

Perfect(ive) or not? Aspectual restrictions in Serbian and English

Neda Todorović

Abstract This paper offers an account of restrictions on perfective aspect with morphological present tense in matrix clauses in Serbian. I argue that the restrictions follow from the impossibility of perfective aspect to locate the event with respect to the local evaluation time. In addition, I illustrate that the observed restrictions on perfective aspect in Serbian are, to a large extent, parallel to restrictions on bare, non-progressive episodic, non-stative, non-generic predicates in English. Following the assumption that these predicates contain a perfective component (Kamp & Reyle 1993, Smith 1991, Cowper 1998, Wurmbrand 2011 *inter alia*), the proposed analysis allows for the unification of Aspect in Serbian and the abovementioned predicates in English.

Keywords *Perfective aspect · Present tense · Local evaluation time · Perfect*

1. Perfective aspect in Serbian and bare non-progressive forms of eventive predicates in English

In matrix clauses in Serbian, verbs that occur with morphological present tense and receive an Utterance Time (henceforth the UT) interpretation are compatible with imperfective aspect, as given in (1a), whereas perfective aspect on the verb results in an ungrammatical sentence, as shown in (1b).^{1,2}

- (1) a. Milan jede jabuku.
 Milan eat-3.sg.pres.**impfv.** apple
 ‘Milan is eating an apple’
 b. *Milan pojede jabuku.
 Milan eat-3.sg.pres.**pfv.** apple
 ‘Milan has eaten an apple (just now)’

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¹ These restrictions discussed in the paper hold for non-stative, non-generic, episodic predicates.

² The perfective in (1b) contributes to the meaning where the point of finishing the apple overlaps with the UT.

On the other hand, perfective aspect is compatible with forms that have past and future time interpretations, as illustrated in (2b) and (3b), respectively:

(2) a. Milan je jeo jabuku.
 Milan is eaten- **impfv.** apple
 ‘Milan was eating an apple’

b. Milan je pojeo jabuku.
 Milan is eaten- **pfv.** apple
 ‘Milan ate an apple (and finished it)’

(3) a. Milan će jesti jabuku.
 Milan will eat-inf. **impfv.** apple
 ‘Milan will be eating an apple’

b. Milan će pojesti jabuku.
 Milan will eat-inf. **pfv.** apple
 ‘Milan will have finished an apple’

Interestingly, the observed restrictions on perfective aspect in Serbian are parallel to the distribution of bare non-progressive forms of episodic, non-stative, non-generic predicates in English. Following Enç (1991), Pesetsky (1995) *inter alia*, I will refer to these predicates as eventive predicates.

As is well-known, bare non-progressive eventive predicates are not felicitous in matrix clauses when a predicate refers to the UT; rather they can only occur in the progressive form, as shown in (4). On the other hand, non-progressive forms are allowed with a past or future interpretation, as in (5) and (6).³

- (4) a. *Leo sings in the shower (*right now). (Wurmbrand 2011)
 b. Leo is singing in the shower right now.
- (5) Mike sang in the shower yesterday.
- (6) Mike will sing in the shower tomorrow.

Thus, the restrictions on the availability of perfective aspect, and bare non-progressive forms, respectively, arise with eventive predicates in Serbian and English receiving the UT interpretation. The parallel distribution of the forms in Serbian and English is taken as an indicator that even the

³ The examples in (5) and (6) are a slightly modified version of the examples given in Wurmbrand (2011).

constructions in English are specified for perfective aspect. In this paper I will show that restriction on perfective aspect in both Serbian and English are due to impossibility to locate the event time interval with respect to local evaluation time. In section 2, I illustrate the approach in Wurmbrand (2011) that argues for the perfective specification of bare non-progressive eventives in English. Section 3 proposes the mechanism of Tense and Aspect evaluation in Serbian and English, providing an explanation for the aspectual restrictions. The final section concludes the paper.

2. Bare eventive predicates in English are specified for perfective aspect

Restrictions on the distribution of eventive predicates in simple present tense have been discussed in Bennett & Partee (1972), Dowty (1979), Enç (1991), Smith (1991), Kamp and Reyle (1993), Cowper (1996, 1998), Abusch (2004), Wurmbrand (2011) *inter alia*. All these approaches share (either implicitly or explicitly) the assumption that bare non-progressive forms of eventive predicates are specified for perfective aspect, and that the perfective conflicts with the requirements of the local evaluation time i.e. the time interval with respect to which the event should be temporally located. For instance, Wurmbrand (2011) advocates the idea that non-progressive forms are specified for perfective aspect, whereas the progressive form is a morphological reflex of an imperfective aspect. She adopts the definition of perfective aspect (as formally given in (7)), according to which the event time interval needs to be included within the reference time interval, i.e. the time interval for which a statement is restricted (see Reichenbach 1947, Klein 1994 *inter alia*).

- (7) a. Imperfective: $\lambda P_{\langle I, \langle I, t \rangle \rangle} . \lambda t_i . \exists e_1 (t \subseteq \text{time}(e) \ \& \ P(e) = 1)$ (Kratzer 1998)
 b. Perfective: $\lambda P_{\langle I, \langle I, t \rangle \rangle} . \lambda t_i . \exists e_1 (\text{time}(e) \subseteq t \ \& \ P(e) = 1)$

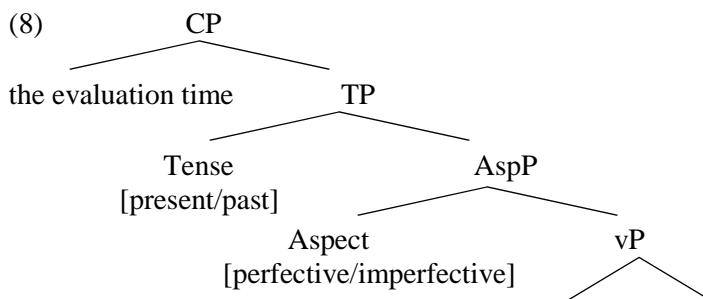
Assuming that bare non-progressive eventive predicates carry perfective aspect, and given the definition of perfective in (7a), it follows, Wurmbrand argues, that bare forms are infelicitous when the reference time interval is included in the event time interval. For instance, the reference time interval in (4a) is the UT, and given that the event time interval includes the UT, only an imperfective interpretation is possible. Since Wurmbrand suggests that imperfective is morphologically realized as progressive in English, in eventive present tense contexts only a progressive form is possible, as in (4b).

Following the abovementioned authors, I take bare non-progressive forms in English to be specified for perfective aspect. Similarly, the analysis of the incompatibility of morphological present tense and the perfective in Serbian and English relies on the interaction of the event time interval and the local evaluation time.

3. Temporal location of the event with respect to the local evaluation time

I adopt von Stechow's (1999a) proposal that both Tense and Aspect are involved in the temporal ordering of the event time interval with respect to the evaluation time (see von Stechow 2002, Klein 1994, Pancheva 2003, Pancheva and von Stechow 2004 *inter alia* for similar proposals). I take the evaluation time to be a time interval with respect to which the event time interval needs to be temporally located, and which, unless specified otherwise, is the UT.

I suggest that the evaluation time is structurally represented, occupying a position in the CP domain. The hierarchical relations of the evaluation time, Tense and Aspect are given in (8):⁴



I propose that the local evaluation time for Tense and Aspect is dependent on the scopal relations in the structure. Given the hierarchy in (8), Tense in matrix clauses is evaluated with respect to the evaluation time in the CP domain, whereas Aspect is evaluated with respect to Tense (which, in turn, is evaluated by the evaluation time in CP). As will be shown below, when there is an additional aspectual or modal component in the structure c-commanding Aspect, that component will be crucially involved in determining the evaluation time for Aspect.

3.1 The UT interpretation

Regarding the present perfective forms in Serbian, which I refer to as the UT interpretations, I propose that present tense and perfective aspect introduce conflicting requirements regarding the temporal ordering of the event time interval with respect to the evaluation time. Since it is impossible to

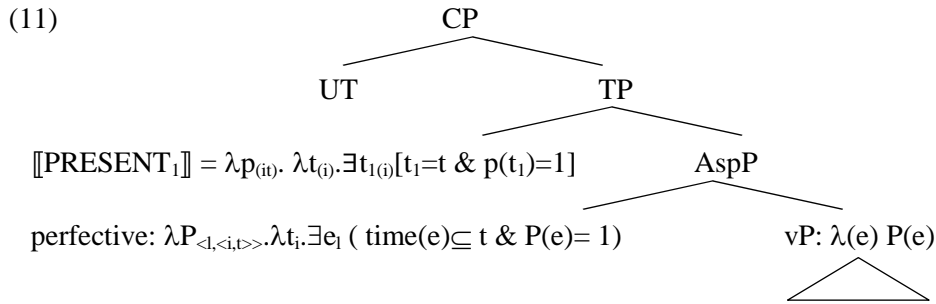
⁴ It is debatable whether Aspect in Slavic should be treated as lexical, situation Aspect (marking the telicity of the event), as grammatical, viewpoint Aspect (referring to the boundedness of the situation), or as some combination thereof. For instance, Filip (2001, 2004) argues that perfective prefixes, by being recursive (e.g. in Bulgarian) and not establishing one-to-one correspondence with telicity, are not markers of either grammatical or lexical aspect. Rather, they derive a lexically novel verb. Whereas in Serbian, aspectual morphemes are indeed recursive and there is no morpheme designated to mark telicity or boundedness, perfective and imperfective morphemes do carry information about boundedness of the event, suggesting that perfective/imperfective mark viewpoint aspect in Serbian. I propose that (at least) in Serbian, both lexical and viewpoint aspect exist, but that their syntax (vP-internal vs. external aspect; cf. Travis 2010) and semantics (telicity vs. boundedness) are different (cf. Borik 2002, Borik and Reinhart 2004, Travis 2010). Focusing on viewpoint aspect, I show that the distribution of imperfective and perfective in matrix clauses is predictable from the temporal composition of the sentence. Specifically, I argue that viewpoint aspect, i.e. boundedness of the event, interacts with the local evaluation time in a semantically transparent compositional way.

resolve the conflict, the event time interval cannot be temporally located and the present perfective form is expected to be infelicitous. I assume the definition of present tense in (9), (a somewhat modified version of the definition given in Pancheva and von Stechow 2004), according to which present tense introduces an interval identical with the contextually specified local evaluation time.⁵ As for perfective aspect, I adopt Kratzer's (1998) definition repeated here in (10).⁶ Perfective aspect requires the inclusion of the event time interval within the local evaluation time. Given the hierarchical relations in (8), the local evaluation time for Aspect is determined by the requirements of the c-commanding Tense.

$$(9) \quad \llbracket \text{PRESENT}_I \rrbracket = \lambda p_{(it)}. \lambda t_{(i)}. \exists t_{1(i)} [t_1 = t \ \& \ p(t_1) = 1]$$

$$(10) \quad \text{Perfective:} \quad \lambda P_{\langle I, \langle i, t \rangle \rangle}. \lambda t_i. \exists e_1 (\text{time}(e) \subseteq t \ \& \ P(e) = 1)$$

Finally, I propose that the evaluation time in the CP domain in matrix clauses is the UT (see also von Stechow 1999b).⁷ I take the UT to be a near-instantaneous time interval (cf. Giorgi & Pianesi 1997, Cowper 1996, 1998, and contra Enç 1987; see also Ogihara 2007 for discussion of the duration of the UT). The structural representation for a present perfective form would then be as follows:



$$\llbracket_{CP} UT \llbracket_{TP} \text{Present} \llbracket_{AspP} \text{perfective} \llbracket_{vP} \text{VP} \rrbracket \rrbracket \rrbracket = \exists t_1 [t_1 = t_c \ \& \ \exists e [\text{time}(e) \subseteq t_1 \ \& \ vP(e)]]$$

Given the definitions of present and perfective above, Tense and Aspect introduce conflicting requirements regarding the location of the event with respect to the local evaluation time. Present tense introduces a time interval identical with the contextually specified local evaluation time, i.e. the UT in matrix clauses. On the other hand, perfective aspect requires the event time interval to be included within the local evaluation time established by present tense, which, in turn, was determined by the UT.

⁵ According to Pancheva and von Stechow (2004), an interval introduced by present tense should be coextensive with the UT. However, present tense in Serbian is a relative tense, and it does not necessarily refer to the UT; thus, the time interval introduced by present is equal to the contextually salient specified evaluation time rather than to the UT.

⁶ Similar proposals are outlined in Klein (1994), Wurmbrand (2011), among others.

⁷ Although I leave aside the discussion on the temporal evaluation of embedded clauses, I argue that the evaluation time for embedded time intervals is not the UT, but rather the attitude holder's contemporary *now* (à la Abusch 2004).

Since present tense requires identity with the UT, the local evaluation time for perfective aspect is the UT. If the UT is a relatively short interval, it seems impossible to resolve the conflict between Tense and Aspect: present tense requires identity with the UT, but an event marked by perfective cannot be included within such a short time interval. If the temporal location of the event is compositional, and given that the conflict between the Tense and Aspect cannot be resolved, the event cannot be temporally located; present perfective forms are expected to be ungrammatical.

Furthermore, since English bare non-progressive eventives receiving the UT interpretation are specified for present tense and, presumably, for perfective aspect, the same conflict between Tense and Aspect is expected to arise. As illustrated by the examples in (4), this prediction is borne out; only the progressive form is felicitous under the UT interpretation. If the progressive forms are specified for imperfective aspect, the duration of the local evaluation time with these forms should not affect the aspectual distribution. Namely, the imperfective aspect requires for the event time interval to include the local evaluation time, and the duration of the local evaluation time should not affect its proper inclusion within the event time interval (as long as the event time is long enough to include the evaluation time).⁸

3.2 Viewpoint Aspect in past interpretations

Unlike the UT interpretations, past interpretations in Serbian allow for perfective aspect to be realized. In the corresponding environments in English, bare eventives are also felicitous.

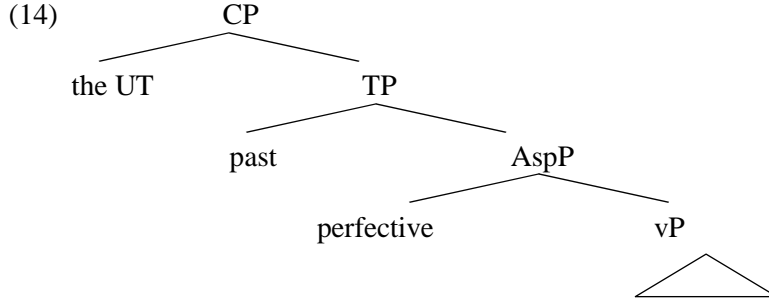
- (12) a. Milan je pojeo jabuku.
 Milan is eaten- **pfv.** apple
 ‘Milan ate an apple (and finished it)’
 b. Mike sang in the shower yesterday.

Similarly, perfective aspect and bare eventives are felicitous with a future interpretation:

- (13) a. Milan će pojesti jabuku.
 Milan will eat-inf. **pfv.** apple
 ‘Milan will have finished an apple’
 b. John will visit me tomorrow.

⁸ Examples with the imperfective illustrate the contrast in the distribution of the two aspectual forms. However, restrictions with imperfective should arise if the event time in the examples would be shorter than the evaluation time.

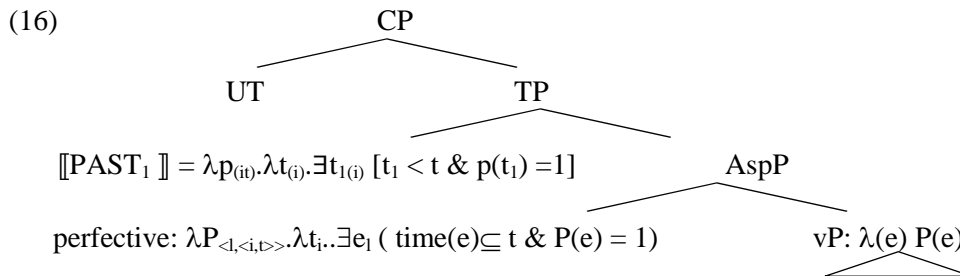
I apply the same mechanism of the location of the event time interval with respect to the evaluation time, i.e. both Tense and Aspect are involved in the temporal location of the event. I argue that with past interpretations in Serbian and English, with the structure in (14), perfective aspect is allowed since Tense and Aspect do not introduce conflicting requirements, i.e. the event can be properly temporally located with respect to the evaluation time.



I propose that past tense introduces a time interval crucially preceding the contextually specified time interval (along the lines of von Stechow 2009).

(15) $[[\text{PAST}_1]] = \lambda p_{(it)}. \lambda t_{(i)}. \exists t_{1(i)} [t_1 < t \ \& \ p(t_1)=1]$ (von Stechow 2009)

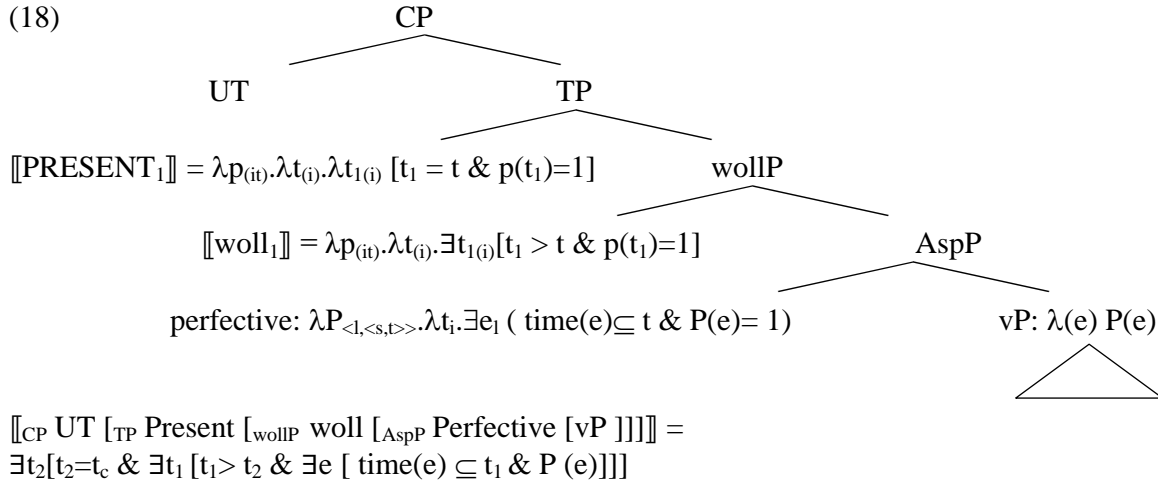
Since Tense is evaluated with respect to the time interval in the C domain, past tense introduces an interval located prior to the UT. Importantly, past tense introduces a potentially indefinitely long time interval. This, I argue, crucially affects the availability of the perfective aspect. Namely, given (14), perfective aspect requires the inclusion of the event time interval in the potentially indefinitely long time interval preceding the UT. Unlike with the UT interpretations, the duration of the local evaluation time interval for Aspect with past interpretations does not pose an obstacle for the requirements of the perfective, simply because the interval is not specified as short and, as such, it is not incompatible with the requirements of perfective. Consequently, the event time interval will be properly temporally located with respect to the UT. The form is correctly predicted to be grammatical.



$[[_{CP} \text{ UT } [_{TP} \text{ Past } [_{AspP} \text{ perfective } [_{vP}]]]]] = \exists t_1 [t_1 < t_c \ \& \ \exists e [\text{time}(e) \subseteq t_1 \ \& \ vP(e)]]$

Turning to the distribution of perfective aspect and the bare non-progressive forms with future interpretations, I follow Abusch (1985, 1988) who argues that forms that have future interpretations in English comprise a tense component [present] and a modal component *woll*. I propose that the same analysis can be applied to Serbian: the Tense specification in future contexts is [present]. I also suggest that the *woll* component can be analyzed à la von Stechow (2009), according to whom the future component introduces a potentially indefinitely long time interval following a contextually specified time interval. The structural representation of matrix future forms in both English and Serbian is given in (18).

$$(17) \quad \llbracket \text{woll}_1 \rrbracket = \lambda p_{(it)}. \lambda t_{(i)}. \exists t_{1(i)} [t_1 > t \ \& \ p(t_1)=1] \quad (\text{along the lines of von Stechow 2009})$$



As in the examples so far, the local evaluation time for the matrix tense is the UT which present tense needs to be identified with. The future component introduces a time interval following the UT (as dictated by the present tense). This potentially indefinitely long time interval now serves as the local evaluation time for Aspect, allowing for the requirements of the perfective to be met; the perfective form is expected to be grammatical in both English and Serbian.

The similarity of future and past interpretations with respect to the distribution of perfective aspect is due to the specification of past tense and the specification of the *woll* component, respectively. In both cases, Aspect is evaluated with respect to a relatively long time interval, and the requirements of the perfective can be met.

3.2.2 Temporally restricted past and future interpretations

In the case of past and future interpretations, the inclusion requirements of the perfective can be satisfied due to a relatively long evaluation time interval, unlike with the UT interpretations. This

contrast further implies the following: if the evaluation time for Aspect with past and future forms becomes restricted to a relatively short time interval, then the inclusion requirements of perfective again cannot be met, and the form is predicted to be infelicitous.

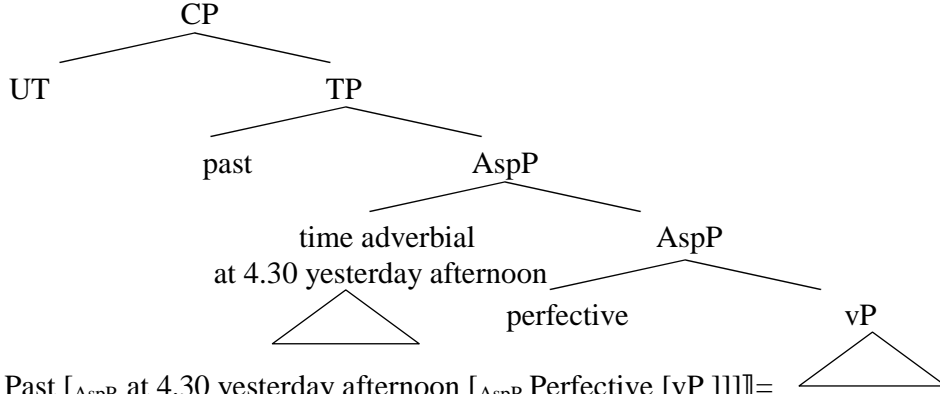
In the examples in (19) for past and (20) for future interpretations, the local evaluation time for Aspect is restricted to a relatively short time interval. Following Ogihara (1995), I assume that “the contribution of the adverb is to restrict the temporal location of the event in question” (1995:663). In the examples below, the adverbial *at 4.30* restricts the potentially indefinitely long time interval introduced by past tense and a modal *woll*, respectively, to a rather short interval. Importantly, this newly formed time interval serves as the local evaluation time for Aspect, and, given its duration, perfective aspect is predicated to be ungrammatical. Whereas this prediction is borne out in English, as in (19b) and (20b), perfective aspect is grammatical in Serbian, as given in (19a) and (20a). In the English examples, bare non-progressive eventive predicates are excluded under the interpretation where Milan was or will be in the process of translating at 4:30 and only progressive is felicitous, as in (c). The relevant interpretation of Serbian examples is one where the process of translating the book finally ends at 4:30.⁹ The question remains why there is a discrepancy in the availability of perfective aspect in English and Serbian with temporally restricted past interpretations.

- (19) a. Milan je konačno preveo knjigu juče popodne u 4:30.
 Milan is finally translated- **pfv.** book yesterday afternoon in 4:30
 ‘Milan finally had translated the book at 4:30 yesterday’
- b. *Milan translated the book at 4:30 yesterday.
- c. Milan was translating the book at 4.30 yesterday.
- (20) a. Milan će konačno prevesti knjigu sutra popodne u 4:30.
 Milan will finally translate-inf. **pfv.** book tomorrow afternoon in 4:30
 ‘Milan will finally have translated the book at 4:30 tomorrow’
- b. *Milan will be translating the book at 4:30 tomorrow’
- b. *John will sing in the shower at 4:30 tomorrow.
- c. John will be singing in the shower at 4:30 tomorrow.

⁹ The most salient interpretation of Serbian examples is the one where the translation starts at 4:30, i.e. the perfective marks the onset of the event. The discussion on those interpretations is beyond the scope of the paper.

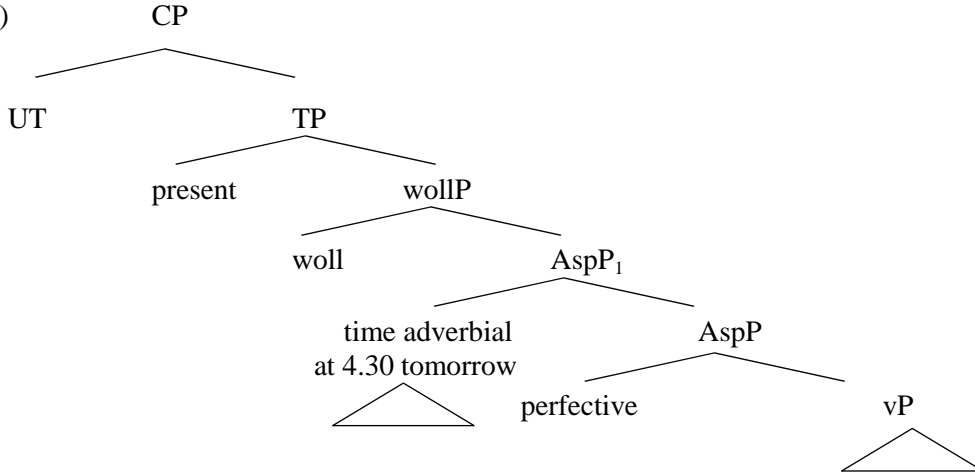
The structure for English (simple) past contexts is given in (21), and for future contexts in (22).

(21)



$\llbracket_{CP} UT \llbracket_{TP} Past \llbracket_{AspP} at\ 4.30\ yesterday\ afternoon \llbracket_{AspP} Perfective \llbracket_{vP} \rrbracket \rrbracket \rrbracket =$
 $\exists t_1 [t_1 < t_c \ \& \ t_1 \subseteq at\ 4.30\ yesterday\ afternoon_c \ \& \ \exists e \llbracket time(e) \subseteq t_1 \ \& \ P(e) \rrbracket]$

(22)



$\llbracket_{CP} UT \llbracket_{TP} Present \llbracket_{wollP} woll \llbracket_{AspP} at\ 4.30\ tomorrow \llbracket_{AspP} Perfective \llbracket_{vP} \rrbracket \rrbracket \rrbracket =$
 $\exists t_2 [t_2 = t_c \ \& \ \exists t_1 [t_1 > t_2 \ \& \ t_1 \subseteq at\ 4.30\ tomorrow \ \& \ \exists e \llbracket time(e) \subseteq t_1 \ \& \ vP(e) \rrbracket]]$

The analysis of (simple) past contexts in English is as follows: past tense introduces a time interval preceding the UT. Since there is an adverbial in the structure, it restricts the time interval introduced by past tense. Crucially, the viewpoint aspect is evaluated directly with respect to the time given by the time adverbial, and, due to its duration, the inclusion requirements of perfective cannot be satisfied; the form in (19b) is correctly predicted to be ungrammatical. Similarly, in future contexts, a potentially indefinitely long time interval introduced by the *woll* component is restricted by the duration of the time interval introduced by the time adverbial; the requirements of the perfective in (20b) cannot be satisfied. Wurmbrand (2011) observes that in the case where the time adverbial introduces a relatively long time interval, as in (23) and (24), bare eventives are felicitous, since the requirements of the perfective can be met, i.e. the event time interval can be included within the local evaluation time introduced by the adverbial. The duration of the time adverbial, thus, plays an important role with English past and future

interpretations, but not with the Serbian ones in (19a) and (20a), which, I argue, is a result of the additional Perfect component in the case of latter, but not in the case of former.

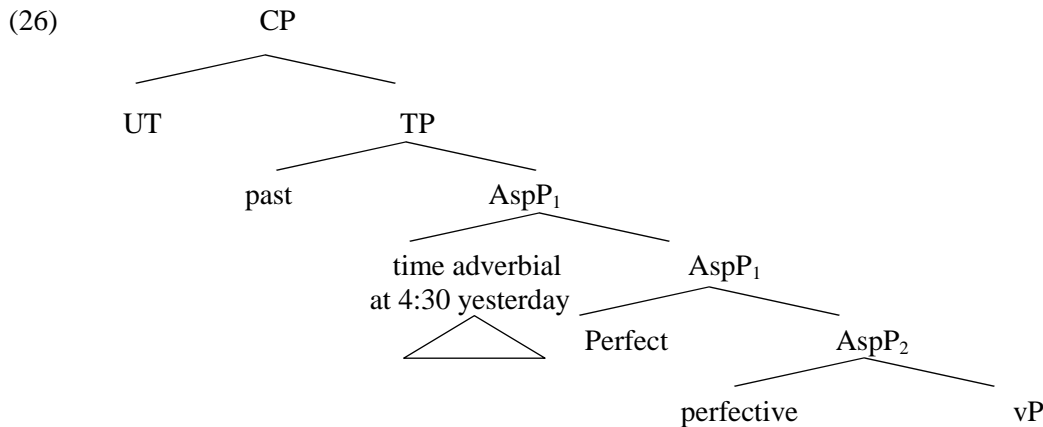
(23) John sang in the shower yesterday.

(24) John will sing in the shower tomorrow.

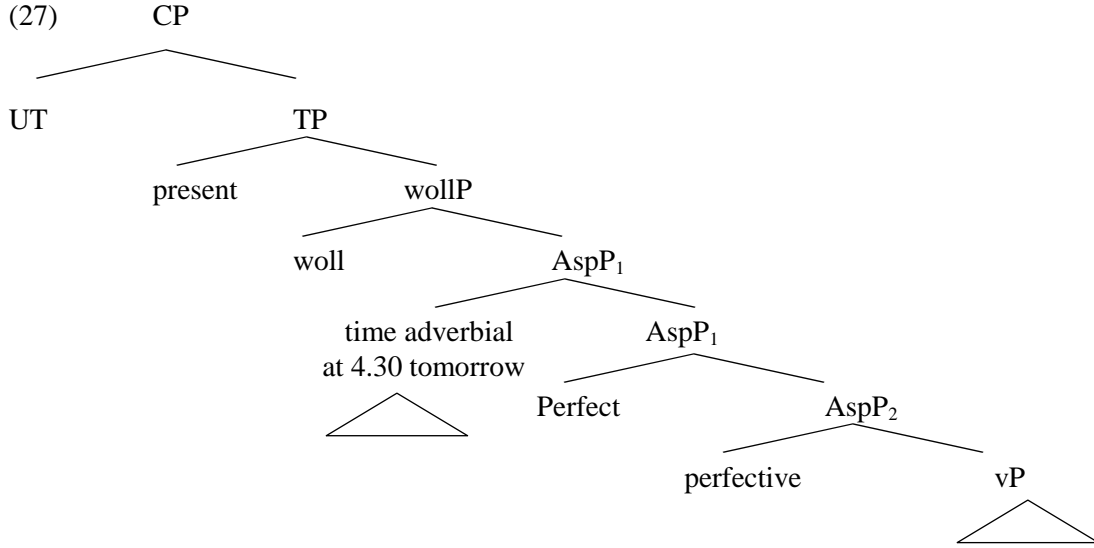
Under the interpretations in (19a) and (20a) in Serbian, perfective is not excluded despite the length of the time interval introduced by the adverbial. I propose that Serbian examples such as (19a) are instances of past perfect constructions, although morphologically, they are realized as present perfect. Similarly, the constructions in (20a) are instances of future perfect, morphologically realized as simple future constructions. Indeed, the meanings of (19a) and (20a) correspond to the English past and future perfect, respectively, which, like the Serbian examples, allows a perfective interpretation and do not require the progressive. I suggest (19a) and (20a) should be decomposed as to include an additional aspectual phrase which semantically translates as Perfect. It is precisely the Perfect component that accommodates for the interpretation of the perfective in (19a) and (20a). I adopt Pancheva's (2003) definition of Perfect, given in (25). Perfect introduces a Perfect Time Span (PTS) (Iatridou et al. 2001), which generalizes over time intervals that extend backwards from the contextually salient time interval. I propose that Perfect in Serbian is integrated into the structure as in (26) and (27), respectively.

(25) $[[\text{PERFECT}]] = \lambda p_{(it)}. \lambda t_{(i)}. \exists t'_{(i)} [\text{PTS}(t', t) \ \& \ p(t')]$ (Pancheva 2003)

PTS (t' , t) iff t is a final subinterval of t'



$[_{CP} \text{ UT } [_{TP} \text{ Past } [_{AspP1} \text{ at 4.30 yesterday afternoon } [_{AspP1} \text{ Perfect } [_{AspP2} \text{ Perfective } [_{vP}]]]]] =$
 $\exists t_1[t_3 < t_c \ \& \ t_3 = \text{at 4.30 yesterday afternoon}_c \ \& \ \exists t_1 [\text{PTS}(t_1, t_2) \ \& \ t_2 = \text{at 4.30 yesterday afternoon}_c \ \& \ \exists e [$
 $\text{time}(e) \subseteq t_1 \ \& \ P(e)]]]$



$$\llbracket_{CP} UT \llbracket_{TP} Present \llbracket_{wollP} woll \llbracket_{AspP1} at\ 4.30\ tomorrow \llbracket_{AspP1} Perfect \llbracket_{AspP2} Perfective \llbracket_{vP} \llbracket \rrbracket \rrbracket \rrbracket =$$

$$\exists t_4[t_4=t_c \ \& \ \exists t_3[t_3 > t_4 \ \& \ t_3 \subseteq at\ 4.30\ tomorrow \ \& \ \exists t_1[PTS(t_1, t_3) \ \& \ \exists e[time(e) \subseteq t_1 \ \& \ vP(e)]]]]]$$

As it can be seen from (26) and (27), $AspP_2$ specified for viewpoint aspect, i.e. perfective, is directly c-commanded by $AspP_1$ headed by *Perfect*. *Perfect* introduces a time interval which, modified by elements higher in the structure, i.e. the time adverbial, Tense (and *woll* in the case of future interpretations), and evaluation time in the C domain, serves as the local evaluation time for the perfective. In that respect, the most important feature of *Perfect* is its property of generalizing over time intervals, by the means of the PTS. *Perfect* extends the time interval backwards from the contextually salient time interval, i.e. the relatively short time interval given by the higher temporal restrictor *4:30*. Most importantly, this extended time interval serves as the local evaluation time for the perfective. Unlike in (21) and (22), the structures without *Perfect*, the local evaluation time in (26) and (27) is a relatively long time interval which accommodates for the requirements of the perfective to be satisfied. The modified structures correctly predict the availability of the perfective in Serbian under certain interpretations, even with time adverbials restricting the evaluation time to a rather short interval, the crucial difference being that the time adverbial is the evaluation time of the *Perfect*, rather than the perfective.

Note, however, under the interpretations parallel to the one in English, only the imperfective can be used in Serbian, as illustrated in (28).

- (28) a. Jovan je prevodio/ će prevoditi roman u 4:30.
 John is translated-**impfv.**/ will translate-**impfv.** novel in 4:30
 ‘John was translating/ will be translating a novel at 4:30’
- b. Jovan je preveo/ će prevesti roman u 4:30.
 John is translated-**pfv.** /will translate-inf.**pfv.** novel in 4:30.
 ‘John had translated/ will have translated a novel at 4:30.’
 *‘John was translating/ will be translating a novel at 4:30.’

Assuming there is always a Perfect component in Serbian constructions, the unavailability of the interpretation where the event of singing starts before 4:30 and ends after it follows in (29); the event time interval needs to extend from a time interval starting from some point in time prior to 4:30 to a point in time after it. Due to the presence of Perfect, the evaluation time for perfective is a time interval up to (but not beyond) 4:30. Thus, an event that extends beyond 4:30 would only be partially included within its evaluation time, hence not satisfying the requirement of the perfective. Imperfective, on the other hand, is possible since it only requires that the evaluation time (the PTS given by Perfect) be included in the event time.

Finally, given the structures in (26) and (27), we also predict that the event of singing can be completed either at 4:30 pm (since this is the right boundary of the PTS) or before that; the perfective is felicitous as long as the event time interval is included in the extended time interval. The latter interpretation is attested in Serbian, as shown in (29) and (30).¹⁰

- (29) Milan je već preveo knjigu juče popodne u 4:30.
 Milan is already translated- **pfv.** book yesterday afternoon in 4:30
 ‘Milan had already translated the book at 4:30 yesterday’
- (30) Jovan će već prevesti roman sutra u 4:30.
 Jovan will already translate-inf.**pfv.** novel tomorrow at 4:30
 ‘Jovan will have already translated the novel at 4:30 tomorrow’

The availability of the interpretation in (30) provides additional motivation for the presence of Perfect with past interpretations. To be more specific, these interpretations are the same interpretations

¹⁰ Note that there is the adverbial *already* in (30) and (31). I leave open the issue of whether the adverbial affects the evaluation time and contributes to the availability of the perfective and the interpretation in question.

that are otherwise obtained by the form that corresponds to English Past Perfect:

- (31) Jovan je bio preveo roman u 4:30.
 John is been translated-**pfv.** novel u 4.30
 'John had already translated a novel at 4:30'
 (32) John had translated a novel at 4.30 yesterday.

The form in (31) is becoming more and more archaic, the same meaning being more commonly expressed by the form in (29). Thus, it might be justified to assume that there is a Perfect component at least with the past interpretation in (29).^{11,12} Interestingly, with English Past Perfect in (32), the bare non-progressive form is available. This suggests that the overt Perfect component extends the evaluation time for the matrix Aspect, allowing for the requirements of the perfective to be satisfied. Since the same interpretation can be obtained by both (29) and (31), I argue that there is a Perfect component with these interpretations in Serbian, but the component is becoming less overtly present.

Similarly, in future contexts, the English counterpart of (30) has an overt Perfect component, as in (33). Crucially, the bare non-progressive form is available. I propose that in both languages, there is an additional Perfect component extending the evaluation time for Aspect. Interestingly, even though in Serbian, the past participle is morphologically only visible in embedded temporal and conditional clauses as in (34), in the Croatian variant of Serbo-Croatian, the past participle form of the verb is also felicitous in matrix clauses receiving a future interpretation, as in (35). The past participle in matrix contexts might provide further support for the presence of Perfect component in future contexts in Serbian.

- (33) John will have translated a novel at 4.30 tomorrow.
 (34) Kada/ako budem došla, reći ću ti.
 When/ if be-1.sg.pres come-past.part. say-inf. will you-cl.acc
 When/ If I have arrived, I will tell you.

¹¹ Although the Perfect component for the interpretation in (19a) was motivated by the extension of the time interval, which in turn allows for the event to end at 4.30, a motivation for Perfect in the structure is still problematic, since the Past Perfect example in (31) does not allow for the interpretation obtained by (19a), i.e. the process of translating being completed at 4.30, but only for the interpretation parallel to (29), where the translation is completed prior to 4.30.

¹² One possibility would be that the double participle construction is replaced by the morphologically simpler present perfect, which, however, retains the past perfect interpretation.

- (35) -Budeš došla sutra? -Budem.
 Be-2.sg.pres come-past.part. tomorrow? be-1.sg.pres
 ‘Will you come tomorrow?’ ‘I will.’

4. Conclusion

In this paper, I have argued that restrictions on perfective aspect in morphological present tense contexts in Serbian matrix clauses arise due to the local evaluation time for Aspect being a short interval. Given that perfective aspect requires the inclusion of the event time interval in the local evaluation time interval, the duration of the time interval makes the inclusion requirements of perfective impossible to satisfy. Conversely, in past and future contexts, past tense or the *woll* component introduces a potentially infinitely long time interval, making it possible to satisfy the inclusion requirements of the perfective and the form is correctly predicted to be grammatical. In addition, I have illustrated that the bare non-progressive forms of eventive predicates in English show, to a large extent, parallel distribution to Serbian perfective forms, providing further support for the claim that the forms in English contain a perfective component. Finally, the contrast in the availability of the perfective in Serbian and English with overt time adverbials provides support for the presence of an additional Perfect component in the former, and the lack thereof in the latter. Since Perfect extends the local evaluation time for the perfective aspect, and, given the contrast in the availability of the form in two languages, it once again emphasizes the role of the duration of the local evaluation time for the availability of the perfective form.

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