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## **Simultaneous readings of past-under-past in Russian**

**Introduction** This work explores simultaneous readings of past-under-past in Russian. Based on the cessation inference pattern, we argue that such readings can only be derived through a *de re* construal. We show that the pragmatic competitor for this reading is the double access reading of the embedded present tense (derived through a *de re* construal).

**The debate** It is a well-established fact that the past tense in Russian, when embedded under a past-marked attitude verb, can get a simultaneous reading (e.g. Altshuler 2008), as illustrated in (1). However, the availability of such readings is more limited compared to English. An illustrative example of this restriction is provided in (2).

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

(1) Tri goda nazad Vanja skaza.l, čto on ljubi.l Anju.  
*three years ago Vanya say.Past that he love.Past Anya.*  
‘Three years ago, Vanya said that he loved Anya’.

(2) #Vanja skazal, čto 4 by.lo nečetnym čislom.  
*Vanya say.Past, that 4 be.Past odd number*

Intended: ‘John said that 4 was an odd number’. (based on Ogihara & Sharvit’s (2012))

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). **The second mechanism** is the *de re* reading of the past tense, wherein the past tense in the embedded clause is interpreted in the matrix clause, and the attitude report establishes an isomorphism between the temporal relationship between the matrix past and the embedded past, and the relationship between the time the holder finds himself in his alternatives (his local now) and the time of the state described by the embedded predicate (Abusch 1997; Heim 1994; Ogihara 1995; Sharvit 2018).

Altshuler & Schwarzschild (2013) argue against the necessity of either of these mechanisms and propose a **third idea**: the past tense receives a relative interpretation, as shown in (3). This interpretation allows for the embedded state to extend to Vanya’s local now, although it is also compatible with cessation. The absence of the simultaneous reading in Russian (2) is explained by pragmatic competition with the LF where the embedded past is substituted by the present tense, which can receive a plain simultaneous (relative) interpretation in Russian. The negation of this alternative results in the cessation inference (4 stopped being an odd number for Vanya), rendering the sentence infelicitous. Due to its pragmatic nature, the cessation inference can potentially be canceled, allowing for the simultaneous interpretation in (1). However, the story of why the cessation inference in (2) cannot be canceled requires further explanation, possibly along the lines of (Magri 2009; Thomas 2012).

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

**The empirical puzzle** The empirical puzzle addressed in this paper revolves around the contrast between examples (1) and (4). The only difference between these cases lies in the temporal adverbial within the matrix clause (‘three years ago’ versus ‘yesterday’), which indicates when the saying event took place. Notably, when the saying event occurs too close to the actual present moment, as in example (4), the simultaneous reading becomes unavailable.

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

(4) #Včera Vanja skaza.l, čto on ljubi.l Anju.  
*Yesterday Vanya say.Past that he love.Past Anya.*

Intended: ‘Yesterday, Vanya said that he loved Anya’.

The unacceptability of (4) can be intuitively attributed to the nature of ‘love’ as a long-lasting state. If someone loved someone yesterday, it seems implausible that the love would have ended

by now, which is the implication conveyed by this sentence. This is supported by the fact that the simultaneous reading becomes available for (4) when the contextual expectation of continued love is lifted, as in the context provided in (5).

(5)**Context:** Vanya is known for being unreliable. The day before yesterday, he confided in me: ‘I love Masha’. Then, yesterday, he said: ‘I love Anya’.

**The empirical generalization:** simultaneous readings of past-under-past in Russian lead to the inference that the state described in the embedded clause does not extend to the actual present.

**The proposal** The contrast between (1) and (4) in Russian can be straightforwardly explained by adopting the *de re* account for the simultaneous reading of past-under-past initially proposed by Abusch (1997) (and complementing it with the pragmatic theory of competition between tenses along the lines of Altshuler & Schwarzschild 2013). According to this account, the past tense of the embedded clause undergoes res-movement, resulting in the LF in (6). Its interpretation is given in (7) (we adopt the pronominal semantics of tense here).

(6)[PAST<sub>1</sub> [yesterday[Vanya [[said PAST<sub>2</sub> ] [λ<sub>5</sub> t<sub>5</sub> he<sub>7</sub> loves Anya]] ] ]

(7) [[(6)]<sup>w<sub>0</sub>,g,t<sub>0</sub></sup> = T iff g(1) ∈ yesterday & ∃P [g(2) = the time z such that P(w)(g(1))(z) & ∇ <w'',t''> ∈ Say-Alt(John,w, g(1)): John loves Mary at the z such that P(w'')(t'')(z)]]

[[ (6) ]<sup>w<sub>0</sub>,g,t<sub>0</sub></sup> is defined only if g(1) <<sub>t<sub>0</sub></sub>; g(2) <<sub>t<sub>0</sub></sub>

These truth conditions require that the temporal relationship between the time of the state of loving relative to when John positions himself in his doxastic alternatives is the same as the relationship between the past of the embedded clause and the past of the main clause. As these two past tenses are independent, the following relationship (P) is a possibility:

(8) λw.λt. λt'' such that t'' overlaps t.

The past marking on the stative triggers the competition with the present tense (Musan 1995, 1997; Magri 2011; Thomas 2012, 2014; Altshuler & Schwarzschild 2013). The competitor is formed by making a substitution in the position corresponding to PAST<sub>2</sub>, as shown in (9).

(9)[PAST<sub>1</sub> [yesterday[Vanya [[said **PRES**<sub>4</sub> ] [λ<sub>5</sub> t<sub>5</sub> he<sub>7</sub> loves Anya]] ] ]

The resulting LF in (9) is the *de re* LF for the present tense. This LF is known to yield the double access reading of the present tense (Abusch 1997; Heim 1994; Ogihara 1995; Sharvit 2018 i.a.). This reading is observed for the present-under-past in English in (10). It requires that the state of loving is both simultaneous to Vanya’s local now and extends to the actual present (if what Vanya said was true at the time he said it). The truth-conditions are in (11).

(10) Yesterday, Vanya said he loves Anya.

(11) [[(9)]<sup>w<sub>0</sub>,g,t<sub>0</sub></sup> = T iff g(1) ∈ yesterday & ∃P [g(4) = the time z such that P(w)(g(1))(z) & ∇ <w'',t''> ∈ Say-Alt(John,w, g(1)): John loves Mary at the z such that P(w'')(t'')(z)]]

[[ (9) ]<sup>w<sub>0</sub>,g,t<sub>0</sub></sup> is defined only if g(1) <<sub>t<sub>0</sub></sub>; g(4) overlaps t<sub>0</sub>

Due to the ‘upper limit constraint’, concepts cannot be future-oriented. Thus, the relationship between the two tenses must be such that the present tense covers the past. One fitting relationship is shown in (12), leading to the double access reading.

(12) λw.λt.λt''. t'' covers the period of Vanya’s lifetime starting from t in w

Accordingly, negating this alternative in (11) will require that no relation of this sort exist. Given that double access in (11) requires both the simultaneity to Vanya’s local now and the extension to the actual present, its negation amounts to this: **either** love is not simultaneous with Vanya’s ‘now’, **or** it does not extend to the actual present. As we are focusing on a context where love is simultaneous with Vanya’s ‘now’, the inference drawn is that love has ceased by the actual present. This is the cessation implicature we observe in (4)!

We propose that while the double access reading is possible for embedded present in Russian, it is normally not perceived due to the availability of the strictly weaker simultaneous reading.

**Comparison to the other approaches** Neither SOT rule nor the pragmatic competition of the relative past and relative present in Russian can account for the contrast between (1) and (4). SOT rule predicts that the simultaneous reading should be available in both cases and predicts

no inference regarding the current status of loving. The relative past analysis predicts that the relevant competitor in both cases is the construction with the relative present (shown in (13)). The negation of this alternative will result in the cessation relative to Vanya's now, thus it will block the simultaneous reading altogether in both cases, failing to predict the contrast.

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

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