

A note on the relative future in Russian

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Everybody agrees that Russian has relative tenses, but their licensing and the restrictions on their use remain rather mysterious. In this snippet, I will draw attention to examples of an apparently unexplored, deeply embedded relative future (...велел её наблюдать его до того, как сам осмотрит его), which I showed to professor Plungian in Nizhnij Novgorod in 2013. Judging from his reactions back then, he found the data intriguing and worthy of further investigations.

1. Background assumptions

The distinction between deictic (absolute; independent) and non-deictic (relative; dependent) tenses is well-known. In the Slavic world, the latter is often referred to as the study of taxis (Jakobson 1990 [1957]). The interest in relative tense in Russian is furthermore corroborated by the fact that Russian tenses typically have a relative interpretation in finite complements:

- (1) Дядя пообещал₁ ему, что в самое ближайшее время его посадят₂ в тюрьму (Улицкая, from Grønn, von Stechow 2010).

The embedded future event of putting him in jail, say at a time t_w^2 , cannot be deictic ($\text{now} < t_w^2$), but must be forward shifted relative to the subject's intensional promise in the past (promise made $< t_w^2$). The best possible worlds according to the uncle's speech act at some time in the actual past are the ones where the guy will be put in jail shortly after the promise was made.

For simplicity, I will here use a toy representation of the relevant temporal interplay between morphology and semantics. My assumptions are the following:

- (i) Tenses express relations between two times/intervals.
- (ii) Leaving the present tense aside, the possible tense relations for finite tenses are:
 - (iia) Past: $t < T\text{-center}$
 - (iib) Future: $t > T\text{-center}$

- (iii) Variables such as t^1 , t^2 etc. are what we usually call the reference time of the verb. The T-center, the temporal center, is like a temporal pronoun (sometimes also called the evaluation time or perspective point) in finite tenses. The denotation of the T-center is responsible for the distinction between deictic and relative tenses. When the T-center is the utterance time 'now', the tense is deictic.
- (iv) Reference times in intensional (modal) contexts have a subscript w: t^1_w , t^2_w etc.

I will skip all the usual lambdas, quantification and other complications, which are not strictly necessary for the points made here. My representation of the embedded relative future in (1) should hopefully be self-explanatory:

(1') Matrix [$t^1 < \text{now}$]

Complement [T-center $< t^2_w$ & T-center = the uncle's subjective now_w, located at the beginning of his promise worlds]

2. Restrictions on the relative future

Given the presence of a relative future in Russian, one would, contrary to the facts (= judgements of native speakers), expect the construction in (2) with its analysis in (2') to be OK:

(2) *??Она наблюдала₁ Шапошникова до того, как Платонов сам осмотрит₂ его.*

(2') Matrix [$t^1 < \text{now}$] & t^1 BEFORE the time at which
Adjunct [$t^2 > \text{T-center}$ & T-center = t^1]

The analysis makes perfect sense semantically, i.e. the future in the temporal adjunct is forward shifted with respect to the past reference time of the matrix ($t^2 > t^1$), mimicking the meaning of the complex temporal preposition *до того, как*. However, the accepted Russian construction is the deictic one with two independent tenses:

(3) *Она наблюдала₁ Шапошникова до того, как Платонов сам осмотрел₂ его.*

(3') Matrix [$t^1 < \text{now}$] & t^1 BEFORE the time at which
Adjunct [$t^2 < \text{T-center}$ & T-center = now]

Thus, Russian does not show unrestricted use of relative tenses. A fully principled explanation is missing in the literature, but the generalization, as a first approximation, seems to be that in purely extensional and episodic environments subordinate tense is deictic, i.e. independent of matrix tense (Grønn,

von Stechow 2012, Сай 2016). Informally, what seems to be the case is that there is no operator in (2)–(3) which can reset the T-center in the temporal adjunct. The speaker's utterance time remains the T-center, hence the unavailability of a relative future tense.

Note that temporal adverbial *before*-clauses can be non-veridical. However, even in these intensional contexts when the event in the adjunct does not occur in the actual world, Russian prefers a deictic past:

- (4) *Штюлер умер до того, как завершил* (?завершит) *проект* (Grøn, von Stechow 2012).

Alternatively, one can insert a modal, but again the tense of the modal is a deictic past in a construction with two independent past tenses (*умер, смог*):

- (5) *Караваджо умер до того, как смог* (?сможет) *представить эту картину* (cf. Grøn, von Stechow 2012).

It appears that the intensional operator must be located in the higher clause (matrix) in order to license a relative future in the temporal adjunct. This leads us to the next section.

3. Relative future embedded in intensional contexts

Here is the original on which examples (2) and (3) are based:

- (6) *Военврач Платонов обещал отпустить ее, но велел_{1a} наблюдать_{1b} Шапошникова до того, как Платонов сам осмотрит₂ его* (Гроссман).

The semi-formal analysis of the forward shifted future under a past matrix is the following:

- (6') Matrix_velel [$t^{1a} < \text{now}$]
 Matrix_nabljudat' [$t^{1b}_w > t^{1a}$] & t^{1b}_w BEFORE the time at which
 Adjunct [$t^2_w > \text{T-center}$ & $\text{T-center} = t^{1b}_w$]

The clue to an understanding of the construction is to be found in the semantics and syntax of the matrix verb *велел*. Syntactically, the verb combines with an infinitive complement. Although non-finite verb forms (*наблюдать*) do not have morphological tense, they still have a temporal interpretation, their own reference time, which is typically induced by the governing verb.

To command (*велеть*) is a speech act in which the subject has the necessary authority to exert pressure on another participant in the situation with the intention of forcing the latter to perform an action (here: *наблюдать Шапошникова*). Obviously, the action to be performed in the best possible worlds

for the commander must occur after the order itself, hence the forward shifting of the reference time of the infinitive ($t_w^{1b} > t^{1a}$). Thus, baked into the semantics of *command* (*велеть*) we can have a covert relative future, as in (6'). For this future (“taxis”), a deictic T-center is a priori excluded, since the forward shift is not overtly expressed by a morphological tense.

Finally, in the temporal adjunct in (6)–(6'), we have a forward shift with respect to the infinitive of the matrix: $t_w^2 > t_w^{1b}$. In other words, we get the following temporal ordering, where the two last events occur inside an intensional context: *велел* < *наблюдать* < *осмотрит*.

Here is the analysis of another similar example from Grossman’s novel “Life and Fate”:

(7) *Женя пробиралась на кухню, когда все спали, а утром старалась_{1a} умы-
ваться_{1b} до того, как проснутся₂ жильцы* (Гроссман).

(7') Matrix_staralas' [$t^{1a} < \text{now}$]

Matrix_umyvatsja [$t_w^{1b} \subseteq t^{1a}$] & t_w^{1b} BEFORE the time at which
Adjunct [$t_w^2 > \text{T-center}$ & $\text{T-center} = t_w^{1b}$]

The explanation for (7)–(7') is similar to (6)–(6'), but there are obviously some differences between the intensional operators *велел* and *старалась*. I assume that the imperfective/habitual *старалась* provides a large reference time in the past, which includes subintervals (reference times for the infinitive, here shortened to the notation $t_w^{1b} \subseteq t^{1a}$) at which Zhenja washes herself. The quantificational structure of the habitual construction is not spelled out, but the important point is that the washing events occur in an intensional context. How often Zhenja actually succeeded in washing herself when she intended to, is unknown to the reader. Again, the event in the temporal adjunct, marked with future tense, is forward shifted with respect to the reference time of each potential washing event.

Apart from some mention in Grønn, von Stechow 2012 I am not aware of any discussion of this construction in the literature. The Russian reference grammar (Шведова (ред.) 1980) provides an interesting example without addressing the puzzling properties of the construction. I quote *in extenso* (I have added the subscripts):

(8) §2972. В наиболее общем виде признак предшествования выражается союзом *до того как*: *Валя должна_{1a} была сопровождать_{1b} отца до то-
го, как начнет₂ светать* (Фадеев).

The temporal ordering is as in (6), with a covert forward shift from the past modal into the infinitive complement: *должна* < *сопровождать* < *нач-*

нет. The embedded future can obviously not be deictic since the beginning of the dawning can occur before the utterance time. In our simplified formalism, the analysis is the following:

- (8') Matrix_dolzha byla [$t^{1a} < \text{now}$]
 Matrix_soprovoddat' [$t_w^{1b} > t^{1a}$] & t_w^{1b} BEFORE the time at which
 Adjunct [$t_w^2 > \text{T-center}$ & $\text{T-center} = t_w^{1b}$]

We conclude from examples (6)–(8) that Russian has a deeply embedded relative future in a temporal *before*-adjunct under a modalized/intensional past. The modal/intensional operator controls/shifts the reference time of its infinitival complement. This reference time is the first temporal argument of *before* (*до*) while the reference time of the temporal adjunct is the second argument of the temporal preposition. Hence, *before* (*до*) encodes the relation $t_w^{1b} < t_w^2$, which is the same configuration encoded by the relative future: $t_w^2 > t_w^{1b}$.

References

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