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Simultaneous readings of past-under-past in Russian¹

1. Introduction

This talk focuses on sentences where a past marked stative is embedded under past marked intensional verbs, as illustrated in (1).

(1) Three years ago, John said he loved Ann.

These type of sentences in English are compatible with two types of scenarios.

Scenario I (the back shifted reading): Three years ago, John came to me and said: “I loved Ann in the past, now I love a different person”.

The truth conditions in this case can be presented as follows:

(2) $\exists t[t < t_0 \ \& \ t \in 3 \text{ years ago} \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say-Alt}(\text{John}, w_0, t) \rightarrow \exists t'' [t'' < t' \ \& \ \text{John loves Ann at } t'' \text{ in } w']]]]$

- Both past tenses contribute to this semantics;
- The second past tense is past relative to the moment when the saying took place (three years ago)

Scenario II (the simultaneous reading): Three years ago, John came to me and said: “I love Ann!”.

The question this talk focuses on is how this type of reading is derived.

Not every language allows for this reading as readily as English.

Overall, three theoretical mechanisms have been proposed to explain the availability of simultaneous readings of past-under-past constructions.

The first mechanism involves an SOT rule, positing that the past tense in the embedded clause is not interpreted (Ogihara 1989; Abusch 1997; Kusumoto 1999, among others).

According to this theory, (1) can have 2 LFs: one with two past tenses (resulting in the back shifting) and one with only one real past tense (the matrix one), resulting in the simultaneous reading.

The second past is only a morphological reflex of the agreement with the matrix past.

(3) [PAST Three years ago John say [he loves Ann]]

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Accordingly, the love relation is understood as simultaneous to John at the time he was saying those words (his ‘local now’ – the time when he finds himself in his doxastic alternatives)

$$(4) \exists t[t < t_0 \ \& \ t \in 3 \text{ years ago} \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say-Alt}(\text{John}, w_0, t) \rightarrow \text{John loves Ann at } t' \text{ in } w']]$$

The second mechanism is the *de re* reading of the past tense (Abusch 1997; Heim 1994; Ogihara 1995b; Sharvit 2018).

This is a very complex theory. In a nutshell:

- The past tense of the embedded clause is interpreted in the matrix clause (so it is a past relative to the real actual present)
- Two pasts are independent, and any relation is possible between them:
 one can precede the other (back shifting)
 they can overlap (simultaneity)
- The attitude establishes an isomorphism between two temporal relationship:
 between the matrix past and the embedded past,
 and
 between the holder’s local now and the time of the state described by the embedded predicate

Altshuler and Schwarzschild (2013) argue against the necessity of either of these mechanisms and propose a **third idea**.

- No special mechanism is needed for the simultaneous reading; there is no real ambiguity here.
- There is only one LF with two interpreted pasts.
- The truth conditions in (5) do not require simultaneity, but also do not block it.

$$(5) \exists t[t < t_0 \ \& \ t \in 3 \text{ years ago} \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say-Alt}(\text{John}, w_0, t) \rightarrow \exists t'' [t'' < t' \ \& \ \text{John loves Ann at } t'' \text{ in } w']]]$$

- In matrix clauses, past marking on a stative verb triggers a cessation implicature, which arises through competition with the present tense:

$$(6) \text{ John loved Ann.} \qquad \textit{Inference: It is false that John loves Ann.}$$

- The same applies to embedded clauses;
- In English, the present tense cannot be embedded and can only receive a *de re* interpretation, resulting in the double access reading;

- Consequently, cessation inferences do not arise;
- In languages where the present tense is embeddable (relative), such as Russian, cessation inferences arise, blocking the simultaneous reading.

The summary of the talk:

- **Past-under-past** in Russian can yield simultaneous readings in limited scenarios.
- These readings trigger a previously unobserved **anti-double access effect** - the inference that the embedded state does not continue into the actual present.
- This suggests that the pragmatic competitor for such readings is the **double access reading** of the present tense.
- It is commonly assumed that the double access reading is derived through a **de re construal** of the present tense.
- Consequently, the properties of simultaneous readings of past-under-past can be explained by the following:
 - These readings are derived through a **de re construal**.
 - The competitor is computed structurally by replacing past with present in the **LF**.

2. Simultaneous readings in Russian

2.1 Anti-double access effect in Russian

The empirical puzzle I will address in this paper is the contrast between (7) and (8).

Context: 3 years ago, Vanya came to me and said: ‘I love Anya!’

(7) Tri goda nazad Vanja skaza.I, što on ljubi.I Anju.
three years ago Vanya say.Past that he love.Past Anya.
‘Three years ago, Vanya said that he loved Anya’.

Context: Yesterday, Vanya came to me and said: ‘I love Anya!’

(8) #Včera Vanja skaza.I, što on ljubi.I Anju.
Yesterday Vanya say.Past that he love.Past Anya.
Intended: ‘Yesterday, Vanya said that he loved Anya’.

- The only difference between these cases is in the temporal adverbial in the matrix clause: ‘three years ago’ versus ‘yesterday’;
- The adverbial restricts the time of the saying event.
- When the saying event occurs too close to the actual present moment, as in example (8), the simultaneous reading becomes unavailable.

Intuitively, what goes wrong in (8) is that ‘love’ is a long state and if someone loved someone yesterday, it is implausible that the love is over today, which is what this sentence is implying.

If this characterization of facts is correct, we expect the simultaneous reading to become available for (8) if we are setting the context in such a way that the expectation that the love continues to the actual now is lifted.

This is borne out, as (8) is acceptable in the context given in (9).

(9) Context: Vanya is an unreliable guy. The day before yesterday he told me: “I love Masha!”, yesterday he told me: ‘I love Anya!’.

(10) The empirical generalization:

Simultaneous readings of past-under-past in Russian trigger the inference that the state of the embedded clause does not extend to the actual present.

Another illustration of the same phenomenon in Russian:

One naturally occurring example of English:

Context: Yesterday Biden said: ‘Xi is a dictator!’

(11) Yesterday Biden said that Xi was a dictator.

The Russian version of this sentence is infelicitous in this context:

Context: Yesterday Biden said: ‘Xi is a dictator!’

(12) #*Včera* Biden skaza.l, čto Si by.l dictatorom.
Yesterday Biden say.**Past** that Xi be.**Past** dictator.

Intended: ‘**Yesterday**, Biden said that Xi was a dictator.’

But the simultaneous reading is available for (13):

Context: In 1933 Mandelshtam said: ‘Stalin is a dictator!’

(13) *V* 1933 godu Mandelštam skaza.l, čto Stalin by.l dictatorom.
In 1933 year Mandelshtam say.**Past** that Stalin be.**Past** dictator.

‘**In 1933** Mandelshtam said that Stalin was a dictator’

- The difference between these examples is that in the actual present Xi is still a dictator (if what Biden said was true at the time he said it), but Stalin is no longer a dictator (as he is dead now).
- The use of the past tense in (12) in Russian triggers the inference that the embedded state no longer holds (if what was said about Xi was true when it was said):
Xi is no longer a dictator now
- That would require that Xi died between yesterday and today or that he changed his ways.

2.2 Parallelism with the double access

- What we observe in Russian is the mirror image of the double access reading of the present tense in English.
- In English this is the only reading available for present-under-past (Abusch 1997, Ogihara 1995a).
- This reading is standardly derived via a *de re* construal (Abusch 1997)

(9) **Yesterday/#2000 years ago**, John said he loves Ann. (Ogihara & Sharvit 2012)

This reading requires two things (hence, double access):

- (i) that the loving relationship holds at John's 'now'
 - (ii) that continues up to the actual present time (if what he said was true at the time when he said it)
- Consequently, placing the speaking time too far away in the past makes (9) infelicitous, as the second condition cannot be satisfied (no one lives 2000 years).

3. The solution of the puzzle in terms of the *de re* theory.

3.1. Ingredient 1: The *de re* theory of past-under-past

Abusch 1997:

- A past-under-past tense can get a *de re* construal
- A *de re* reading of the past tense is compatible with both the simultaneous and the back-shifted interpretation.

Let's consider our example again:

(14) Včera Vanja skaza.l, čto on ljubi.l Anju.
Yesterday Vanya say.**Past** that he love.**Past** Anya.
'Yesterday, Vanya said that he loved Anya'.

(Reminder: good only under 'a short unreliable love reading' with the inference that the love is over today)

The embedded PAST is interpreted in the main clause.

Step 1:

(15) [PAST [yesterday Vanya [[said **PAST**] [λ2 t₂ Vanya loves Anya]]]]

Step 2: the final LF

(16) [PAST [3[PAST yesterday [Vanya [[said t₃]][λ₂ t₂ Vanya loves Anya]]]]]]

(17) [[say]]^{w₀,g,t₀}
 [λt': the object of believe (res)
 [λQ<_s,<_i,t>>: the intension of the predicate of times
 [λy_e: the attitude holder
 [λt'': the time of saying
 ∃P. t' = the time z such that P(w)(t'')(z) &
 ∀<w'',t''> ∈ Say-Alt(y,w₀,t''). Q(w'')(the z such that P(w'')(t'')(z)=T)]]]

The attitude verb introduces quantification over temporal concepts fitting for the holder (Vanya)

This temporal concept establishes an isomorphism between two relationships:

the past time of saying and the past time moved from the embedded clause

and

the local now of holder and the time of the embedded state

(18) [[(16)]]^{w₀,g,t₀,c} = T iff ∃t[t < t₀ & ∃t'[t' < t₀ & t' ∈ yesterday &
 ∃P [t = the time z such that P(w₀)(t')(z) &
 ∀<w'',t''> ∈ Say-Alt(Vanya,w, t'): Vanya loves Anya at the z such that P(w'')(t'')(z)]]]

The relation between the time of the state of loving with respect to the time when Vanya locates himself in his doxastic alternatives is the same as the relation between the past of the main clause and the past of the embedded clause.

These two past tenses are independent; thus, any relationship is possible between them.

Possibility 1: Corresponding to the back-shifted reading

The concept can be past-oriented, as shown in (19):

(19) λw.λt. λt'' such that t'' is 2 years before t.

the loving happens at the z such that z is 2 years before the local Vanya's present time

the past of the embedded clause is two years before the time of saying²

² **Possibility 3: The option where the embedded past is after is ruled out by the Upper Limit Constraint.** I have nothing new to say about this, so I set this issue aside here.

Possibility 2: Corresponding to the simultaneous reading

The relation can be the one of overlapping (this is what we are interested in!)

(20) $\lambda w.\lambda t. \lambda t'' .t''$ overlaps t .

the loving happens at the z such that z overlaps the local present time for Vanya

the past of the embedded clause overlaps the past time of saying

Interim conclusion:

- De re theory derives simultaneity of the two pasts.
- We still need to compute the cessation inference (the inference that the embedded state does not hold at the actual now).

3.2. Ingredient 2: The derivation of the cessation inference

3.2.1 Structural alternatives

The presence of PAST on the stative triggers the cessation inference.

(21) $[Exh_{ALT} PAST_F [3[PAST \text{ yesterday } [Vanya [[said\ t_3][\lambda_2\ t_2 \text{ Vanya loves Anya}]]]]]]$

To compute the contribution of Exh, we make a substitution in the position corresponding to PAST that was moved from the embedded clause (Katzir 2007, Fox and Katzir 2011).

We substitute it with its competitor: the present tense.

(22) $[PRES [3[PAST \text{ yesterday } [Vanya [[said\ t_3][\lambda_2\ t_2 \text{ Vanya loves Anya}]]]]]]$

Exh asserts its prejacent and negates the result of interpretation of (22) (this is our alternative)

We first need to understand the resulting interpretation of this alternative in (22).

3.2.2 The meaning of *de re* construal for present tense

The idea in a nutshell:

- The resulting alternative is **the *de re* LF for present tense**.
- This is the LF that results in the double access reading of the present tense! (Abusch 1997)
- Thus, the predicted competition is with the double access reading.

What the double access reading is can be appreciated by looking at embedded present in English. In English this is the only reading available for the embedded present tense.

(23) Yesterday/3 years ago/10 years ago, Vanya said he loves Anya.

- This reading requires two things: that the loving relationship holds at Vanya’s “now” and that continues up to the actual present time (hence, double access).
- Accordingly, its negation equivalent to: either the loving relationship does not hold at Vanya’s “now” or it does not continue up to the actual present time.
- In other words:
 if the loving relationship holds at Vanya’s ‘now’ then it does not continue up to the actual present time.
- Given that the readings of past-under-past we are focusing on are the simultaneous, the inference we get is: love does not continue up to the actual present time
- This correctly captures the cessation inference we perceive in the Russian examples.

A technical implementation of the double access reading (based on Abusch 1997).

(24) [PRES [3[PAST yesterday [Vanya [[said t_3][$\lambda_2 t_2$ Vanya loves Anya]]]]]]

(25) $\llbracket (24) \rrbracket^{w_0, g, t_0} = T$ iff $\exists t[t^0 t_0 \ \& \ \exists t'[t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \exists P[t = \text{the time } z \text{ such that } P(w_0)(t')(z) \ \& \ \forall \langle w'', t'' \rangle \in \text{Say-Alt}(Vanya, w_0, t'): Vanya \text{ loves Anya at the } z \text{ such that } P(w'')(t'')(z)]]$

The temporal isomorphism between two relationships:

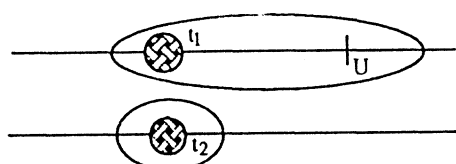
the time of saying and the present time moved from the embedded clause

and

the local now of holder and the time of the embedded state (love)

- Because of the restriction called ‘the upper limit constraint’ these concepts cannot be future oriented.
- The only possible relationship between the present tense and the past tense is that of an overlap.

(26) Illustration copied from Abusch 1997:



The concept has to be something like this:

(27) $\lambda w.\lambda t.\lambda t''. t''$ covers the period stretching a year in both direction from t in w

Then, we correctly capture the meaning of the double access: if what Vanya said was true at the time he said it, he still loves Anya now.

(28) $\exists t'[t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \text{Vanya loves Anya at the } z \text{ such that covers the period stretching a year in both direction from } t' \text{ at } w_0]$

Going back to the computation of the cessation implicature:

Exh negates the double access alternative

(29) $\neg \exists t[t' < t_0 \ \& \ \exists t'[t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \exists P [t = \text{the time } z \text{ such that } P(w_0)(t')(z) \ \& \ \forall \langle w'', t'' \rangle \in \text{Say-Alt}(Vanya, w_0, t'): Vanya \text{ loves Anya at the } z \text{ such that } P(w'')(t'')(z)]]]$

There is no temporal concept for Vanya such that (both things hold):

- in Vanya's alternatives it would pick the time of loving when applied to his local now;
- in the real world it would pick the actual present when applied to the time when Vanya said his words

Hence, his temporal concepts are of 'short loving'

- (29) excludes any concepts for Vanya that in the real world could pick any time overlapping with real now, such as

(30) $\lambda w.\lambda t.\lambda t''. t''$ covers the period stretching 1 whole day in both direction from t in w

- This is, however, compatible with the back-shifted concepts (not interesting for us):

(31) $\lambda w.\lambda t.\lambda t''$ such that t'' is 2 years before t .

(32) $\exists t'[t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \text{Vanya loves Anya at the } z \text{ such that } z \text{ is 2 years before } t' \text{ at } w_0]$

- Importantly, this is also compatible with the simultaneous concepts as long as they won't reach the real now when applied to the real world and the time when he said his words yesterday

(33) $\lambda w.\lambda t.\lambda t''. t''$ covers the period stretching 5 hours in both direction from t in w

Then, if what Vanya said was true at the time he said it, he does not love Anya now:

(34) $\exists t' [t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \text{Vanya loves Anya at the } z \text{ such that covers the period stretching 5 hours in both direction from } t' \text{ at } w_0]$

Because the negation of the double access alternative leaves us only with these ‘short-term’ concepts not reaching to the actual now, we get the inference that Vanya does not love Anya anymore today.

This makes this sentence acceptable only in a funny ‘short term’ scenarios.

3.2.4 Can the present tense in Russian get the double access reading?

I proposed that de re construal of the past tense in Russian pragmatically competes with the double access reading of the present tense.

It is standardly assumed that the present tense in Russian does not have a double access reading.

Instead, it has a plain relative reading.

The corresponding example is completely fine in Russian:

(35) Dve tysjači let nazad Vanja skaza.l, on ljubi.t Anja.
 two thousand years ago Vanya say.Past he love.Pres Anya.
 ‘2000 years ago, Vanya said he loved Anya.

(36) $[[(35)]^{w_0, g, t_0} = T \text{ iff } \exists t [t > t_0 \ \& \ t \in \text{2000 years ago} \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{Say-Alt}(\text{John}, w_0, t) \rightarrow \text{John loves Ann at } t' \text{ in } w']]]$

- It is a well-established fact, however, that double access is a strictly stronger reading than simple simultaneous delivered by the relative present.
- Double access requires both simultaneity and that the embedded state continues up to the actual present.
- Relative present only requires simultaneity.
- The proposal is that Russian present tense can have a double access reading, but this fact is masked by the existence of a strictly weaker plain simultaneous reading.
- The double access reading is the only competitor for the past-under-past as both are derived via a de re construal.

4. Comparison with the other approaches

Other two approaches cannot account for the observed contrasts in Russian.

- SOT rule predicts that the simultaneous reading should be available in both cases;
- The relative past analysis predicts that the same competitor in both cases: the relative present construction:

(16) $\exists t[t < t_0 \ \& \ t \in \text{yesterday/three years ago} \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in \text{SayAlt}(Vanya, w_0, t) \rightarrow Vanya \text{ loves Anya at } t' \text{ in } w']]$

- The negation of this alternative results in the cessation relative to Vanya's now, thus it will block the simultaneous reading altogether in both cases.

5. Obligatoriness of the cessation inferences

Cessation inferences are cancellable in matrix clauses:

(37) John was sick, he is still sick.

So, why cannot we cancel the cessation inference in this case and make the sentence acceptable without changing the context to the 'short term love'?

Context: Yesterday, Vanya came to me and said: 'I love Anya!'

(38) #Včera Vanja skaza.l, što on ljubi.l Anju.
Yesterday Vanya say.Past that he love.Past Anya.
 Intended: 'Yesterday, Vanya said that he loved Anya'.

The idea would be that the sentence can have a **de re** LF without Exh.

The cessation inference comes from Exh, since Exh is absent, the sentence can get a plain simultaneous interpretation without additional inference of cessation by the time of speech.

(39) [**PAST** [3[PAST yesterday [Vanya [[said t_3][$\lambda_2 t_2$ Vanya loves Anya]]]]]]

(40) $[[(51)]^{w_0, g, t_0} = T \text{ iff } \exists t[t < t_0 \ \& \ \exists t'[t' < t_0 \ \& \ t' \in \text{yesterday} \ \& \ \exists P [t = \text{the time } z \text{ such that } P(w_0)(t')(z) \ \& \ \forall \langle w'', t'' \rangle \in \text{Say-Alt}(Vanya, w_0, t') : Vanya \text{ loves Anya at the } z \text{ such that } P(w'')(t'')(z)]]]$

This is not possible. Why?

One option we can consider is that maybe the inferences associated with past-under-past are mandatory in Russian for some reason.

However, this is wrong. Consider a perfectly consistent example below³:

(41) Včera kogda my prišli iz teatra
Yesterday when we came from theater

 Vanja skaza.l, što u nego bolela golova.
Vanya say.Past that by him hurt.Past head

³ I thank Petr Kusliy for this example and the discussion of this point.

*Ona u nego do six por bolit.
It by him until this times hurt*

‘Yesterday, when we came from the theater, Vanya said he had a headache. He still has it now’.

There is no mandatory inference that the headache stopped by now.

What is the relevant difference between ‘love’/’dictatorship’ and ‘pain’?

It seems to be that there is no contextual expectation that pain will extend for two days.

There are other cases when pragmatic inferences seem to be not cancellable (Magri 2011; Thomas 2012, 2014):

(42) #Chomsky was a linguist.
Inference: Chomsky is no longer alive

(43) #Some Italians come from a warm country.
Inference: Not all Italians come from a warm country

It has been argued that there is something special about these cases that makes exhaustification mandatory.

What is in common between all of them and our example is that the stronger alternative is not logically entailed (so it can be negated by Exh), but it is contextually entailed leading to a problem.

The idea is that alternatives that are contextually (but not logically) entailed by the prejacent are mandatorily negated by Exh (Magri 2011; Thomas 2012, 2014).

In the standard context, being a linguist is considered an enduring property of a person. Thus, the statement that there is a past tense when Chomsky was a linguist, taken together with the context, entails that Chomsky is a linguist now. Given that such alternatives are mandatorily negated, we get the infelicity of (42).

Extending this to our cases (somewhat vaguely):

- **Love:** The standard context is that love lasts at least a year after it is declared. The past tense *de re* construal, taken together with this context, entails the double access alternative (simultaneous to Vanya and continuing until today), thus this alternative is mandatorily negated.
- **Dictatorship:** The standard context is that dictatorship is a permanent property and does not change until the person dies. The past tense *de re* construal, taken together with this context, entails the double access alternative, thus this alternative is mandatorily negated.

5. Conclusion:

- A simultaneous reading of past-under-past in Russian can only be derived via a *de re* construal;

- A simultaneous reading of past-under-past in Russian pragmatically competes with the double access reading of the present tense;
- Russian present tense can have a double access reading;
- It is difficult to detect it in other contexts due to the presence of the strictly weaker simultaneous reading.

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