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## SUBJECT-PREDICATE INVERSION AND ITS COGNITIVE SOURCES

In Russian, moving a word or a constituent from the end of a sentence to its beginning usually engenders inversion of the word order in the remaining Subject-Predicate combination. (In the examples below the constituent that moves from the final position to the initial one is underlined; the heads of the subject and predicate group are italicized; the head of the predicate group is in bold.)

- (0.1) a. Высокая *шапка* **была** надвинута на глаза;  
 b. На глаза **была** надвинута высокая *шапка*.
- (0.2) a. Реферативный *журнал* **помогает** специалисту экономить время;  
 b. Экономить время **помогает** специалисту реферативный *журнал*.
- (0.3) a. *Вода* **делает** в пустыне подлинны́е чудеса;  
 b. Подлинны́е чудеса **делает** в пустыне *вода*.

In other words, fronting of a rhematic constituent (it may be an NP, PP, adverbial, infinitive etc.) can or even must be accompanied by Subject-Predicate inversion.

The main starting point of this paper is that the word order is to be regarded as inseparable from prosody – from the placement of phrasal accent and its type (raising / falling), i.e. from what is called in Paducheva 1985/2008 and Yanko 2001 LINEAR-INTONATIONAL, or LINEAR-ACCENTUAL structure of a sentence (“linejno-akcentnaja structura”), LA-structure.

### 1. LA-structure and its transformations

The LA-structure is the overt expression of the Theme-Rheme-structure (= topic-focus structure, = communicative structure) of a sentence, which is one of its cognitive structures. Semantic relationships between a- and b-sentences in examples (0.1) – (0.3) can be accounted for by transformations, or shifts, that are applied to their LA-structures. The following two shifts are in the scope of my attention (cf. Ковтунова 1976, Падучева 1985/2008: 108-119, Янко 2001, Циммерлинг 2007):

1) EXPRESSIVE PREPOSITION, i.e. fronting of a constituent preserving the **falling** phrasal accent customary for the end of a sentence, as in (0.3a):

2) THEMATIC PREPOSITION, i.e. fronting of a constituent with a change of the intonation contour: the fronted constituent loses its rhematic falling accent and acquires the thematic **raising** one, as in (0.1b), (0.2b).

Both transformations tend to be accompanied by subject-predicate inversion.

Some types of the Russian fronting accompanied by subject-predicate inversion can be found even in languages with so-called fixed word order, such as English. Locative inversion, for example, is widespread in English, see, e.g., Levin & Rappaport Hovav 1995. In Russian, SP-inversion is not limited to fronting of locative constituents: many other types of constituents display the same kind of behavior. The subject itself can be fronted – in sentences with the obligatory final position of the subject. In this case inversion is applied to some other part of the sentence, e.g., to the object. (In the examples below slash / denotes the raising tone, back slash \ represents the falling tone; the vertical line | shows the border between LA-structure components.)

- (1.1) a. *Ивана* **охватила** яро́сть \ ;  
 b. Яро́сть \ **охватила** *Ивана*.

Apart from the two abovementioned types of LA-shifts, there are many others (some of them connected with SP-inversion), but they do not concern us here.

## 2. Expressive preposition

Only those sentences are taken into consideration in which the Rheme consists of a verb and the RHEMATIC CENTER (Падучева 1985/2008: 112), or the ACCENT BEARER (in terms of Янко 2001, where this notion is thoroughly examined). For example, in (2.1a) *пахнет махоркой* is the Rheme, *махоркой* is the accent bearer. Examples of expressive preposition.

- (2.1) a. Этот мешок **пахнет махоркой** \ ;  
b. Махоркой \ **пахнет** этот мешок.
- (2.2) a. Ребенок **требует любви и заботы** \ ;  
b. Люви и заботы \ **требует** ребенок.
- (2.3) a. Споры **были жаркие** \ ;  
b. Жаркие \ **были** споры.
- (2.4) a. Комната **наполнилась запахом осени** \ ;  
b. Запахом осени \ **наполнилась** комната.
- (2.5) a. Этот вопрос **вставал** передо мною не однажды \ ;  
b. Не однажды \ **вставал** передо мною этот вопрос.

The main bulk of sentences that undergo fronting accompanied by SP-inversion are intransitive. In a transitive sentence SP-inversion is possible as well (Циммерлинг 2007), but here it is much less obligatory than in sentences (2.1)–(2.5) above with intransitive verbs:

- (2.6) a. Золушка *мыла* посуду на кухне;  
b. На кухне \ *мыла* посуду Золушка;  
c. На кухне \ Золушка *мыла* посуду.

The semantic effect of the expressive preposition (i.e. the change of meaning it produces) escapes any strict definition. Nothing more can be said than that it adds expressiveness.

## 3. Thematic preposition

Thematic preposition is an LA-shift with identifiable semantics. The shift itself consists in that the constituent which in its “previous” final position carried the rhematic falling tone not only changes its place (and now occupies the initial position in the sentence) but also acquires the thematic raising accent; hence all the consequences of being the Theme of the sentence.

In the examples below (the a-sentences) the subject phrase (“gruppa podlezhashchego”) is the Theme, the predicate phrase is the Rheme; the Rheme is divisible into a verb and an NP, PP or Adjective phrase – the accent bearer. In the b-sentence the accent bearer of the a-sentence becomes the Theme, while the remnants of the sentence, namely, the subject and what is left of the initial Rheme constitutes the new Rheme.

- (3.1) a. Мой брат / | **живет** в Казани \ ;  
b. В Казани / | **живет** мой брат \ .
- (3.2) a. Утки / | **плавают** в пруду \ ;  
b. В пруду / | **плавают** утки \ .
- (3.3) a. Ваза / | **стояла** в углу \ ;  
b. В углу / | **стояла** ваза \ .
- (3.4) a. Коля / | **пришел** на рассвете;  
b. На рассвете / | **пришел** Коля \ .
- (3.5) a. Собака / | **укусила** мальчика \ ;  
b. Мальчика / | **укусила** собака \ .
- (3.6) a. Ваня / | **бросался** камнями \ ;  
b. Камнями / | **бросался** Ваня \ .
- (3.7) a. Объект / | **выражается** аккузативом \ ;  
b. Аккузативом / | **выражается** объект \ .
- (3.8) a. Обращение к значению / | **является** в этом случае обязательным \ ;  
b. Обязательным / | **является** в этом случае *обращение к значению* \ .

The syntactic type of the fronted constituent varies: it can be a locative, a time adverbial, a direct object, an Instrumental object, an Adjective phrase, etc. Note that some adverbials (such as *не однажды* in (2.5), smoothly undergoing expressive preposition, are not licensed in the thematic position (adverbs *заранее, рано, давно* are of the same kind).

Subject-predicate inversion in (3.1) – (3.8) is almost obligatory. Note that this inversion is completely obligatory in interrogative sentences, see example (3.10), and in relative clauses, example (3.11). In both cases inversion is triggered by moving of the constituent from its natural final position to the beginning of the sentence or clause.

(3.10) a. *Речь идет о зарплате* \ ;

b. *О чем идет речь* \ ?

c. *\*О чем речь идет* \ ?

(3.11) a. *Собака укусила мальчика*;

b. *Где мальчик, которого укусила собака* \ ?

c. *\*Где мальчик, которого собака укусила* \ ?

In subjectless sentences a similar kind of inversion takes place: the subject missing, some other thematic constituent undergoes inversion as a consequence of fronting of the rhematic NP.

(3.12) a. *Не удалось / подобрать для нее подходящего партнера* \ ;

b. *Подходящего партнера / подобрать для нее удалось* \ .

(3.13) a. *Нельзя / пускать туда детей* \ ;

b. *Детей / | туда пускать нельзя* \ .

(3.14) a. *На немецком языке / | говорят в Австрии* \ ;

b. *В Австрии / | говорят на немецком языке* \ .

(3.15) a. *От тебя / | пахнет рыбой* \ ;

b. *Рыбой / | пахнет от тебя* \ .

As for semantics of the thematic preposition, it can be described distinctly enough.

Take, first, example (3.7). The final position of an NP provides it with definiteness; hence what is called EXHAUSTIVE LIST INTERPRETATION: sentence (3.7) means that the object (in the language in question) is expressed only by the Accusative; i.e. that there are, e.g., no genitive objects in that language. While (3.7b) means that the Accusative marks only the direct object NPs (so that the language has, e.g., no Accusativus temporis).

Another example of the same kind is (3.14). This is a famous example from Sgall, Hajičova 1977: definitely, (3.14b) is true, while (3.14a) is false. The meaning difference between a- and b-sentences in (3.7) and (3.14) rests upon the fact that the NP in the rhematic position expresses identification. Sentence (3.14b) identifies languages spoken in Austria, while (3.14a) identifies countries that speak German.

In (3.16) the difference is obvious: the NP *женщина* is interpreted as definite in sentence (3.16a), in the initial position in the sentence, and as indefinite in (3.16b), in the final position.

(3.16) a. *Женщина / | стояла у окна* \ ;

b. *У окна / | стояла женщина* \ .

Now about SP-inversion.

#### 4. Cognitive motivation of SP-inversion

In the frame of syntactic approaches to SP-inversion the goal has been to find co-occurrence restrictions on SP-inversion. For example, in Levin & Rappaport Hovav 1995 the task was to find lexical and syntactic limitations on SP-inversion conditioned by fronting of a locative phrase. My goal is to find **cognitive sources** of SP-inversion that accompanies fronting: what it is motivated by. Perhaps, for Russian, with its very broad freedom of fronting

and inversion, the overall picture is clearer than for languages with strict word order limitations, such as English.

In an ordinary Russian sentence, with a prepositive subject, as in (3.1a), the subject NP is the Theme, the predicate is the Rheme, and the sentence has a TWO-COMPONENT LA-structure. Thematic preposition of the Rhematic center creates a new Theme. And **by default** the old subject and the remnants of the old predicate VP unite into one integrated Rheme. In this way a sentence with a fronted constituent acquires a new two-component LA-structure. Now, the Nominative NP in the constituent-initial position contributes to disintegration of the newly born rhematic constituent. While Subject inversion, i.e. transferring of the Nominative NP into the final position, prevents disintegration. More than that, it provides integration. In fact, it contributes to formation of a new Rheme as a united, i.e. non-disintegrated constituent. The **final position of an NP contributes to communicative integration of the rhematic constituent – while an NP in the constituent-initial position contributes to disintegration.**

The notion of non-disintegrated Rheme (неразчлененная рема) is well known when applied to a sentence as a whole. For example, in (4.1) the change of word order (and accent!) transfers a two-component, disintegrated LA-structure into an LA-structure consisting of one non-disintegrated Rheme.

- (4.1) a. Весна наступила = [Весна]<sub>T</sub> [наступила]<sub>R</sub>  
b. Наступила весна = [Наступила весна]<sub>R</sub>

It turns out that the same choice is possible for the rhematic constituent of a sentence. Examples (3.1) – (3.8) demonstrate that one and the same integrative device is at work on the level of a sentence and a constituent. When the Theme is already chosen, there are two possibilities for the remaining part of the sentence – it can either be integrated into one rhematic LA-structure component or disintegrated into Theme and Rheme. In this second case we get a three-component LA-structure. Example (4.2) demonstrates these two possibilities:

- (4.2) a. *Хозяин* дома / *открыл* дверь \ ;  
b. Дверь / *открыл* *хозяин* дома \ ;  
c. Дверь / *хозяин* дома *открыл* \ .

Sentence (4.2b), with SP-inversion, exemplifies the familiar binary LA-structure, the same as in (3.1)–(3.8). Meanwhile (4.2c), with a non-inverted word order, has a different LA-structure – and a different meaning. This difference of interpretations is represented as (4.2b#) and (4.2c#). T1 and T2 are, correspondingly, the 1st Theme, and the 2d Theme. In (4.2c#) the NP *дверь*, Theme 1, becomes the focus of contrast; hence the implication that something else (e.g., the window) remained shut (see Падучева 1985: 118 on contrastive Theme and Янко 2001 on contrast in general).

- (4.2b#) Дверь *открыл* *хозяин* дома = [Дверь]<sub>T</sub> [открыл *хозяин* дома]<sub>R</sub>  
(4.2c#) Дверь *хозяин* дома *открыл* = [Дверь]<sub>T1</sub> [*хозяин* дома]<sub>T2</sub> [открыл]<sub>R</sub>

Along these lines we get an explanation for example (4.3):

- (4.3) a. *Иван* *видел* \ Марию;  
b. Марию / | *Иван* *видел* \ .

The constituent *Марию* in (4.3a) lacks rhematic stress; the rhematic center of the sentence is here the verb, so the fragment *Иван видел*, which comes into being after removal of the object NP, bears the rhematic accent and is already a well-formed Rheme. Thus, no additional rhematization devices, such as SP-inversion, are needed when the sentence undergoes final NP fronting, and we get (4.3b) without SP-inversion.

In Levin & Rappaport Hovav 1995 it is acknowledged that active (unergative) verbs are admissible in locative inversion sentences – which contradicts the initial widely accepted hypothesis that only inactive (unaccusative) verbs license SP-inversion. The fact is that SP-

inversion provides the sentence with existential (i.e. stative, inactive) meaning. In fact, this is the case in example (4.4).

(4.4) а. На перекрестке машина **остановилась**;

б. На перекрестке **остановилась** машина.

My explanation is that in (4.4a) the verb has its basic active (dynamic) meaning, while (4.4b) looks like an existential sentence (cf. on existential sentences Borschev, Partee 2007). Now, existential sentences are notorious for their non-disintegrated TR-structure. Thus, locative inversion, with its preference for inactive verbs, is just a particular subclass of constructions for which my explanation of SP-inversion works.

Still SP-inversion is only one of a set of devices that contribute to the integrity of the Rheme. There are many others. In examples (4.5), (4.6) it is negation or some other rhematizing particle that yields rhematic integrity to the non-thematic fragment of the sentence:

(4.5) а. Ваня / | не обладал даром предвидения \ ;

б. Даром предвидения / | Ваня не обладал \ .

Clearly, without negation the word order in (4.5b) would have been less natural. The same in (4.6).

(4.6) а. Валя / | даже не посмотрела на ребенка \ ;

б. На ребенка / | Валя даже не посмотрела \ .

Some factors of this kind are discussed in Циммерлинг 2007 – sentence (4.7b), with a verb that in the context of a fronted locative receives an existential interpretation, is untenable without inversion; while in (4.7b), with a rhematizing adverb, inversion does not apply.

(4.7) а. В Иране / | злобствуют фундаменталисты;

б. \*В Иране фундаменталисты злобствуют;

с. В Иране / | фундаменталисты злобствуют *вовсю*.

Note that nothing of the kind happens if a non-rhematic constituent is fronted, as in example (4.3). In fact, what is left after fronting of the final NP in (4.3) is a constituent with an accent on the final word, i.e. a full-fledged Rheme.

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SP-inversion remained a riddle of the Russian word order regularities for decades. I suggest the following explanation of SP-inversion that, obligatorily or optionally, accompanies fronting of a rhematic constituent in a Russian sentence. Namely, SP-inversion is a device that makes it possible to overcome the **communicative disintegrity** (i.e. potential Theme-Rheme divisibility) of a constituent in which the NP precedes the VP.

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