component of the definition (usually, genus proximum). For example, Longman Dictionary of Contemporary English defines *bicycle* as 'a vehicle with two wheels that you ride by pushing its pedals with your feet'. The topmost component of this definition is semanteme 'vehicle'. That is why the phrase *big bicycle* is interpreted as 'big vehicle' but under no circumstances as 'big pedals' or 'big feet'.

Second, if the definition of lexeme *L* contains a predicate π which has its own arguments (i.e. distinct from the arguments of *L*), in a sentence, these arguments are fully located

inside the definition of *L*. They cannot include definition-external components.

As an illustration, let us consider a pair of Russian antonyms *sobljudat'* 'observe' – *narušat'* 'violate', which differ by a negation: 'observe the rules' – 'do what is allowed by the rules'; 'violate the rules' – 'do what is not allowed by the rules'. If one attaches a negation to one of then, the antonymy turns into the synonymy:

(3a) *On ne budet sobljudat' pravila priličija.*
'he will not observe the decency standards'.

(3b) *On budet narušat' pravila priličija.*
'he will violate the decency standards'.

Let us introduce an adverbial of purpose into sentences (3a) and (3b):

(4a) *On ne budet sobljudat' pravila priličija tol'ko čtoby tebe ugodit'.*
'he will not observe the decency standards only to please you'.

(4b) *On budet narušat' pravila priličija tol'ko čtoby tebe ugodit'.*
'he will violate the decency standards only to please you'

Sentence (4a) has two interpretations depending on whether or not the purpose adverbial is included in the scope of negation:
  1) not [will observe the decency standards only to please you];
  2) [not [will observe the decency standards]] only to please you.
Sentence (4b) has only the second interpretation.

The reason is that in (4a) the negation is expressed by a separate word, while in (4b) it makes part of the lexical meaning of *narušat'* 'violate' and therefore its scope cannot include the purpose adverbial. The rule that prohibits external material from making part of the scope of an internal predicate will be made more precise below, in section 5.2.

3   Non-Prototypical Valency Slot Filling

Linguistic phenomena rarely exist in their pure form. Most often, there is a core zone, in which the properties of the phenomenon stand out very clearly, and a periphery zone, in which these properties are weaker or undergo certain modifications. In the area of valency filling, the core zone is beyond doubt constituted by verbal constructions, in which the actants are expressed by the subject of the verb

and different types of complements. In this zone, properties (1)-(2) from the previous section perfectly hold. The periphery zone is much more diverse.

As far as the syntactic aspect of valency filling is concerned, the deviation from the prototype is determined first of all by different syntactic potential of valency-bearing words. There is a wide range of syntactic positions that a SyntScope may have with respect to its predicate. From this point of view, three types of valency slot filling could be distinguished: ACTIVE, PASSIVE, and DISCONTINOUS ones (Boguslavsky 2003). If lexeme L **subordinates** its SyntScope A by means of an immediate dependency relation, we will say that such a valency filling is ACTIVE (*the boy* [A] *runs* [L], *the search* [L] *for* [A] *the solution*). This is the most typical (prototypical) case. If a lexeme **is subordinated** to its SyntScope, we will say that the filling is PASSIVE (*green* [L] *leaves* [A], *run* [A] *quickly* [L]). This kind of valency filling is characteristic of adverbials, adjectives, particles, conjunctions and prepositions. If there is **no direct syntactic link** between the lexeme and its SyntScope, we will call such valency filling DISCONTINOUS (*By habit* [L], *John* [A] *got up early*). This is a relatively infrequent type, typical of adverbials and adjectives.

In more detail, cases of violation of requirement (1), due to non-prototypical syntactic positions of SyntScope with respect to their predicates, were examined in Boguslavsky 2007. Here we will concentrate on the violation of requirement (2).

4   Internal semantic scope

When predicate-argument relations are discussed, it is usually presumed that both the predicate and its argument are lexical units – a lexeme or a multiword expression that functions as single unit.

The phenomena that we will discuss below require that lexical units be replaced by their semantic definitions, i.e. decomposed into simpler semantic units (=semantemes). We proceed from the assumption that, in the prototypical case, **if word A semantically affects word B, then the semantic definition of B should contain a meaning component for A to act upon**.

We will need not only the semantemes that make part of the lexical meaning but also those that originate in semantically relevant grammatical categories, such as tense, aspect, mood, number, etc. For example, the habitual meaning of the imperfective aspect in Russian (as in *On vstaet rano* 'He gets up early') is expressed by means of the predication 'situation P ['get up early'] takes place always or usually'. As we will see below, both lexical and grammatical semantemes can enter into predicate-argument relations with semantemes belonging to a different word, usually an adverbial or an adjective.

4.1 Temporal adverbials: *zavtra* 'tomorrow'

Let us begin with temporal adverbials such as *zavtra* 'tomorrow', *vo vtornik* 'on Tuesday', *vtorogo maya* 'on May 2', etc. All these expressions have a valency corresponding to the situation that is temporally located at the time interval specified by the adverbial. This situation is normally denoted by the verb to which the adverbial is syntactically connected. Let us look at (5):

(5) *I saw you tomorrow.

This sentence is ungrammatical, and the reason is obvious: *tomorrow* places the seeing event in the future, while the past tense places it in the past. One can generalize this simple fact and predict that *tomorrow* cannot modify of a verb in the past. This generalization seems quite straightforward but still it is wrong. Cf. sentence (6):

(6) *Ja ždal tebja zavtra (a ty prišel segodnja).*
'I expected you tomorrow (and you came today)'.

It has the same grammatical and syntactic structure as (5), but nevertheless is quite acceptable. To explain this difference, we have to decompose the lexical meaning of *expect.* According to COBUILD, if X expects Y, X believes that Y is going to happen or arrive, because X has been told that it will. Now, it is clear that the event which *tomorrow* places in the future in (6) is not the top predication of the definition - 'X believes something', but the embedded predication 'Y is going to happen or arrive'. Hence, as opposed to (5), (6) contains no contradiction: the meanings of the past tense and of *tomorrow* apply to different events. The past tense is related to the internal

state of the subject of expecting, while *tomorrow* characterizes the arrival of the object. We will call this type of valency filling INTERNAL SCOPE to convey the idea that the scope of the predicate is located inside the lexical meaning of some lexeme.

It goes without saying that this effect has nothing to do with specific properties of *tomorrow*. I have chosen this adverbial only to create a dramatic conflict between (5) and (6). As a matter of fact, the same behavior with respect to *expect* is inherent in any *when*-adverbial. On the other hand, *expect* is not the only verb that lets temporal adverbials penetrate its lexical meaning. Here are some more examples from Russian.

(7) *Ja na tebja zavtra rassčityvaju.*
 lit. 'I count on you tomorrow'
'I hope that tomorrow you will do what I am asking for'.

(8) *Ja priglašaju vas zavtra na obed.*
 lit. 'I am inviting you tomorrow for lunch'
'I am inviting you for lunch for tomorrow'.

(9) *V ponedel'nik menja vyzyvajut k dekanu.*
 'on Monday I am called to the dean'
    a) 'the call takes place on Monday'
    b) 'I have to come to the dean's office on Monday'

(10) *Poteplenie obeščali v konce nedeli.*
lit. 'warming was promised at the end of the week'
    a) 'the promise that the weather will be warmer was made at the end of the week'
    b) 'according to the promise, the weather will be warmer at the end of the week'

4.2 Temporal adverbials: *na zavtra* 'for tomorrow'

It is instructive to contrast adverbials of the type *zavtra* 'tomorrow', *vtorogo maja* 'on May 2', *v ponedel'nik* 'on Monday', etc. with the ones introduced by preposition *na* and an NP denoting localized time spans – *na zavtra* 'for tomorrow', *na vtoroe maja* 'for May 2', *na ponedel'nik* 'for Monday', etc.

(11a) *On priglasil ee na zavtra.*
'he invited her for tomorrow'

(11b) *Čto vy predlagaete na segodn'a?*
'what do you propose for today?'

(11c) *My dogovorilis' na ponedel'nik o vstreče.*

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lit. 'we agreed for Monday on the meeting'
'we agreed that the meeting will take place on Monday'

(11d) *On navjazal nam na utro nikomu ne nužnuju poezdku.*
lit. 'he imposed on us for the morning a trip that nobody needed'.
'he imposed on us a trip that was to take place in the morning and that nobody needed'.

Both types of expressions (*zavtra* 'tomorrow' – *na zavtra* 'for tomorrow', etc.) seem to do the same job – they place an event in the same temporal interval but they are not perceived as synonyms and are rarely interchangeable. The difference consists in what event is being assigned a temporal characteristic. In sentences (11a-d) what is characterized temporally are not the acts of the invitation, proposal, agreement or imposition themselves, but the events that these acts imply – coming for a visit in (11a), proposed activity in (11b), a meeting in (11c) and a trip in (11d). These expressions mean the same but differ in their scope. Adverbials of the *zavtra* type usually have an external scope, and only in some cases discussed above can have an internal one. The *na zavtra* adverbials in sentences like (11a-d), on the contrary, have an internal scope and do not allow for an external one.

The range of the verbs that permit an internal scope interpretation of *na zavtra* adverbials is rather large and hardly intersect with the verbs with which *zavtra*-adverbials can have an internal scope. Some of the exceptions are *rassčityvat'* 'to count on' and *vyzyvat'* 'call'. In one of the interpretations, sentences (12a)-(12b) and (13a)-(13b) are synonymous.

(12a) *Zavtra možeš' na menja rassčityvat'.*
'you can count on me tomorrow'

(12b) *Na zavtra možeš' na menja rassčityvat'.*
lit. 'you can count on me for tomorrow'
'you can count on me tomorrow'

(13a) *On vyzval menja v 3 časa v ponedel'nik*
lit. 'he called me at 3 o'clock on Monday'
'he called me for 3 o'clock on Monday'

(13b) On *vyzval menja na 3 časa v ponedel'nik*
'he called me for 3 o'clock on Monday'.

That is why if a verb (distinct from *rassčityvat'*, *vyzyvat'* and some others) co-occurs with both types of adverbials, the phrases are not synonymous, because the adverbials have different scope; cf.:

(14a) *Čto on predložil na ponedel'nik?* 'What did he propose for Monday?' ≠

(14b) *Čto on predložil v ponedel'nik?* 'What did he propose on Monday?'

This also explains why *zavtra* and *na zavtra* adverbials are not perceived as synonyms, in spite of their semantic similarity and identical syntactic functions.

This description may raise the following objection: Do we really need to resort to such an exotic description as an internal scope? Why cannot we simply say that the verb *ždat'* 'to expect' and other verbs mentioned above have one valency more – that of the time of the internal proposition? In this case, phrases like *Ja ždal tebja zavtra* 'I expected you tomorrow' will display quite standard predicate-argument relations.

This solution could be valid, if it were only temporal adverbials that could scope over the internal proposition. But the range of such adverbials (underlined below) is much more diverse:

(15a) *My ždem ego iz otpuska.*
lit. 'we are expecting him from vacation'
'we expect him to come back from vacation'

(15b) *Kogda ždat' vas k nam (v Moskvu)?*
lit. 'when could we expect you to us (to Moscow)?'
'when could we expect you to visit us (to Moscow)?'

(15c) *Nepremenno (objazatel'no) ždem vas.*
lit. 'without fail we are expecting you'
'we expect that you come without fail'

(15d) *Ja ždal tebja s ženoj.*
lit. 'I expected you with your wife'
'I expected that you would come with your wife'

(15e) *Ego sročno vyzvali k dekanu.*
lit. 'he was urgently called to the dean'
'he was called to the dean and must come urgently'

(15f) *Ego vyzvali v školu s roditeljami.*
lit. 'he was called to school with his parents'
'he was called to school and must go there with his parents'.

Obviously, all these adverbials cannot open separate valency slots in the verb meaning. Therefore, they can only have a circumstantial status and have an internal scope in the meaning of the verb.

4.3 Intensifiers and *akzent* 'accent'

We speak of an internal scope when a word semantically affects an internal component of the meaning of lexeme *L*. The capacity to have such a scope is mostly characteristic of adverbials and adjectives. Very often, this component is not difficult to find. For example, *kormit' (kogo-to)* 'to feed (somebody)' means 'to give food to somebody'. When adverbial *vkusno* 'tastily' is attached to this verb, its internal scope is obvious: 'to give tasty food'.

However, in many cases it is not that clear. As we stressed above, if word A semantically affects word B, then the meaning of B should contain a component for A to act upon. This requirement can be used in search of adequate meaning definition. Suppose we want to define the meaning of word B and see that it can be modified by A, which affects semanteme α. This is a serious argument in favour of including α in the definition of B. Let us illustrate this principle with the word *accent,* as used in sentences like (16):

(16a) *She spoke with a southern accent.*

(16b) *The man had a Spanish accent.*

(16c) *He can mimic the Georgian accent.*

We will use the definition from the Longman Dictionary of Contemporary English, which is very similar to definitions of other dictionaries:

(17) ACCENT: 'the way someone pronounces the words of a language, showing which country or which part of a country they come from'.

According to this definition, *southern accent* is interpreted as the way somebody pronounces the words of a language, showing that the speaker is from the South. This interpretation reflects the meaning of (16a) well enough. But if we try to apply this definition in other contexts, we will see that it is not sufficient. How should we interpret sentences that say something about the degree of the accent, such as (18a) or (18b)?

(18a) *He has a slight Essex accent.*

(18b) *She still speaks with a strong (heavy, pronounced) accent.*

Definition (17) does not contain any component that could justify quantifiablity of *accent*. What do we want to convey when we say that somebody has a slight Essex accent? Ob-viously, not that the pronunciation of this person s l i g h t l y   s h o w s   that he/she is from Essex. Rather, we mean that, first, his/her pronunciation of English words (a) is typical for people from Essex, and second, is s l i g h t l y   d i f f e r e n t   from the standard. Similarly, (18b) means that the difference between the actual pronunciation and the standard is large. It is just the degree of the deviation from the standard that is characterized by degree adjectives, such as *slight* and *strong.*

Facing phrases such as *slight (strong) accent* makes us revise the definition of *accent* and introduce a component that accounts for its quantifiability. This component is the deviation from the standard. The deviation may be greater or smaller, but it is one of the semantic elements that constitute *accent.*

A definition that reflects these considerations can look like this:

(19) 'peculiarities of the pronunciation of person Y in language Z that distinguish it from the standard pronunciation of the speakers of Z and are typical for the representatives of language, group or region X'.

Examples: *French accent* (pronunciation typical for the French), *aristocratic accent* (pronunciation typical for aristocracy), *southern accent* (pronunciation typical for southerners).

4.4 *Edinstvennyj* 'the only' in the context of *syn/doč* 'son/daughter'

The standard interpretation of the phrase *edinstvennaja doč* 'the only daughter' implies that there are no other daughters, just as the phrase *edinstvennyj syn* 'the only son' means that there are no other sons. In these phrases, nouns *syn* 'son' and *doč* 'daughter' fill one of the valencies of *edinstvennyj* 'only' (Boguslavsky 2016). However, these phrases can also be used in a more general meaning – 'there are no other children'. For example, in (20a) and (20b) this is the most natural interpretation:

(20a) *K nemu prišla ženščina – vdova, – u kotoroj pogib edinstvennyj syn.*
'a woman came to him – a widow – whose only son was killed'
(20b) *Ego edinstvennaja doč i naslednitsa Varvara slyla odnoj iz samyx zavidnyx nevest Rossii.*

'his only daughter and heiress Varvara was reputed to be one of the most enviable brides in Russia'.

In the standard interpretation, the valency of the unique element is filled by the whole meaning of *son/ daughter:* 'there is nobody else that is a son/daughter (=an immediate male/female descendant)'. In (20a)-(20b) this valency is filled by only a genus proximum part of this meaning: 'an immediate descendant'.

Apparently, *syn* 'son' and *doč* 'daughter' are not the only words in which *edinstvennyj* can affect the genus proximum component alone. Cf. sentence (21a), which can be interpreted as 'there were no other pieces of seat furniture (not necessarily chairs, but also stools, arm-chairs, benches etc.)' or sentence (21b), which can mean that 'there was no more money (not necessarily roubles)'.

(21a) *On sel na edinstvennyj stul v komnate.*
'he sat on the only chair in the room'

(21b) *Ja istratil edinstvennyj rubl', kotoryj u menja ostavalsja.*
'I spent the only rouble left'.

4.5 *Tože* 'also' in the context of *po-moemu* 'in my opinion'

In Sections 4.1-4.4 we discussed cases when a valency of an adverbial or an adjective was filled by a part of the lexical meaning of a verb or a noun. Here we will deal with a case where both participants – the predicate and the word in which the predicate has an internal scope – are adverbs.

Let us begin with a two-place verb *X dumaet, čto Y* 'X thinks that Y'. There exists an adverbial – *po-moemu* 'in my opinion' – which is an adverbial realization of the predication *Ja dumaju, chto P* 'I think that P'. Due to this, sentences (22a)-(22b) may be regarded as synonymous.

(22a) *Ja dumaju, čto Real Madrid proigraet.*
'I think Real Madrid will lose'

(22b) *Po-moemu, Real Madrid proigraet.*
'in my opinion, Real Madrid will lose'

From the point of view of the argument structure, valency Y of *dumat'* is inherited by the adverbial and is expressed by means of the subordinating verb (cf. *proigraet* 'will lose' in (22b)). Valency X is incorporated in the mean-

ing of the adverbial and cannot be expressed along with it: *po-moemu, Y* = 'I think that Y'.

Now, let us take another adverbial – *tože* 'also':

(23) *Ja tože dumaju, čto Real Madrid proigraet.*
'I also think that Real Madrid will lose'.

Tože 'also' is a two-place predicate, too: *X tože P* = 'X is doing P; something or someone different from X is doing the same'. According to this definition, the meaning of (23) looks like this: 'I think that Real Madrid will lose; somebody else thinks the same'.

Now, we can introduce the key example: cf. dialogue (24a-b).

(24a) – *Po-moemy, Real Madrid proigraet.*
'in my opinion, Real Madrid will lose'.
(24b) – *Po-moemu tože, (Real Madrid proigraet).*
lit. 'in my opinion also, Real Madrid will lose'.

Let us compare (24b) with the synonymous sentence (25):

(25) *I also think that Real Madrid will lose.*

In (25), both valencies of *also* are filled (X = 'I', Y = 'think that RM will lose'). The same is true for (24b). Hence, one part of the lexical meaning of *po-moemu* ('I') fills valency X of *tože*, and another part ('think that') – valency Y.

5 Absorbing semantic scope

In this section, internal components will not act as a scope but rather as a predicate that has a scope of its own. In other words, we will be interested in the scope of the predicates that constitute only a part of the meaning of some word. From this point of view, of particular interest are meanings expressed by grammatical categories. We will speak about two such meanings: the habitual imperfective and the inchoative.

5.1 Habitual meaning

We have seen above (Section 2) that if the negation is part of the lexical meaning of word *L*, its scope cannot include circumstantials connected to *L*. However, aspectual meanings behave in a different way. For example, the habitual meaning of the imperfective aspect ('to take place always / usually')

affects the whole predication formed by the verb and can easily involve its circumstantials. We can see that in (26):

(26) *Každyj den', pozavtrakav* [Perf], *Petya idet* [Imperf] *v školu.*
'every day, after having breakfast [Perf] Peter goes [Imperf] to school'.

The verb *zavtrakat'* 'have breakfast'(perf. *pozavtrakat'*) is in the perfective aspect and denotes a single event, while *idti* 'go' is in the habitual imperfective. Nevertheless, the situation that always takes place includes both events – the one expressed by the imperfective and the one expressed by the perfective.

The same is true for the negation. The verb *opazdyvat'* 'to be late' means 'to come later than is needed'. Sentence (27) with the habitual means that Peter always comes to school in time:

(27) *Petya ne opazdyvaet v školu.*
lit. 'Peter is not late for school'
'Peter is never late for school'.

Having noted this information about the habitual imperfective, we will turn to the adverb *počti* 'almost'. Let us give here a slightly simplified definition of *počti* than proposed in (Boguslavsky 1985, Wierzbicka 1987):

(28) *Počti* P = 'P does not take place; the difference between P and P′, which does take place, is very small'.

Let us compare sentences (29a) and (29b):

(29a) *Petr ne ošibsja v svoem prognoze.*
'Peter was not mistaken in his forecast'

(29b) *Petr počti ne ošibsja v svoem prognoze.*
'Peter was almost not mistaken in his forecast'.

Sentence (29a) means that Peter's forecast was correct, and (29b) – that it was almost correct, i.e. it deviated from truth very little. In other words, the SemScope of *počti* 'almost' in (29b) is 'not mistaken (=correct)'. Let us show it schematically:

(30a) not[mistaken in his forecast] = not[the forecast is not correct] = the forecast is correct

(30b) almost not [mistaken in his forecast] = almost not [the forecast is not correct] = almost [the forecast is correct]

Similarly, in (31) the SemScope of *počti* is 'was not left'.

(31) *Vremeni počti ne ostalos'.*
lit. 'time almost not was-left'
'there was almost no time left'.

Now, let us put (29b) in the habitual imperfective:

(32) *Petr počti ne ošibaetsja v svoix prognozax.*
'Peter is almost not mistaken in his forecasts'.

In contrast to (29b), sentence (32) is ambiguous:

(32a) 'Peter makes very small mistakes in his forecasts, his forecasts are almost correct'
(32b) 'Peter makes mistakes (maybe quite serious) very seldom (almost never)'.

The first reading is a kind of habitual variant of (29b): 'every time Peter is making a forecast, it is either correct or almost correct'. The second interpretation is more curious. Here *počti* affects the aspectual component of the meaning ('always'): 'Peter is not always correct in his forecasts, but the deviation from "always" is very small'.

Let us summarize how the meaning of the verb is distributed among the scopes of the negation and *počti* in both interpretations of (32). In both cases, the negation affects the lexical component of *ošibit'sja* 'make-mistake', because, as mentioned above, its scope cannot include the aspectual component. As for *počti,* in (32a) it scopes over the combination of the negation with the lexical component, again, without affecting the aspectual component:

(33a) always [almost not make-mistake].

In (32b), on the contrary, its scope includes only aspectual meaning:

(33b) [almost always] [not make-mistake]

Here the aggregate meaning of the verb is "dragged apart" by the scopes of the negation and *počti*.

After distinguishing between two possible SemScopes of *počti* in (32), which account for the ambiguity of this sentence, it is easy to explain why sentence (34) is not ambiguous, although it has a verb in the habitual imperfective just as (32):

(34) *On počti ne xodit v teatr.*
lit. 'he almost does not go to the theater'
'he goes to the theater very seldom, almost never'

Theoretically, (34) can have two SemScopes, similar to (33a) and (33b):

(35a) always[almost not goes to the theater]

(35b) [almost always][not goes to the theater]

However, one of them – (35a) – is senseless: not-going to the theater cannot be quantified by 'almost'. This becomes obvious if we put (34) in the perfective aspect and thus exclude the aspectual SemScope – the sentence becomes anomalous:

(36) **On počti ne pošel v teatr.*
'he almost did not go to the theater'.

It is worth noting that *počti* can scope over the aspectual meaning only in the context of explicit negation. Sentence (37) cannot mean 'almost always makes mistakes':

(37) **Petr počti ošibaetsja v svoix prognozax.*
'Peter almost makes mistakes in his forecasts'.

Even implicit negation is not sufficient to support the 'almost never' interpretation. Sentence (38a) does have this interpretation, while (38b) does not.

(38a) *Petr počti ne sobljudaet pravila.*
'Peter almost does not observe rules'

(38b) *Petr počti narušaet pravila.*
'Peter almost breaks rules'.

5.2 Inchoative meaning

In Russian, there is a large group of verbs whose meaning contains the inchoative component. For example: *zasmejat'sja* ('begin to laugh')*, zatrepetat'* ('begin to tremble')*, zaigrat'* ('begin to play')*, zapet'* ('begin to sing')*, zasnut'* ('begin to sleep')*, zainteresovat'sja* ('begin to be interested'), etc. The meaning of inchoativity can be represented as follows:

P began =
(a) 'before moment t not-P was true';
(б) 'after t P is true'.

We showed above that an intra-word predicate cannot typically scope over the meanings expressed outside of the given

word. Now we will describe some conditions in which this rule does not hold.
Let us consider sentence (39):

(39) *Zakončiv školu, Volodya vserjez zanjalsja politikoj.*
'after graduating from high school, Volodya was seriously engaged (lit. began to be engaged) in politics'.

The meaning of (39) consists of three components:
  (a) 'before moment *t* Volodya was not engaged in politics';
  (b) 'after *t* he is engaged in politics';
  (c) 'he is engaged in politics seriously'.

Component (c) has nothing to do with the scope of beginning. It is not part of the situation that did not take place before *t* and does take place afterwards. Now, let us move adverb *vserjez* 'seriously' to the Rheme of the sentence:

(40) *Zakončiv školu*, [*Volodya zanjalsja politikoj*]$_{Th}$ [*vserjez*]$_{Rh}$.
'after graduating from high school, [Volodya was engaged (lit. began to be engaged) in politics]$_{Th}$[seriously]$_{Rh}$'

The meaning of the sentence has changed. Now the sentence means that Volodya was engaged in politics even before *t,* but not seriously. The situation that did not take place before *t* and takes place after *t* is not simply 'engagement in politics' but 'serious engagement in politics'. Hence, component 'seriously', is included in the scope of 'begin'.

The situation is highly noteworthy: a rhematic component of the sentence «is absorbed» by the scope of an intraword predicate. Such a scope can be called ABSORBING.

6 Conclusion

The mechanism of valency filling (or discovering predicate-argument relations) is considered as the main instrument of combining word meanings together to obtain the meaning of the whole sentence. This approach requires that a broader class of valency-bearing words be taken into account than is usual. Predicates expressed by adverbs, adjectives and particles often fill their valencies in a different ways than verbs and nouns do. For this reason, it is expedient to generalize the concept of *actant* and introduce a broader concept that covers all

types of valency filling irrespective of the way it is realized in the syntactic structure. This is the concept of *scope.*

The scope should be considered separately at the syntactic and semantic level of sentence representation, because fragments of syntactic and semantic structures filling the same valency may be non-isomorphic. We demonstrated two types of such non-isomorphism, which were called *internal* and *absorbing scope.* Of special interest is the interaction between the predicates expressed by lexical and grammatical means.

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