Narrative Effects in Russian Indirect Reports and What They Reveal About the Meaning of the Past Tense

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1. The role of reference time in the interpretation of indirect reports

Ever since the seminal work in (Kamp 1979, Hinrichs 1981; 1986, Kamp and Rohrer 1983, and Partee 1984), it has been generally held that temporal anaphora depends in part on the aspectual distinction between events and states. For example, consider Partee's classic example in (1). Here, the times of the described events (i.e. John's getting up, going to the window, raising the blind, going back to bed) correlate with the order of appearance, i.e. a *narrative progression* is invoked. On the other hand, the states described in (1) (i.e. being light out, not being ready to face the day, being depressed) hold throughout the described events, i.e. a *narrative halt* is invoked.

(1)   John got up, went to the window, and raised the blind. It was light out. He pulled the blind down and went back to bed. He wasn't ready to face the day. He was too depressed (Partee 1984: 253).

The narrative effects above motivate some notion of a context supplied "reference time"—i.e. the time or event to which the story has so far developed—which is provided by the antecedent discourse and with which a temporal element in the new sentence establishes a certain anaphoric relation. In particular, the following has been proposed in the literature on temporal anaphora:

(2)   TEMPORAL LOCATION
        Whereas the truth conditions for an eventive sentence require that the described event occur within a reference time, the truth conditions for a stative sentence require that the described state hold throughout the reference time (Kamp 1979, Hinrichs 1981; 1986, Kamp and Rohrer 1983, and Partee 1984).

(3)   UPDATE OF REFERENCE TIME[1]
        An eventive predicate updates the reference time to the duration of a consequent state of the described event (Moens and Steedman 1988; Webber 1988); a stative predicate does not update the reference time (Hinrichs 1981; 1986).

[1] Partee (1984) proposes that eventive predicates updates the reference time to a time "immediately after" the described event and stative predicates update the reference time to the duration of the described state. The generalizations made in this paper do not depend on which version of the rule is chosen.

(4)   REFERENCE TIME RESOLUTION[2]
       Unless there exists contextual justification to the contrary, a described eventuality
       is—by default—located in time relative to the most recent reference time that is
       made salient in discourse (after Kamp and Reyle 1993: 545)

       Let us see how (2)-(4) apply to the discourse in (1). Given (3), the eventive
predicate *got up* updates the reference time to a consequentstate of that event. Given the
default condition in (4), this is the reference time relative to which the going to the
window event is located in time. Finally, given (2), the going to the window event is
contained within a consequent state of the getting up event. Applying the rules in this
way, we also derive that the raising the blind event is contained within a consequent state
of the going to the window event. On the other hand, the state of being light out contains
(rather than being contained within) a consequent state of the raising the blind event
given (2) and the default condition in (4). Moreover, since stative predicates do not
update the reference time, the pulling the blind down event is contained within a
consequent state of the raising the blind event given (2) and the default condition in (4)—
and so on; see Fig. 1, where the underscore lines represent a consequent state of a
described event, which serves as the reference time in the interpretation of a clause.

J gets up ● _____

    J goes to window ● _____

        J raises the blind ● _____

           It is light out ...//...

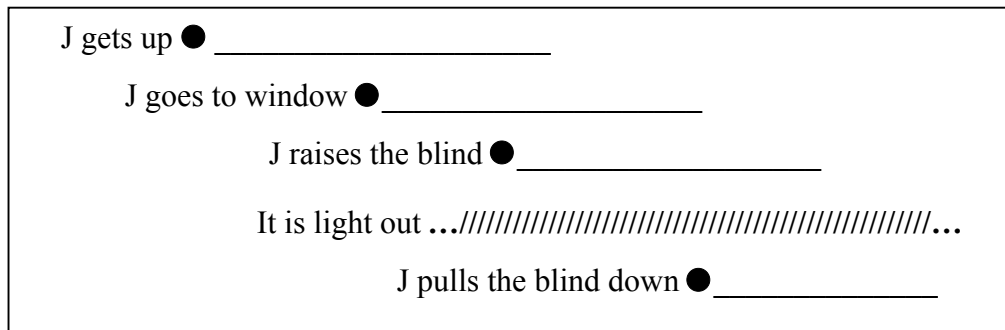   J pulls the blind down ● _____

Figure 1: Narrative effects in (1)

       The goal of this paper is to investigate narrative effects in indirect reports like
(5b). These constructions consist of (i) a matrix clause that contains an indirect speech or
an attitude verb which describes an eventuality v_1 and (ii) a complement clause that
contains a predicate which describes an eventuality v_2.

(5)   a. *V prošlom godu v bare ja do-li-l   bakal Dudkina i*
          In last   year at bar I PFV-pour-PST.1s glass Dudkin and
          'Last year, at a bar, I filled up Dudkin's glass and

       b. *skaza-l,   čto ja xote-l   emu soobščit' čto-to   prijatnoe.*
          PFVsay-PST.1s that I want_IPF-PST.1s him announce something pleasant
          said that I wanted to inform him of something pleasant.'

I argue that (2)-(4) play a crucial role in the temporal ordering of v_1 and v_2 analogous to unembedded eventualities in discourse viz. (1). Although the core data comes from Russian, the generalizations made in this paper presumably apply to other languages as well. Russian is chosen in order to address the following question, which has not received a satisfactory answer in the literature: when do Russian indirect reports have an interpretation in which the eventualities described by the embedded and the matrix predicate overlap in time (henceforth: *overlapping* interpretation)?

Returning to the discourse in (5) above, notice that the following inferences are made: (i) the speaker's report described in (5b) is understood to follow the glass event described in (5a) and (ii) the wanting to inform state described in (5b) holds at the time of the glass filling event and continues to hold throughout the speaker's report. The rules in (2)-(4) predict the following about the temporal order of the eventualies described in (5). Given (3), the reference time in (5a) is updated to a consequent state of the filling up event. Given the default condition in (4), this is the reference time in the matrix clause of (5b). What about the reference time in the embedded clause? The default condition in (4) tells us that it is a consequent state of the saying event. Given (2), the wanting to inform state holds throughout this consequent state, while the saying event holds within a consequent state of the glass filling event. As result, we account for the fact that (5b) entails that the eventualities described by the matrix and the embedded clause overlap in time; however, we do not account for the inference that the state of wanting to inform holds at the time of the glass filling event:
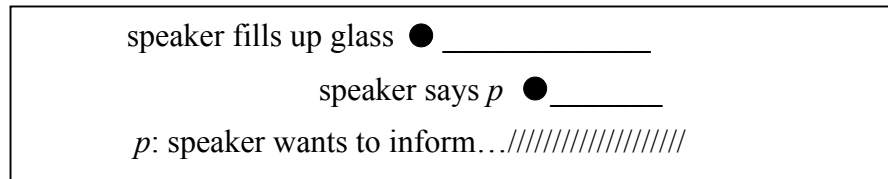

Figure 2: Narrative effects in (5) given the default condition in (4)

One could say that world knowledge about the typical duration of a wanting state accounts for this inference (cf. Dowty 1986 and Gennari 2003). Alternatively, one could say that the default condition in (4) is overridden: the embedded predicate "disregards" the reference time update of the eventive matrix verb in (5b) and "chooses" the reference time that is updated by a preceding eventive predicate in (5a). On such a view, the reference time in the embedded clause of (5b) would be the same as the reference time in the matrix clase. Given (2), the saying event would hold within a consequent state of the filling up event and the wanting to inform state would holds throughout it:
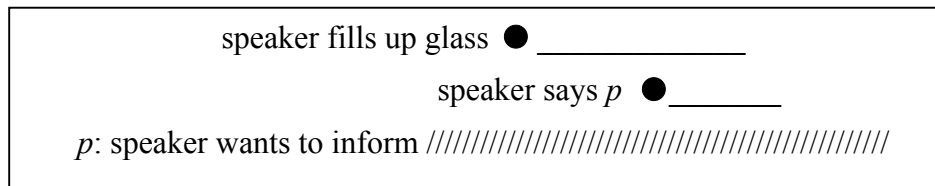

Figure 3: Narrative effects in (5) given an override of the default condition in (4)

Potential evidence that the embedded predicate in (5b) does, in fact, "disregard" the reference time update of the eventive matrix verb comes from (6) and (7).

(6)   a.   *V prošlom godu Dudkin razve-l-sja   s   ženoj.*
                 In last   year Dudkin ^{PFV}seperate-PST.3s-REFL with wife
                 'Last year Dudkin divorced his wife.'
        b.   *#On by-l   sčastlivym xolostjakom.*
                  He be$_{IPF}$-PST.3s happy   bachelor
                 'He was a happy bachelor.

(7)   a.   *V prošlom godu Dudkin razve-l-sja   s   ženoj.*
                 In last   year Dudkin ^{PFV}seperate-PST.3s-REFL with wife
                 'Last year Dudkin divorced his wife.'
        b.   *#Ja slyša-l,   čto on by-l   sčastlivym xolostjakom.*
                  I ^{PFV}hear-PST.1s that he be$_{IPF}$-PST.3s happy   bachelor
                 'I heard that he was a happy bachelor.'

The continuation in (6b) is infelicitous because asserting that Dudkin was a happy bachelor at the time of his divorce is absurd. And as illustrated in (7b), embedding (6b) under an attitude does not improve the infelicitous status of the discourse. This observation is mysterious if assume that the reference time in the embedded clause is revolved to a consequent state of the hearing event desribed by (7b). On the other hand, this observation is expected if we assume that the default condition in (4) is overridden in indirect reports: the embedded predicate "disregards" the reference time update of the eventive matrix verb in (7b) and "chooses" the reference time that is updated by a preceding eventive predicate in (7a).

       A question that arises, then, is: what is responsible for the override of the default condition in (4)? One hypothesis would be to say that the past tense on the embedded predicate is responsible for the override; it ensures that the reference time in the embedded clause precedes the time of the event described by the matrix clause. This hypothesis is addressed in §3.2. For the time being I will follow Kamp and Reyle (1993) and assume that we can identify the reference time in a given clause based on our intuitions about the temporal ordering of eventualities—e.g. we know that a consequent state of the glass filling event is the reference time in the embedded clause of (5b) since we understand the wanting to inform state to hold before the filling up the glass event (and continuing to hold throughout this event).

       Let us now consider the indirect report in (8b), which is identical to (5b) but has a different interpretation due to the surrounding discourse. Here, an overlapping interpretation is not entailed (though it is compatible with 8b)—e.g. the speaker's desire to inform Dudkin of something pleasant may never have ceased or this desire may have ceased shortly before the time of his report.

(8)   a. *Včera   Lev menja sprosi-l*:   "*Počemu ty reši-l   pojti*
            Yesterday Lev me ^{PFV}ask-PST.3s why   you decide-PST.2s ^{PFV}go.INF
            v bar s   Dudkinym?"
            to bar with Dudkin
            'Yesterday Lev asked me: "Why did you decide to go to the bar with Dudkin."'

b. *Ja skaza-l,   čto ja xote-l   emu soobščit' čto-to   prijatnoe.*
   I ^{PFV}say-PST.1s that I want_{IPF}-PST.1s him   announce something pleasant
   'I said that I wanted to inform him of something pleasant.'

Given (3), the reference time in (8a) is first updated to a consequent state of the speaker's asking, then to a consequent state of hearer's decision. However, the saying event in (8b) is understood to be located in time relative to the former consequent state, not the latter. After all, answers follow rather than precede the question to which they correspond to. For example, consider the discourse in (9). Here, Obama's reply is understood to follow the question asking rather than the havoc raising.

(9)   The reporter asked a provoking question to Obama. It raised havoc all around the country. I wonder why. After all, the candidate replied as best as he could.

Therefore, I assume that the reference time in the matrix clause of (8b) is resolved to a consequent state of the speaker's asking in (8a) due to extra-linguistic reasoning analogous to (9). What about the reference time in the embedded clause of (8b)? Since we understand the wanting state to hold during the decision to go to the bar, the reference time in the embedded clause of (8b) is a consequent state of the decision. Given (2), the saying event thus holds within a consequent state of the asking, while the wanting to inform state holds throughout a consequent state of the decision. As result, it is correctly predicted that (8b) does not entail that the eventualities described by the matrix and the embedded clause overlap in time:
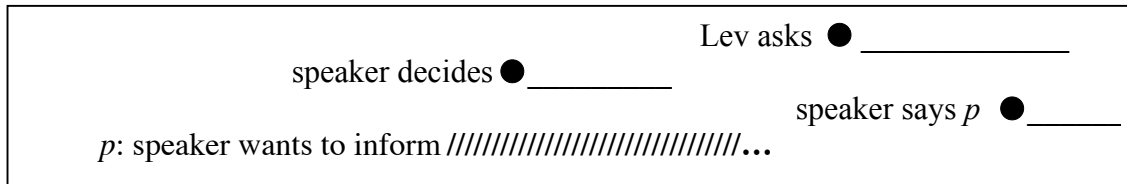

Figure 4: Narrative effects in (8) do not trigger an overlapping interpretation

In sum, we have seen that when an embedded clause of an indirect report is stative and the reference time overlaps the time of the matrix eventuality, an overlapping interpretation is entailed. This generalization automatically follows from (2). However, it is quite different from what has been proposed in the literature on (Russian) indirect reports. Previous researchers have addressed the question of what allows an embedded eventuality to overlap in time with a matrix eventuality by appealing to properties of grammatical elements such as *tense*, *aspect* and *verb*. In the next section, I attempt to show how some of the previous generalizations—although incorrect—raise some interesting questions about the temporal interpretation of indirect reports that require further research. Subsequently, in §3, I consider what narrative effects in indirect reports reveal about the meaning of the past tense. I present novel data and argue that a standard theory which holds that the past tense requires a reference time to precede the *local evaluation time* cannot be right if by "reference time" we mean the topical interval of time previously introduced in discourse that accounts for narrative progression. Moreover, I argue that a theory of tense that assumes a richer ontology of times—such as

the one in Kamp and Reyle 1993—could be extended to account for the indirect report indirect report data that the standard theory of tense cannot.

2. Previous research on Russian indirect reports

Forbes (1914) argued that Russian indirect reports allow an overlapping interpretation only if embedded tense is non-past. This generalization has independently resurfaced in much of the literature on this topic (e.g., Comrie 1985; 1986, Kondrashova 1999; 2006, Kusumoto 1999, Schlenker 2003; 2004, von Stechow 2003, Hollebrandse 2005, and Babyonyshev and Matushansky 2006). While this generalization is false (see 5 and data in §5), it is surprising that so many researchers have concluded from indirect reports that are similar to those provided in the previous section—albeit without a supporting context—that an overlapping interpretation is not possible with the embedded past tense. The question then, is: what (if anything) does this reveal about the temporal properties of these constructions? A natural hypothesis is to say that by default, the reference time in the embedded clause of an indirect report precedes the reference time in matrix clause. This hypothesis, along with the implicative nature of the past tense, could possibly explain why past researchers have (incorrectly) generalized from out-of-the-blue indirect reports that an overlapping interpretation is not possible with the embedded past tense. Future research will hopefully shed light on whether such a hypothesis is correct.

In contrast to the aforementioned researchers, Khomitsevich (2008) argues that an overlapping interpretation is possible only if the embedded predicate is imperfective.[3] However, Khomitsevich does not say why only the imperfective should allow an overlapping interpretation and why an overlapping interpretation is often not possible with this aspect (viz. 8). Moreover, as illustrated in (10), an overlapping interpretation is, in fact, possible with an embedded perfective predicate when it recieves a habitual interpretation. Here, Alexey's habit of never giving in is understood to hold (though need not be instantiated) at the time of the knowing.

(10) *Ona zna-l-a,   čto v situacijax, sxodnyx s   segodnjašnej,*
      She know$_{IPF}$-PST.3s-FEM that in situations prevailing from today
      Aleksej nikogda ne   ustup-it.
      Alexey never   not ^{PFV}give.in-NPST.3s
      'She knew that in such situations as that prevailing today, Aleksey never gave in.'
      (Aksenov, *Kollegi*; Forsyth 1970: 178)

This is not surprising if we assume following Bittner 2008 that analogous to stative sentences, the truth conditions for a habitual sentence require that the described habit contain the reference time. Since both the imperfective and the perfective aspect give rise to the habitual interpretation (Jakobson 1971; see also Stunová 1986) neither aspect is a necessary condition for an overlapping interpretation.

Finally, it is worthwhile to note that Boeck (1957) and Costello 1960/1) have argued that Russian indirect reports with an embedded past tense allow an overlapping

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[3] This conclusion is independently reached for indirect reports in Romance (see Giorgi and Pianesi 1997; 2000 for Italian and Gennari 2001 for Spanish); see also Hollebrandse 2005 for more discussion.

interpretation as long as the matrix verb is an attitude as opposed to an indirect speech verb. These authors conclude that it is not the tense or the aspect of the embedded predicate that is responsible for an overlapping interpretation (or the lack thereof), but rather the semantic properties of matrix verb.[4] While this generalization is also false (see 5 and data in §5), it is unclear at this point what it reveals about the temporal properties of indirect reports.[5]

3. The role of the past tense in the interpretation of indirect reports

3.1. *Predictions of the standard theory*

In this section I would like to consider what indirect reports like (11b)—which crucially differ from (5b)/(8b) in that the embedded predicate is eventive (viz. the perfective marking on the embedded verb)—reveal about the meaning of the past tense. Here the following inferences are made: (i) Anna's report described in (11b) follows the murder described in (11a) and (ii) the running away event described in (11b) follows the murder.

(11) a. *Dudkin soverši-l   ubijstvo v tom zdanii.*
         Dudkin ^{PFV}commit-PST.3s murder in that building
         'Dudkin committed murder in that building.'

      b. *Mne Anja skazala,   čto on u-beža-l   s   aktrisoj.*
         Me Anna ^{PFV}say-PST.3s that he PFV-run-PST.3s with actress
         'Anna told me that he ran away with an actress.'

The rules in (2)-(4) predict the following about the temporal order of the eventualies described in (11). Given (3), the reference time in (11a) is updated to a consequent state of the murder. Given the default condition in (4), this is the reference time in the matrix clause of (11b). This is also the reference time in the embedded clause of (11b) since we understand the running away event to *follow* the murder described in (11a). Given (2), the saying and the running away events are contained in a consequent state of the murder. But how do we account for the intuition that the running away precedes the saying event?

In order to see what the standard theory of tense—which says that the past tense requires a reference time to precede the *local evaluation time*—predicts, let us assume that the tenseless sentence *on ubegat'* ('he run away') has the denotation in (12) and the past tense has the denotation in (13). Note that I adopt the following conventions: (i) τ is a trace function assigning to eventualities in its domain their run time (Link 1987), (ii) t_0 refers to the speech time when free, or the attitude holder's *now* when bound by the complementizer (Abusch 1997, Heim 1994, and von Stechow 1995; 2003) and (iii) a free time variable t_R^n refers to a reference time r, which is a topical interval of time inherited from the context in which the sentence is interpreted.

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[4] See also Forsyth 1970, Brecht 1975, Barensten 1996, Altshuler 2004, and Khomitsevich 2008.

[5] It may worthwhile to note, however, that Brasoveanu and Farkas (2007) have recently claimed that attitude and indirect speech reports have different anaphoric properties. Unfortunately, the authors do no say whether the observed differences affect the temporal interpretation of these constructions.

(12) on ubegat' $\rightsquigarrow$ $\lambda t_1 \lambda w_1[\exists e_1[run.away(he)(e_1)(w_1) \wedge \tau(e_1) \subseteq t_1]]$

(13) PST^1 $\rightsquigarrow$ $\lambda R_{i_{\omega}t} \lambda w_1[t_R^{\,1} < t_0 \wedge R(t_R^{\,1})(w_1)]$

If we assume that the embedded past tense in (11b) is *deictic*—i.e. t_0 refers to the speech time—then (11b) would have the denotation (14), where the argument of *skazat'* ('say') is a set of worlds:

(14) PST^1 Anja skazat' čto PST^2 on ubegat' $\rightsquigarrow$

$\lambda w_1[\exists e_1[t_R^{\,1} < t_0 \wedge say(\lambda w_2[\exists e_2[t_R^{\,2} < t_0 \wedge run.away(he)(e_2)(w_2)$
$\wedge \tau(e_2) \subseteq t_R^{\,2}]])(anna)(e_1)(w_1) \wedge \tau(e_1) \subseteq t_R^{\,1}]]$

If, on the other hand, we assume that embedded past tense in (11b) is bound—i.e. t_0 refers to the attitude holder's *now* rather than the speech time—then (11b) would have the translation in (15); the propositional argument of *skazat'* ('say') is now a set of world-time pairs (rather than a set of worlds):

(15) PST^1 Anja skazat' čto PST^2 on ubegat' $\rightsquigarrow$

$\lambda w_1[\exists e_1[t_R^{\,1} < t_0 \wedge say(\lambda w_2\lambda t_0[\exists e_2[t_R^{\,2} < t_0 \wedge run.away(he)(e_2)(w_2)$
$\wedge \tau(e_2) \subseteq t_R^{\,2}]])(anna)(e_1)(w_1) \wedge \tau(e_1) \subseteq t_R^{\,1}]]$

I will now show that both (14) and (15) are problematic given the following two assumptions:

(16) By "reference time" we mean the topical interval of time previously introduced in discourse that accounts for narrative progression.

(17) The identity of the reference time in the matrix and the embedded clause of (11b) is necessary to account for the intuition that the saying event and the running away event follow the murder described in (11a).

I begin with (14). The reference time variables $t_R^{\,1}$ and $t_R^{\,2}$ could refer to the same or different reference times depending on the surrounding discourse. Assuming that they get assigned the same value, a forward shifted interpretation[6] and an overlapping interpretation[7] are wrongly predicted to be possible; Fig. 5 illustrates the two temporal ordering of events that are compatible with (14).

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[6] Abusch (1997) rules a forward-shifted interpretation via the *Upper Limit Constraint* (Abusch 1997: 23-25).

[7] It has been argued by Kusumoto (1999; 2005) that in English, an overlapping interpretation is possible when the embedded predicate is eventive. If such were the case, then presumably the fact that an overlapping interpretation is not rule out would be a welcomed result (though of course one would still need to explain why the overlapping interpretation is not possible in 11b). Kusumoto provides the example in (i) and observes that it can correspond to the direct speech report "Ichiro strikes out", as uttered by an announcer.

(i)   The announcer said that Ichiro struck out (Kusumoto 2005: 324).

Note, however, that when an announcer reports live sporting events, he uses the present tense so that the sports fan perceives the described event as "ongoing" even though it has already taken place—e.g. when an
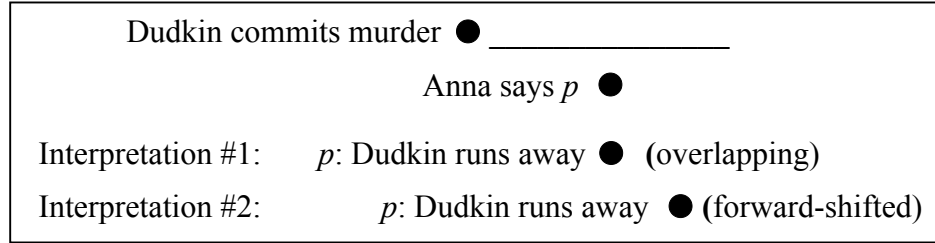
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┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│   Dudkin commits murder  ●  ─────────────                         │
│                                                                   │
│                          Anna says p  ●                           │
│                                                                   │
│   Interpretation #1:      p: Dudkin runs away  ●  (overlapping)   │
│                                                                   │
│   Interpretation #2:         p: Dudkin runs away  ● (forward-shifted) │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
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Figure 5: two possible temporal ordering of events given (16)

Let us us now consider (15) and make the standard assumption that the lexical semantics of an indirect speech (or attitude) verb ensures that time of the attitude holder's report in the actual world is identified with the attitude holder's *now* in some possible world.[8] Since the saying event holds within the reference time denoted by $t_R{}^1$, while the reference time denoted by $t_R{}^2$ precedes the counterpart of the saying time, namely the attitude holder's *now*, filling in the same value for $t_R{}^1$ and $t_R{}^2$ leads to a contradiction.

In sum, I have presented an argument against the standard theory of tense. This argument crucially relies on (16) and (17). While I take (16) to be well motivated, one could question the assumption in (17). However, in doing so, one must then find some other way to account for the temporal ordering of events described in (11b) relative to the event described in (11a). Instead of trying to rescue the standard theory in this way (which is a non-trivial task), I will consider why this theory fails given the assumptions (16) and (17). Its failure seems to be due to the fact that the reference is being asked to do too many things at once: not only is it being asked to account for narrative progression, but it is also being asked to locate the described eventuality relative to the local evaluation time (albeit indirectly). Based on data orthogonal to indirect reports, Kamp and Reyle (1993) reach a similar conclusion. They argue that the "reference time" encoded by the tense should not be held accountable for narrative progression. Only the "reference time" encoded by the aspect should have this function. In the next section, I briefly outline Kamp and Reyle's motivations for such a view and extend their proposed analysis to indirect reports. I show that this analysis can account for the indirect report data considered thus far.

3.2. *Kamp and Reyle's analysis of the past tense extended to indirect reports*

Kamp and Reyle (1993) propose that the (simple) past tense is "…ambiguous between (at least) two different relation pairs. When the past tense sentence…[is eventive]…then its

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announcer says "Ichiro strikes out", he says this after Ichiro's bat has gone through the strike zone—i.e. what he really means is "Ichiro has just struck out". To the best of my knowledge, there are no convincing cases where an overlapping interpretation is possible when the embedded predicate is eventive (see e.g. Gennari 2003, Hollebrandse 2005, and Higginbotham 2006). This is especially clear in Russian, where an episodic perfective predicate in the embedded clause of an indirect report never allows an overlapping interpretation.

[8] This assumption is necessary since even if the attitude holder is clueless (or wrong) about what time it is, the bound t_0 still represents his *now* and not his *past* or *future*. That is, the attitude holder does not believe himself to be living in the past or future of whatever time he may believe it to be (even if he has a false belief about what time it is). See Lewis 1979, and von Stechow 1995 for more discussion of this point.

tense always corresponds to the pair *<TPpt coincides with utterance time; described eventuality before TPpt>*. When…[the past tense sentence is stative]…the corresponding relations may be *<TPpt before the utterance time; described eventuality overlaps TPpt>*" (Kamp and Reyle: 597):[9]

(18) a. PST^1_{Event} $\rightsquigarrow$ $\lambda P_{\epsilon\omega t}\lambda w_1[\exists e_1[t_P^1 = t_0 \wedge \tau(e_1) < t_P^1 \wedge P(e_1)(w_1)]]$

    b. PST^1_{State} $\rightsquigarrow$ $\lambda R_{\sigma\omega t}\lambda w_1[\exists s_1[t_P^1 < t_0 \wedge t_P^1 \cap \tau(s_1) \neq \varnothing \wedge R(s_1)(w_1)]]$

Note that 'TPpt'—represented as t_P in the formulas above—corresponds to a *perspective time* (or *temporal perspective point*). But what is the nature of a *perspective time*? Due to space limitations, I will only outline one their motivations (see Kamp and Reyle 1993, Chap. 5.4 for more discussion)—which is independent of indirect reports—and then move on to consider some evidence that Kamp and Reyle provide for the view that the (simple) past tense is ambiguous viz. (18).

    Ever since Reichenbach 1947, it has been generally held that temporal interpretation is determined by relating (at least) three distinct times: the *reference point* (or *reference time*), the *event time* and the *speech time*. This view is made more fine-grained in Kamp and Reyle 1993, where it is argued that: "Reichenbach went astray when he wanted his notion of reference point to do too many things at once." Kamp and Reyle observe that in discourses such as (19), which involve the so-called *extended flashback*, all the past perfect clauses use the time of the arriving as their "reference point." However, these clauses also form a narrative progression and therefore each clause also provides a "reference point" for the clause following it—a time which the eventuality described by the second clause must follow or overlap.

(19) Fred arrived at 10. He had got up at 5; he had taken a long shower, had got dressed and had eaten a leisurely breakfast. He had left the house at 6:30 (Kamp and Reyle 1993: 594).

To account for the temporal ordering in (19), Kamp and Reyle propose that Reichenbach's notion "reference point" should be broken up into two distinct notions, which play entirely different roles. They write (Kamp and Reyle 1993: 594):

(20) "We propose to retain the term *reference point* for the type of reference time which accounts for narrative progression…For reference times that arise in two-dimensional analysis of the past perfect, we will use the term *temporal perspective point*…This term is meant to reflect our intuition that the intermediate time which Reichenbach recognized as essential to the interpretation of past perfects is the time *from which* the described eventuality is seen as past".

Thus in (19), Fred's arrival is the perspective time relative to which all the events denoted by the past frect predicates are located in time. Moreover, the narrative progression in

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[9] This is a grossly simplified version of Kamp and Reyle's analysis of the simple past tense. It is presented as such for the sole purpose of deriving the indirect report data considered thus far. I refer the reader to Kamp and Reyle 1993, Chap. 5.4 for intricate details of their proposal.

is accounted for if we assume that the reference time of a past perfect predicate is updated to the duration of a consequent state of the described event (see Kamp and Reyle 1993: 606-609 for a detailed description of the analysis).

Let us now consider some evidence that Kamp and Reyle provide for the view that the (simple) past tense is ambiguous viz. (18). They observe that in (21) and (22) the adverb *now* refers to a past interval of time, which serves as the perspective time for and in virtue of which the described eventualities (i.e. feeling at home and writing a letter respectively) are seen as past.[10]

(21)   Mary had been unhappy in her environment for more than a year. But now she felt at home (Kamp and Reyle 1993: 595).

(22)   Bill had come home at seven. Now he was writing a letter (Kamp and Reyle 1993: 596).

In contrast to the examples above, (23) shows that *now* cannot modify eventive sentences in the past tense.[11] This contrast is also evident with e.g. the Russian *sejčas* ('now'), the French *maintenant* ('now') and the Korean *cikum* (see Lee and Choi 2009 for more discussion).

(23)   #Bill had come home at seven. Now he wrote a letter (Kamp and Reyle 1993: 596).

Assuming that *now* refers to the perspective time, the data above suggests that the perspective time for an eventive past tense sentence must coincide with the utterance time, while the perspective time for a stative past tense sentence may be some past time that is determined by the context, typically the run time of an event described previously in discourse. If this is right, then the relations between the perspective time and described eventuality imposed by the past tense must be the ones in (18): for eventive sentences, the described eventuality precedes the perspective time (i.e. since the perspective time coincides with the utterance time), while for stative sentences, the described eventuality

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[10] Some native speakers of English feel that (21) and (22) are marginal. However, when presented with more naturally occurring examples, such as (ii), these speakers have no problem accepting the fact that *now* can refer to a past interval of time.

(ii)   The student-mistress was much younger than Sabina, and the musical composition of her life had scarcely been outlined; she was grateful to Franz for the motifs he gave her to insert. Franz's Grand March was now her creed as well. Music was now her Dionysian intoxication (*The Unbearable Lightness of Being*; Milan Kundera).

[11] Perhaps more convincing contrasts are found in the following discourses:

(iii)   He came to me and told me he had been dressing in my clothes whenever I wasn't home for quite a few years, and now he {was ready to take/taking/*took} the next step and with the help of his doctor…(internet)

(iv)   Last month I met Bianca, an old friend whom I haven't seen for so much time. But I was surprised to see how much has she changed. She was a quite well-built girl and now she…
        a.   ….was so skinny and her face was a little pale.
        b.   …*now she became skinny and her face became a little pale.
        c.   …now she had become skinny and her face had become a little pale.

overlaps the perspective time (i.e. since the perspective time precedes the utterance time).[12]

Let us now apply Kamp and Reyle's analysis of tense to indirect reports. In doing so, I would like to make the following assumption: *an embedded past tense is always bound*. Given this assumption, let us reconsider the discourse in (11), repeated below in (24):

(24) a. *Dudkin soverši-l   ubijstvo v tom zdanii.*
        Dudkin [PFV]committ-PST.3s murder in that building
        'Dudkin committed murder in that building.'
      b. *Mne Anja skazala,   čto on u-beža-l   s   aktrisoj.*
        Me Anna [PFV]say-PST.3s that he PFV-run-PST.3s with actress
        'Anna told me that he ran away with an actress.'

Recall that (24) is a problem for the standard theory of tense because either it does not rule out non-existing interpretations or it derives a contradiction when the reference times in the matrix and the embedded clause are identified. On the other hand, as illustrated by (25)—which is the denotation of (24b)—assuming Kamp and Reyle's meaning for the "eventive" past tense in (18a) allows us to rule out an overlapping interpretation even if the reference time in the matrix and the embedded clause is identical. Such is the case because the embedded "eventive" past tense requires the running away event to precede the attitude holder's *now*; see Fig. 6.

(25) PST^1_{event} Anja skazat'^{1} čto PST^2_{event} on ubegat'^{2} $\rightsquigarrow$
      $\lambda w_1[\exists e_1[t_P^1 = t_0 \wedge \tau(e_1) < t_P^1 \wedge say(\lambda w_2 \lambda t_0[\exists e_2[t_P^2 = t_0 \wedge \tau(e_2) < t_P^2$
          $\wedge\; run.away(he)(e_2)(w_2) \wedge \tau(e_2) \subseteq t_R^2]])(anna)(e_1)(w_1) \wedge \tau(e_1) \subseteq t_R^1]]$
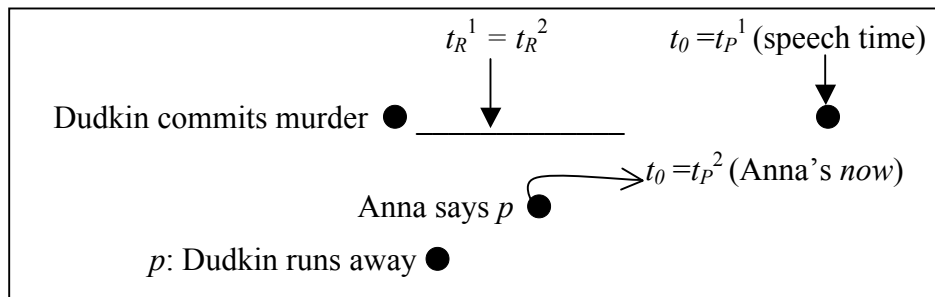

Figure 6: Narrative effects in (24)

By requiring the described event to precede the attitude holder's *now*, the embedded "eventive" past tense not only accounts for the fact that (24b) entails an non-overlapping interpretation, but it also prevents the described event from being located in time relative to a reference time that is updated by an indirect speech (or attitude) verb. In this way, the observation that the "eventive" past tense overrides the default condition in (4) is not

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[12] The view that tense is sensitive to the lexical properties of verbs has some cross-linguistic appeal. As argued in Baker and Travis 1998, the Mohawk past tense morpheme *hne'* can only attach to stative predicates. Future research will hopefully reveal other languages where similar restrictions are found.

surprising, i.e. we account for the observation that the embedded predicate "disregards" the reference time update of the eventive matrix verb in (24b) and "chooses" the reference time that is updated by a preceding eventive predicate in (24a).

I conclude this section by showing that the "stative" past tense in (18b) is compatible with the temporal ordering of events in (5) and (8), repeated below in (26) and (27) respectively; the denotation of the indirect report in (26b)/(27b) is given in (28).

(26) a. *V prošlom godu v bare ja do-li-l   bakal Dudkina i*
          In last   year at bar I PFV-pour-PST.1s glass Dudkin and
          'Last year, at a bar, I filled up Dudkin's glass and

      b. *skaza-l,   čto ja xote-l   emu sobščit' čto-to   prijatnoe.*
          PFVsay-PST.1s that I wantIPF-PST.1s him announce something pleasant
          said that I wanted to inform him of something pleasant.'

(27) a. *Včera   Lev menja sprosi-l: "Počemu ty reši-l   pojti*
          Yesterday Lev me   PFVask-PST.3s why   you decide-PST.2s PFVgo.INF
          v bar s   Dudkinym?"
          to bar with Dudkin
          'Yesterday Lev asked me: "Why did you decide to go to the bar with Dudkin."'

      b. *Ja skaza-l,   čto ja xote-l   emu sobščit' čto-to   prijatnoe.*
          I PFVsay-PST.1s that I wantIPF-PST.1s him announce something pleasant
          'I said that I wanted to inform him of something pleasant.'

(28) $\text{PST}^1_{\text{Event}}$ Dudkin skazat'^{1} čto $\text{PST}^2_{\text{State}}$ on xočit sobščit'^{2} $\leadsto$
      $\lambda w_1[\exists e_1[t_P^1 = t_0 \wedge \tau(e_1) < t_P^1 \wedge say(\lambda w_2 \lambda t_0[\exists s_1[t_P^2 < t_0 \wedge t_P^2 \cap \tau(s_1) \neq \varnothing$
          $\wedge \ want.to.inform(he)(s_1)(w_2) \wedge t_R^2 \subseteq \tau(s_1)]])(dudkin)(e_1)(w_1) \wedge \tau(e_1) \subseteq t_R^1]]$

Fig. 7 and Fig. 8 illustrate the contribution of the embedded "stative" past tense in (26b) and (27b) respectively. Note that I assume that the reference time in the matrix and the embedded clause of (26b) is the same (namely a consequent state of the glass filling event) and the perspective time in the embedded clause is the time of the glass filling event; the perspective time in the matrix clause is the speech time. In (27b), I assume that the reference time in the matrix clause is a consequent state of the asking, while the reference time in the embedded clause is a consequent state of the deciding; the perspective time in the embedded clause is the time of the decision; the perspective time in the matrix clause is the speech time.
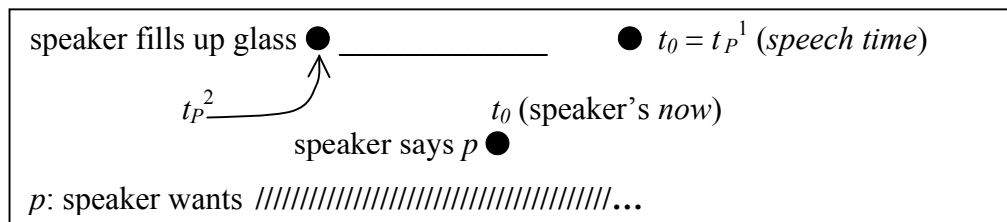
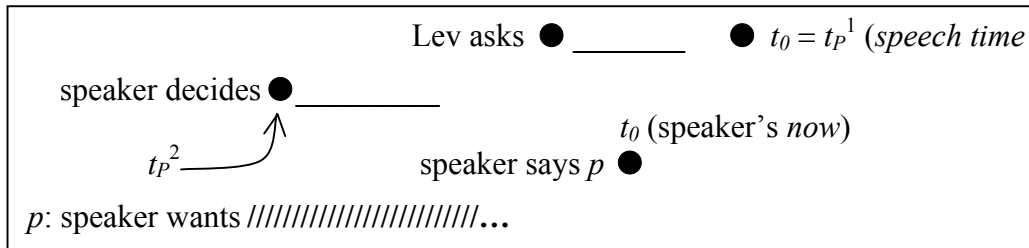

Figure 7: Narrative effects in (26)

Figure 8: Narrative effects in (27)

Fig. 7 illustrates that a situation in which the state described by the embedded predicate contains the attitude holder's *now* is compatible with the requirement imposed by the "stative" past tense. Therefore, unlike the "eventive" past tense, the "stative" past tense does not override the default condition in (4). However, we should not conclude from this that the meaning of the "stative" past tense is inadequate. After all, it allows us to derive the overlapping and the non-overlapping interpretation in (26b) and (27b) respectively without any additional stipulations.[13] Moreover, it could very well be the case that an embedded past tense overrides the default condition in (4) only when the embedded predicate is eventive; in cases where the embedded predicate is stative, the default condition in (4) is overridden by some other means. Potential evidence for such a view comes from (29b), where the embedded stative predicate does not have past tense morphology (which, in Russian, signals the use of the non-past tense) yet we understand the state of Krylov's house being on fire to hold at the time of Dudkin's arrival.

(29)   a. *Dudkin pri-exa-l   domoj.*
           Dudkin PFV-go-PST.3s home
           'Dudkin came home.'
        b. *On skaza-l   Anne, čto požar v dome Krylova.*
           He [PFV]say-PST.1s Anna that fire in house Krylov
           'He told Anna that Krylov's house was on fire.'

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[13] Abusch (1997) showed that an overlapping interpretation could be derived without invoking a sequence of tense rule if the embedded past tense is interpreted deictically. The analysis advocated here shows that this interpretation could be derived without a sequence of tense rule even if the embedded past tense is bound. Moreover, it seems reasonable that the theory advocated here could be extended to account for the oft-cited examples involving multiple embedding under *would*. For example, consider the discourse below:

(v)   Mary felt very tired and was starting to get a little bit worried about how much longer the procedure was going to go on, so she asked the nurse if the doctor could come back and check to see how much her cervix was dilated by that point. **Mary thought that the doctor would say that she was 10 centimeters dilated** and it was time to push (modified from the internet). (c.f. Mary thought: "The doctor will say that I <u>am</u> 10 centimeters dialed")

We could analyze the bolded indirect report as follows. The saying event is contained within a consequent state of the asking event, which in turn is contained within the state of being dialated 10 cm. This correctly predicts an overlapping interpretation. With regard to the tenses we could say the following: the "eventive" past tense on *thought* locates the thinking event prior to the speech time; *would* locates the saying event after the thinking event; the "stative" past tense on *was 10 centimeters dialed* overlaps the perspective time, which is presumably the run time of the asking event.

Since it is highly unlikely that the non-past tense could override the default condition in (4), (29) suggests that this condition is overriden by some other means. If this is right, then a reasonable hypothesis would be to say that whatever overrides the default condition in (29) is also responsible for the override in (26b) and (27b). I leave this issue open for further research.

4. Conclusion

In this paper, I have argued that the rules that have been proposed to predict narrative progression in matrix sentences play a crucial role in the temporal ordering of eventualities described by an indirect report. I showed that it automatically follows from (2) that an overlapping interpretation is entailed by an indirect report with an embedded stative predicate if the reference time in the embedded clause overlaps the time of the matrix eventuality. This generalization is quite different from what has been proposed in the literature on (Russian) indirect reports. Previous researchers have addressed the question of what allows an embedded eventuality to overlap in time with a matrix eventuality by appealing to properties of grammatical elements such as *tense*, *aspect* and *verb*. I attempted to show how previous generalizations—although incorrect—raise some interesting questions about the temporal interpretation of indirect reports that require further research.

   Moreover, I considered what narrative effects in indirect reports reveal about the meaning of the past tense. I presented novel data and argued that a theory which holds that the past tense requires a reference time to precede the local evaluation time (Standard Theory) cannot be right if by "reference time" we mean the topical interval of time previously introduced in discourse that accounts for narrative progression. I argued that a theory of tense that assumes a richer ontology of times—such as the one in Kamp and Reyle 1993—could be extended to account for the indirect report data that the Standard Theory cannot. Many more examples of indirect reports—as they occur within a discourse—need to be considered to see if and how such a theory needs to be refined. The hope is that this paper provides a starting point in this regard.

5. Appendix: Overlapping interp. in Russian past-under-past indirect reports

(30) *Anja zameti-l-a*   *ne bez* *udivlen'ja, čto kamuški, ležaščie*
   Anna ^{PFV}notice-PST.3s-FEM not without surprise that pebbles lying
   na polu, odin za drugim prevrašča-l-i-s'   *v kroxotnye pirožki.*
   on floor one after other change$_{IPF}$-PST.3p-RFL into small pies
   "Alice noticed, with some surprise, that the pebbles were all turning into little cakes as they lay on the floor" (Nabakov, *Alice in Wonderland*; Barensten 1996).

(31) *V 1915 gody A.C. Buturlin sta-l*   *bolet'. On, kak vrač*
   In 1915 year A.C. Buturlin ^{PFV}become-PST.3s sick.INF he how doctor
   ne bez   *osnovanija predpolaga-l,* *čto u nego by-l*   *rak.*
   not without basis   suspect$_{IPF}$-PST.3s that to him be$_{IPF}$-PST.3s cancer
   "In 1915, A.C. Buturlin became sick. Being a doctor he suspected not without basis for doing so that he had cancer" (Tolstoy, *Očerki bylogo*; Costello 1961/62).

(32) *Ona duma-l-a,*   *čto Aleksej Aleksandrovič xote-l*
 She think_{IPF}-PST.3p-FEM that Alex   Alexandrovich want_{IPF}-PST.3p
čto-to   soobščit′ ej prijatnoe dlja sebja ob   etom dele i   ona
something announce her pleasant for   self   about this matter and she
voprosami nave-l-a   *ego na rasskaz.*
questions   ^{PFV}point-PST.3p-FEM him to story
'She thought that Alex Alexandrovich wanted to inform her of something about this matter that pleased him, and through questions, she lead him to tell her the story' (Tolstoj, *Anna Karenina*).

(33) *Egoruška, kogda ešče ne gore-l*   *koster i   možno by-l-o*
Egorushka when still not burn_{IPF}-PST.3s fire   and possible be_{IPF}-PST.3s-AGR
videt′   daleko, zameti-l,   *čto točno   takoj-že staryj, pokosivšijsja*
see_{IPF}-INF far   ^{PFV}notice-PST.3s that exactly same   old   tilt
krest stoja-l   *na drugoj storone bol′šoj dorogi*.
cross stand_{IPF}-PST.3s on other   side   big   road
'When the fire was still not burning and it was possible to see afar, Egorushka noticed that the very same, old, tilted cross stood on the other side of the big road' (Chexov, *Step′*; Costello 1961/62).

(34) *On skaza-l,*   *čto ona žy-l-a*   *blagodarja emu, i   èto*
He ^{PFV}say-PST.3s that she   live_{IPF}-PST.3s-FEM thanks   him and this
otnima-l-o   *počti vsju ego ežednevnuju energiju*.
take.away_{IPF}-PST.3s almost all   his daily   energy.
"He said that she was living thanks to him, and that this was taking away almost all of his daily energy" (Mirzuitova, *Detstvo s Gurdžievym*).

(35) *On jasno poni-l,*   *čto sejčas ot   nego treb-ova-los′*
He clearly ^{PFV}understand-PST.3s that now   from him expect-IPF-PST.3s
tol′ko odno.
only   one
"He clearly understood that there was only one thing expected from him now."
(Mel'čuk 1985: 264)

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