I Introduction

The Auxiliary-participle construction (illustrated in (1)), can be found not only in Serbo-Croatian (SC), or indeed the Slavic group of languages, but in European and Non-European languages alike. What is interesting about this construction is the fact that, in some languages, it is used to convey resultative meaning (as, for example in English where resultative meaning is conveyed by the ‘have-past participle’ construction), while in other languages, it is used to convey purely past tense meaning. In yet other languages, one and the same construction is used to express both meanings. SC is such a language. Both meanings are illustrated in (1)¹.

1) a. Trčali smo.  
   (we)runImpf (we)are  
   a) We were running.  
   b) *We have run.

1) b. Jučer smo trčali.  
   yesterday (we)are (we) runImpf  
   a) We were running yesterday.  
   b) *We have run yesterday.

1) c. Poljubio sam Sofiju.  
   (I)kissedPf am Sofia  
   a) I kissed Sofia.  
   b) I have kissed Sofia.

1) d. Jučer sam poljubio Sofiju.  
   yesterday am (I)kissedPf Sofia  
   a) I kissed Sofia yesterday.  
   b) *I have kissed Sofia yesterday.

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¹ Pf = perfective aspect, Impf = imperfective aspect
What is interesting about the construction in (1) is that the available interpretation seems to be dependent on the aspect of verb: only perfective verbs yield both resultative and past tense interpretations, while with imperfectives, we get only past tense interpretation. If the past time is lexically specified by, for example, a temporal adverbial (cf. (1b) and (d)), only past time interpretation is available.

This phenomenon is somewhat puzzling and indeed it prompts some questions about the relationship between aspect and tense, both of which are temporal categories. In this paper I intend to re-examine the traditional notions of aspect and tense in SC in order to answer the question posed by the data above: how is it possible for a single construction to convey two different meanings? In Sections 2 and 3, I present traditional analyses of SC aspect and Present and Perfect tense, respectively. In Section 4, I raise some questions about the traditional treatment of the auxiliary-participle construction (and therefore Past tense in SC, and perhaps other languages), and in the final Section, I propose a solution to the problem posed above. Briefly, I will show that traditional assumptions about the auxiliary-participle construction are inadequate. I will argue, in contrast to traditional grammar, that tense is not grammaticalised in SC and show how despite that, it is possible to derive a temporal interpretation. I will concentrate on showing how past time temporal interpretation is derived in SC, and claim that it is derived from the semantic characteristics of perfective aspect. If that is indeed the case, we might argue that present and future time interpretations can also be derived from either of the two or both temporal categories of aspect and mood. This approach to temporal interpretation is not new; it has been acknowledged in the literature that not only tense, but also aspect and mood and the interplay between all three has much wider implications for temporal interpretation of clauses than recognised so far (e.g. Comrie (1976), Lyons (1977), Chung and Timberlake (1985)). Such a model therefore treats all elements of temporal interpretation in a unified way.

II Aspect and Serbo-Croatian Verbs

Before characterising aspect in SC verbs, we need a clear definition of the term aspect that will be assumed throughout. In this paper, aspect will be viewed as a grammatical expression which is concerned with the internal temporal structure of an event described by a verb (cf. Comrie (1976), Smith (1991) among others). The internal temporal structure of
an event refers, not to absolute time, but to different temporal stages of that event. This constitutes the major difference between aspect and tense, another grammatical expression concerned with the temporal reference of an event. Aspectual systems differ greatly across languages in terms of both their grammatical expression and the semantic features they encode (cf. Comrie (1976), Binnick (1991) for example). Both will be addressed in relation to SC in the following subsections.

The internal temporal structure of a situation\(^2\) can be looked at in two different ways: from the outside, looking at the situation as a single whole not necessarily distinguishing different elements or phases making up the situation (such as the beginning, the culmination, or the end), and from the inside taking notice of the possible elements of the situation if the situation has them. The former way of viewing a situation is usually referred to as perfective, and the latter as imperfective. Both ways of viewing a situation can be either grammaticalized or lexicalized in a language, in which case they are referred to in the linguistic literature as perfective and imperfective aspect and aktionsart (or lexical aspect), respectively\(^3\). This approach to characterising aspect is known in the literature as ‘viewpoint aspect’ (after Smith 1991).

In SC, as in all Slavic languages, aspect is realised on verbs\(^4\). All SC verbs have their aspect realised lexically. In other words, their internal meaning determines whether they are perfective or imperfective. The aspectual opposition is then marked by overt grammatical means: the processes of prefixation or suffixation\(^5\). The processes are of derivational rather than inflectional character (Spencer, 1991) which is a distinguishing attribute of Slavic aspect.

2.1 Morphology of Serbo-Croatian Aspect

As mentioned above, aspectual pairs in SC are formed by two processes: prefixation and suffixation. Perfectives are formed from imperfectives by prefixation, and imperfectives

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\(^2\) Regardless of whether the situation is an event, a state, or a process.

\(^3\) Durst-Andersen (1992) terms the latter imminent aspect, which is a necessary outcome of the meaning of a verb.

\(^4\) Aspect can be realised on nouns as well, e.g. in Finnish and German. So, according to Filip’s (1993) terminology, SC has a verb-centred expression of aspect.

\(^5\) This lexical change of aspectual class in Slavic verbs by means of derivational morphology is referred to by most Slavists as aktionsart (Comrie, (1976;7)).
from perfectives by suffixation, i.e. by adding a syllable. As a result, most verbs have aspectual counterparts, while a smaller number of verbs do not. This is illustrated in (2)\(^6\):

2) a. imperfective  
   \(pisati\) ‘write Inf’  
   \(pjevati\) ‘sing Inf’  
   \(napisati\) ‘write up Inf’  
   \(otpjevati\) ‘finish singing’  

   b. perfective  
   \(kupiti\) ‘buy Inf’  
   \(pomoči\) ‘help Inf’  
   \(kupovati\)  
   \(pomagati\)

Some prefixes (most of which are prepositional\(^7\)) may change the meaning of the verb: \(ispisati\) ‘fill (e.g. a page) by writing.Inf’, \(zapisati\) ‘write down.Inf’, \(popisati\) ‘list.Inf’, \(dopisati\) ‘add in writing.Inf’, \(prepisati\) ‘copy.Inf’, etc. These are actually not perfectivising, but derivational prefixes forming verbs out of other verbs, which have their own aspectual pairs. For example, the verbs given above seem to be perfectivised forms of the imperfective \(pisati\) ‘write Inf’ (given in (2a)) formed by different prefixes. However, since they have imperfective counterparts of their own (\(zapisivati, popisivati, dopisivati, ispisivati, prepisivati\), it is obvious that the distinction between them and the verb \(pisati\) is not aspectual, but derivational. In fact, some of these verbs, by virtue of their meaning do not have aspectual counterparts, e.g. \(govoriti\) ‘talk.Inf’, \(ići\) ‘go.Inf’.

Besides prefixation and suffixation, iterative members of aspectual pairs can be created by two additional processes: lengthening of a stem (in order to form iteratives from imperfectives), and change of accent (in order to form iteratives from perfectives:

3) a. lengthening of a stem: \(voditi - vodati\) ‘lead.Inf’  
   \(nositi - nosati\) ‘carry.Inf’  
   \(voziti - vozati\) ‘drive.Inf’

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\(^6\) The suffix \(-ti\) is one of the two infinitival suffixes (the other being \(-či\)).

\(^7\) \(pro-\), \(raz\), \(pa\)- are not prepositions.
b. change of accent: \[\text{pogledati - poglédati} \text{  ‘look at.Inf} \]
\[raskidati - raskidati \text{  ‘tear into pieces.Inf} \]
\[razgledati - razglédati \text{  ‘see.Inf} \]

At this point, it is important to make a distinction between the two additional properties of SC verbs (\textit{durativity} and \textit{iterativity}) and imperfectives. \textbf{Duratives} refer to the fact that the situation lasts for a certain period of time without a break, and \textbf{iteratives} denote a repeated event. Neither are incompatible with perfective aspect; \textit{podonašati} ‘finish bringing.Inf’ and \textit{ispitati} ‘examine.Inf’ are examples of a perfective iterative (in addition to the examples in (3b)), and a perfective durative, respectively. Their imperfective counterparts are \textit{donositi} and \textit{ispitivati}.

So far, we have only considered verbs marked for either perfective or imperfective aspect. A subset of SC verbs is considered to be biaspectual (e.g. \textit{večerati} ‘dine.Inf’, \textit{vidjeti} ‘see.Inf’, \textit{ručati} ‘lunch.Inf’, \textit{doručkovati} ‘breakfast.Inf’, \textit{čuti} ‘hear.Inf’, \textit{vidjeti} ‘see.Inf’, \textit{telefonirati} ‘telephone.Inf’). If a such a verb is used, the aspect is determined by some aspectual lexical expression (an adverb or a compositional expression). In (4), they are indicated in bold.

4) a. imperfective: \textit{Grci obično večeraju satima.}
\hspace{1cm} ‘Greeks usually dine for hours.’

b. perfective: \textit{Čim večeram, nazvat ću te.}
\hspace{1cm} as soon as (I) dine (I) call will you
\hspace{1cm} ‘As soon as I dine, I’ll call you.’

The same result is obtained by applying Vendler’s (1967) test for the perfective/imperfective distinction; a perfective licenses a time-span adverbial introduced by the preposition \textit{za} (such as \textit{za deset minuta} ‘in ten minutes’, \textit{za kratko vrijeme} ‘for a short time’), whereas an imperfective licenses time-span adverbials on their own (such as \textit{satima} ‘for hours’, \textit{deset minuta} ‘ten minutes’, \textit{dugo vremena} ‘for a long time’):

5) a. \textit{Grci obično večeraju za deset minuta/deset minuta}
\hspace{1cm} ‘Greeks usually dine for ten minutes/in ten minutes.’
b. imperfective: Grci obično piju deset minuta/*za deset minuta.
‘Greeks usually drink in ten minutes/*for ten minutes.’

c. perfective: Grci obično popiju za deset minuta/*deset minuta.
‘Greeks usually drink for ten minutes/*ten minutes.’

2.2 Semantics of the perfective-imperfective opposition

Perfectives are in the literature often termed completives, understood as indicating a completed situation. However, they can also encode other meanings, so the term is not precise enough to serve as a unifying term for all perfectives. Each viewpoint has several meanings associated with it. Comrie (1976) gives the following features of the perfective aspect, all of which can be found in SC as the corresponding examples show⁸:

• indication of the beginning (or ‘ingression’) of an event⁹;

6) Ivo je progovorio nakon duge pauze i nastavio govoriti čitav sat.
I. is began-to-talk after long pause and continued talk whole hour
‘Ivo began to talk after the long pause, and continued for the whole hour.’

• indication of a completed event (with or without emphasis on the end-point of the event);

7) Ivo je pojeo sve sendviče. Ništa nije ostalo!
I. is eat-up all sandwiches nothing not left
‘Ivo ate up all sandwiches. Nothing left!’

• indication of the result of an event, after which there is a change of state;

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⁸ See also Forsyth (1970).
⁹ These verbs are in the literature referred to as ‘inceptives’, ‘ingressives’, or ‘inchoatives’.
   at last am persuade I. that eat meat more not vegetarian
   ‘I finally persuaded Ivo to eat meat. He’s not a vegetarian any more’

   *indication of a punctual, momentary event;*

9) Ivo je *namigujo* Sofiji (samo jednom).
   I. is winked S. only once
   ‘Ivo winked at Sofia (only once).’

The main feature of the SC perfective is completion. All the other interpretations derive from either the lexical meaning of the verb involved, or contextual information.

   Note in relation to the examples (6)-(9) above that perfective verbs do not explicitly mark separate phases making up an event; rather, this is done by the lexical meaning of the verb itself. For example, punctuality in (9) is not indicated by the prefix *na-*, as the following example shows: *na-pisati* ‘to finish writing’ denotates not punctuality, but a completed event emphasising its end-point.

   In contrast to perfectives, imperfectives convey an *on-going* event, or an event of a *long duration*. There are two meanings that can be associated with imperfectives: habitual and progressive (after Comrie (1976)). As mentioned earlier, duratives and iteratives, which are usually associated with the imperfective are compatible with the perfective as well in SC.

   *habitual;

10) Mama *vodi* Ivu u školu svaki dan.
    Mum takes I. to school every day
    ‘Mum takes Ivo to school every day.’

   *progressive;

11) Vidim da mama *vodi* Ivu u školu.
    (I) see that Mum takes I. to school
    ‘I can see that Mum is taking Ivo to school.’
Note that in the examples above, contextual information enables us to distinguish between the two meanings conveyed by the imperfective form of the verbs, and not the verbs themselves. In (10), it is the phrase *svaki dan* ‘every day’ that shows habituality expressed by the verb, and in (11), it is the matrix verb *vidim* ‘I see’ that suggests the progressivity of the event described by the verb *vodi* ‘takes’. Without contextual information, it would not be possible to distinguish between the two. The verbs themselves only denote a difference from the corresponding perfectives.

**Telicity** and **atelicity** is another peculiarity in relation to the aspectual properties of SC verbs. Both are compatible with either perfective or imperfective aspect without any change in the telicity/atelicity of the situation (Comrie (1976)). If a telic verb (referring to a situation which has an inherent terminal point) is used imperfectively, the newly formed verb signals that the terminal point has not been reached yet (i.e. the situation is still telic): *ubijeđivati* ‘to try to persuade Impf’ v. *ubijediti* ‘to persuade Pf’. An atelic verb used perfectly also changes the telicity of the verb, and not the telicity of the situation: *boriti se* ‘to fight (refl.) Impf’ v. *izboriti se* ‘to gain something by fighting (refl.) Pf’. The distinction between aspect and telicity is perhaps clearer in the following example, describing a telic situation with both aspectual forms of the verb ‘write’: *pisati/napisati* ‘write Inf Impf/Pf’:

12) a. imperfective: Ivo je *pisao* pismo.
   I. *is write letter*
   ‘Ivo was writing a letter.’

   b. perfective: Ivo je *napisao* pismo.
   I. *is write letter*
   ‘Ivo wrote a letter.’
III Tense and Serbo-Croatian Verbs

Tense is a linguistic device for locating situations in time. In other words, tense is a morphologically expressed reflection of temporal ordering relations. In Western societies time is represented linearly with the present preceding the future and following the past. Reichenbach (1947) recognises three primitive objects of time: the Speech time (or S point), the Event time (or E point), and the Reference time (or R point). While the Speech time refers to the time of utterance production, the Event time refers to the time the event denoted by the verb takes place. The Reference point is itself not located in time, but is a time indication given by the linguistic context. The linear order of S, R and E reflects the temporal order between these three points in time: anteriority, posteriority, and simultaneity. This is the usual framework in which the semantics of tense is represented today.

According to the neo-Reichenbachian framework, tense is a deictic system; the situations are related to some arbitrary reference point, or deictic centre. The deictic centre is usually taken to be the present moment of speech, i.e. the same moment for both the speaker and the hearer. With respect to the deictic centre, events can be related to time in two ways; by absolute time reference, or by relative time reference. The former obtains if the situations referred to are located either prior to, subsequent to, or simultaneous with the deictic centre (that is past, future, or present, respectively), and the latter if the events are located in time relative to some deictic centre defined by the context (not necessarily present). Accordingly, tenses, which are grammatical expressions of location of a situation in time, can be classified into three groups: absolute, relative, and absolute-relative tenses. It is important to point out that the basic difference between absolute and relative tense is not the difference between the present moment and some other point in time, but between forms whose meaning specifies the present moment as a reference point, and forms whose meaning does not specify the present moment as reference point (Comrie (1985:58)).

\[10\] Due to lack of space, I shall concentrate only on the morphology of Present and Past Tenses. The semantics of tense is for the same reasons entirely omitted.

\[11\] With revisions and extensions (Comrie (1985) and Hornstein (1990), among the others).
SC tense has not been studied in detail; all the recent analyses of SC clauses (for example, Wilder and Čavar (1994), Bošković (1995, 1997), Progovac (1996), Franks (1998))\(^{12}\) draw upon traditional assumptions about the SC tense system. Although it will be shown later in the text that the account of SC tenses given by the traditional grammar is inadequate, it nonetheless provides us with valuable insights into the basics of SC tense distinctions. Accordingly, the next subsection presents a traditional analysis of the morphology and some of the usage of the SC tense system. The basic characteristics of each tense will be given in turn.

### 3.1 Morphology and Usage of Serbo-Croatian Present and Past Tenses

According to traditional grammar, SC has three basic tenses for connecting events to past, present and future time (e.g. Corbett (1987)). This would suggest that the basic, three-way tense split corresponds exactly to the Indo-European concept of time. Other tenses such as Aorist and Imperfect, the simple tenses for expressing past events, and periphrastic Pluperfect for expressing remote events in the past are either completely replaced in spoken SC by the Perfect, an all-purpose past tense, or retained only in some dialects (de Bray (1969), Corbett (1987), Campbell (1991), Schenker (1993), Browne (1993)). All three redundant tense forms are preserved in literary use.

SC tenses can be either simple or periphrastic. In either case, the main verb’s morphological alternations are centred around either of the two stem-forms: present or infinitival. Both stems are obtained by removing the suffixes marking present and infinitive, respectively:

\[
\begin{align*}
13) \quad a. \quad & pi + -jem \rightarrow pijem ‘I drink’ \quad \text{rib} + -am \rightarrow \text{ribam}, ‘I scrub’ \\
& \text{žur} + -im \rightarrow \text{žurim} ‘I hurry’ \\
& na + -ći \rightarrow \text{naći} ‘find’ \quad \text{nosi} + -ti \rightarrow \text{nositi} ‘carry’
\end{align*}
\]

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\(^{12}\) The studies of SC are focused mainly on clitics.
Present tense. In Comrie’s (1985) terms, the SC Present tense is a simple absolute tense; the time of the event described by the verb is simultaneous with the time of the utterance (E simultaneous S). The Present tense is formed from a present tense stem and suffixes containing information about person and number:\(^{13}\):

\[
\begin{align*}
14) & \quad & \text{Sg} \\
1. & \quad & \pij\text{em}^{14} \text{‘I drink’} & \text{izribam ‘I scrub up’} & \text{žurim ‘I hurry’} \\
2. & \quad & \pije\text{š} & \text{izribaš} & \text{žuriš} \\
3. & \quad & \pije & \text{izriba} & \text{žuri} \\

& \quad & \text{Pl} \\
1. & \quad & \pij\text{e}mo ‘we drink’ & \text{izribamo ‘we scrub up’} & \text{žurimo ‘we hurry’} \\
2. & \quad & \pij\text{e}te & \text{izribate} & \text{žurite} \\
3. & \quad & \piju & \text{izribaju} & \text{žure} \\
\end{align*}
\]

The basic use of the Present tense is temporal; it is used either for describing a situation that holds at the present moment, or for describing a situation that will take place in future. As the examples in (15) show, the Present tense form of perfectives cannot be used to express either present or future time meaning. Therefore, we might conclude that the temporal use of the Present tense is aspect-sensitive.

\[
\begin{align*}
15) & \quad & \text{a. *Popijemo vino.} & \text{b. *Sutra odem na put.} \\
& \quad & \text{(we)drinkPf wine} & \text{tomorrow (I) go awayPf on trip} \\
& \quad & \text{‘We are drinking wine.’} & \text{‘I am going away on a trip tomorrow.’} \\
\end{align*}
\]

\(^{13}\) Stevanović (1951) identifies following suffixes forming the Present tense: -\(m\), -\(š\), -\(e\), -\(mo\), -\(te\), -\(e/-u\). Since exact morphological classification is of no importance for the present work, I shall follow Brabec et al. (1958). A handful of verbs have -\(u\) in the first person singular, e.g. hoču ‘I want’.

\(^{14}\) \(j\) can be omitted with some verbs, e.g. pišem ‘I write’.
As mentioned before, there is only one tense in most dialects of conversational SC for expressing past time events - the so-called **Perfect tense**, an absolute past tense (E before S). Traditionally, it is assumed that this compound tense is formed from the clitic form of the present tense of the auxiliary *bitti* ‘to be’ and the active form of the past participle of the main verb. As in all compound tenses in SC, person and number are encoded in the auxiliary, and gender and number in the main verb.

<table>
<thead>
<tr>
<th></th>
<th>Sg</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pita-*l/-o, -a sam ‘asked-Masc, -Fem (I)am’</td>
<td>pita-*l -i -e smo ‘asked-Masc, -Fem (we)are’</td>
</tr>
<tr>
<td>2</td>
<td>si</td>
<td>ste</td>
</tr>
<tr>
<td>3</td>
<td>-a, -o je</td>
<td>-e, -a su</td>
</tr>
</tbody>
</table>

The active form of the past participle of a verb is in traditional grammars of SC considered to be a non-tensed verbal form, formed from the infinitival stem of the verb to which the suffixes -o, -la, -lo, encoding gender are added. In more recent accounts of Slavic morphology and related phenomena (e.g. Comrie (1976, 1985), Spencer (1991), Browne (1993), Price (1998)), these forms of main verbs are termed ‘-l participles’ and separated from the other non-tensed verbal forms (e.g. ‘-n participles’). The -l participles are formed by adding two suffixes to the verb stem: -l and -o, -a, -o, -i, -e, -a, encoding gender. As the examples below show, formation of this verbal form is not sensitive to aspectual distinctions among verbs:

<table>
<thead>
<tr>
<th></th>
<th>Imperfective</th>
<th>Perfective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sg</td>
<td>Pl</td>
</tr>
<tr>
<td>Masc.</td>
<td>pita-*l/-o</td>
<td>pita-*l-i</td>
</tr>
<tr>
<td>Fem.</td>
<td>pita-*l-a</td>
<td>pita-*l-e</td>
</tr>
<tr>
<td>Neut.</td>
<td>pita-*l-o</td>
<td>pita-*l-a</td>
</tr>
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</table>

15 “The /l/ alternates with /o/ in a syllable final (coda) position” (Spencer, 1991, p. 352). As far as the verbs are concerned, this phonological process is characteristic only of the first person singular number and masculine gender in the majority of SC dialects.
The use of the **Perfect tense** is primarily temporal. As shown by the incompatibility of the Perfect tense and temporal adverbials denoting future (compare (18a) and (18b)), the Perfect serves for describing events located in the past\(^\text{16}\).

18) a. Vlada je jučer/danas odobrila prodaju nezdrave hrane.

   government is yesterday/today approved sale unhealthy food

   ‘The government **approved** the sale of unhealthy food yesterday/today.’

b. *Vlada je sutra odobrila prodaju nezdrave hrane.

   government is tomorrow approved sale unhealthy food

   ‘The government **approved** the sale of unhealthy food tomorrow.’

Note that the Perfect tense is still used even when events that happened in the past have consequences which are still evident in the present (cf. (1c)). Therefore, the SC Perfect tense corresponds to two English tenses: the Present Perfect and the Simple Past/Preterite tense. However, if there is a past temporal adverbial in the sentence, only one, i.e. the past time interpretation of the Perfect is possible. Therefore (18a) cannot be interpreted in the same way as the English Present Perfect: *The government **has approved** the sale of unhealthy food yesterday/today.

### IV Traditional Assumptions Re-examined

The most obvious puzzle concerns the Perfect tense: it is not clear which element of the compound Perfect tense (auxiliary or participle) contributes to the past time interpretation. According to assumptions based on traditional grammar, the auxiliary is marked for present tense (and person and number features), and the so-called ‘past participle’ is not marked for tense at all, but is specified only for number and gender features. If that is indeed the case, we may assume that the present tense carried by the auxiliary refers to the time of utterance, and the event time (past) must be obtained by contextual lexical means as in (1b) and (1d).

\(^{16}\) If the adverbial *danas* ‘today’ is used, the meaning of the sentence can only be ‘The government approved the sale of unhealthy food *earlier today.*'
Under such assumptions SC Perfect is an Absolute tense, i.e. it “refers only to a situation holding at the present moment, even where that situation is part of a larger situation that occupies more than just the present moment”, e.g. past (Comrie 1985: 38). However, as we can see from the same examples, if the adverbials are used for specifying the past time at which an event took place, a resultative meaning, which is characteristic of the Perfect tense cannot be obtained. Moreover, if the past time is denoted lexically, two additional questions can be raised. Firstly, how is the past time meaning obtained in the absence of contextual lexical means (cf. (1a) and (1c))? And secondly, how do we account for the differences in interpretation between imperfectives and perfectives, where a resultative interpretation is obtained only if perfectives are used (cf. (1a) and (1c))? Moreover, it is difficult to justify the claim that the auxiliary *biti* ‘be’ is marked for tense when conversational SC has no other tensed forms either past or future.

On the other hand, we might assume that the Perfect is a relative tense where the auxiliary denotes the time of the utterance and the participle relative time reference. This assumption can be dismissed for the following reasons. Firstly, the function of the present-marked auxiliary is not clear; if the contextual reference point is lacking, the participle receives a simultaneous interpretation with the closest absolute tense form (the present form of the auxiliary), in which case the tense is superfluous, since SC has Present tense. Secondly, as is the case with the first assumption, both past time and resultative meanings are not obtainable. And finally, SC has forms for expressing relative time reference:

19) a. Napustio je sastanak **psujući.** Napušta sastanak **psujući.**
   (he)left is meeting swearing (he)leaves meeting swearing
   ‘He left the meeting swearing.’ ‘He is leaving the meeting swearing.’

b. **Poljubivši** Mariju, Ivan je napustio sastanak. **Poljubivši** Mariju, Ivan napušta sastanak.
   kissed M. I. is left meeting kissed M. I. leaving meeting
   ‘Having kissed Maria, Ivan left the meeting.’/‘Having kissed Maria, Ivan is leaving the meeting.’

In (19a), the -či form (**psujući** ‘swearing’) receives the simultaneous interpretation with the closest verb, so ‘leaving’ and ‘swearing’ are taking place simultaneously either in the past or present, depending on the temporal interpretation of the closest verb. In (19b), however,
the -vši form (poljubivši ‘having kissed’) indicates that ‘kissing’ is taking place before ‘leaving’ either in the nearer or more remote past (if the closest verb carries present or past tense features, respectively).

The third possibility is to consider the Perfect tense and absolute-relative tense specifying the time of the event as the time before some contextual reference point, which in turn precedes the time of the utterance. In that case, the meaning of the Perfect would be ‘past before past’, exactly the meaning of the Pluperfect. This is a plausible suggestion since, as mentioned before, the Perfect has already replaced the Pluperfect in some dialects of SC. On the other hand, the main drawback of this assumption is that both meanings, characterising the Perfect do not obtain because the R point is lacking (cf. (1))\(^\text{17}\).

There is another possible way of accounting for the SC Perfect: through a historical/diachronic change, the auxiliary lost its ability to carry tense feature. Instead, past tense is marked on the participle. That would enable us to obtain the past time interpretation. The resultative interpretation is a result of discourse, i.e. pragmatic constraints (Michaelis (1998)). Diachronic evidence supports this view; according to Hewson and Bubenik (1997), the SC Perfect developed out of the Proto-Indo-European Aorist, denoting past events. At some stage, it fused with the synthetic perfect, denoting results of past events\(^\text{18}\). Cross-linguistic evidence also indicates the plausibility of this assumption. For example, l-participles are not resultative in Macedonian, which is another South Slavic language. Diachronic cross-linguistic evidence suggests that in other Slavic languages periphrastic forms of present perfect tenses have developed into synthetic forms (most notably Russian and Polish). Therefore, we might assume that the same process is under way in SC. However, if this view is correct, we face a difficulty in accounting for both the impossibility of obtaining a resultative interpretation from the imperfective verb-forms (cf. (1)), and the contrast between the examples below which could be accounted for only if theoretical assumptions about syntax are considerably changed:

\(^{17}\) For extensive argumentation against treating the Perfect as an absolute-relative tense see Comrie (1985,64f.).

\(^{18}\) In contrast, Durst-Andersen (1992) argues that the modern SC Perfect developed out of Old Church Slavonic Retrospective, indicating the results of past events.
In (20) above, we can see that only imperfective verbs can undergo raising. Recall also from the text above that perfectives can only be used in subordinate clauses if they are marked for the Present tense. In other words, not only do the examples posing a problem for the assumptions about the Prefect tense given above show aspectual sensitivity of the verbs, but the verbs in all tenses, including the Present tense exhibit aspectual sensitivity. If, as we saw in Section 2, aspect refers to the internal temporal contour, and not to locating events in time, it is not clear why tense would cause a different distribution of the perfectives and imperfectives. The problem suggests that more attention should be paid to the interplay between tense and aspect which is, after all well-attested throughout the literature (Comrie (1976, 1985), Lyons (1977), Chung and Timberlake (1985) among many others). The next section will therefore look at the intricate relation between tense and aspect in SC.

V The Interplay between Aspect and Tense

SC Aspect and tense have not been studied within the framework of a more recent grammatical theory. Current assumptions about SC aspect and tense systems are based either on the treatment traditional grammar has provided or on the analysis of the systems of other Slavic languages (most notably Russian), which have been studied more than SC. In the previous sections we saw that neither can provide the framework for successful analysis of SC aspect and tense because both approaches look at aspect and tense separately as two distinct grammatical categories although it has been acknowledged in the literature so far that the SC verbal system is an aspectual rather than a tense system (Corbett (1987)). The primacy of SC aspect over tense has its roots in Proto-Slavonic (Schenker (1993)) and
was well-established in Old Church Slavonic (Campbell (1991)). Furthermore, it has been acknowledged in the literature that the interplay between aspect, tense and mood has much wider implications for the role of aspect and mood on temporal interpretation (Comrie (1976), Lyons (1977), Chung and Timberlake (1985)) than reflected in the accounts of SC aspect and tense offered above. The next section explores the idea that the morphosyntactic category of aspect has wider functions in SC than has been recognised so far. In other words, the proposed model of SC aspect and tense suggests that only aspect, and not tense is grammaticalised. Consequently, temporal interpretation is derived solely from the aspectual characteristics of verbs; while the presence of a perfectivising affix indicates a past time interpretation due to the semantics of perfective aspect, the lack of the same indicates a non-past time interpretation. The past time meaning of imperfectives is a default. Such a model treats not only the semantics and morphology of aspect, but all elements of temporal interpretation in a unified way. The section begins with an overview of time and the ways it is represented in a language.

5.1 The Concept of Time

Western culture traditionally views time through the notions of ‘past’, ‘present’, and ‘future’. While ‘present’ is the point in time of indefinite duration which can be termed ‘now’, ‘past’ and ‘future’ extend indefinitely on the either side of it; ‘past’ lies behind us, and ‘future’ ahead of us. On the line of time (cf. Figure 1), ‘past’ is located to the left of the ‘present’, and ‘future’ to its right. Thus, one of the basic characteristics of time as we know it is that it is typically represented in spatial terms (Comrie (1985), (Binnick, (1991)).

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Figure 1 Western concept of time
There are two additional characteristics of the Western concept of time (ibid.)\(^\text{19}\): time has direction, and the nature of time is dynamic. In other words, time continuously flows from ‘past’ to ‘future’ through ‘present’. What is seen as ‘present’ now used to be ‘future’ at some previous moment, and will be ‘past’ soon. Therefore, ‘past’ always precedes ‘present’, and ‘future’ follows it. Such a view of time results from our general knowledge of the world, rather than any semantic distinction between different ‘times’.

Correspondingly, the dynamic structure of time in natural language is described by different tenses (past, present, or future) which are represented by different verb forms. However, since time is not divided into ‘past’, ‘present’, and ‘future’ on semantic grounds, there cannot be a semantic distinction between its grammatical representation either, i.e. tenses. Consequently, in some languages (e.g. English, German, Serbo-Croatian, Russian) we find tense distinctions which do not exactly match the above described time distinctions. Such languages make a two-way distinction between tenses: time is represented by a past/non-past distinction (the latter standing for present and future). Furthermore, some languages (e.g. Malay, Thai, Chinese, Arabic) do not have tense distinctions at all, but represent time through other grammatical means (e.g. aspect and mood (Comrie (1985), Lyons (1977))). As such, these languages do not put an emphasis on the dynamic character of time, but on its static structure. I shall argue below that SC is one of these languages; its aspect has two temporal functions. The primary function of SC aspect is to represent the static structure of time, and its secondary function is to represent temporal relations from which a past time temporal interpretation is derived.

5.2 The Primary Function of Serbo-Croatian Aspect

The dynamic nature of time and its directionality are in the foreground of the Western concept of time. However, these two characteristics of time somehow force us to view only larger chunks of time. If we concentrate on smaller temporal units, it is possible to discern the static structure of time and see it as consisting of a closely knit continual sequence of

\(^{19}\) Klein (1994) gives a more elaborate characterisation of the basic time concept underlining linguistic expressions of temporal relations: segmentability, inclusion, linear order, proximity, lack of quality, duration, origo (time span of present experience).
separate time-segments comprising time-intervals\textsuperscript{20}. Comrie (1985;5) represents segments and intervals in the following way:

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{time_segments_intervals.png}
\caption{Time segments and intervals}
\end{figure}

Segments of time are characterised by punctuality (cf. events A, B, and C in Figure 2) and time-intervals by non-punctuality, i.e. they are extended in time (cf. events D-I in Figure ). The aspectual perfective-imperfective distinction serves to linguistically express the punctuality difference between segments and intervals: momentary segments of time, i.e. punctual events are represented by perfective aspect, and intervals, i.e. non-punctual events, which are extended over time, by imperfective aspect.

Since punctual events are moments in time, they can be ordered with respect to each other in terms of precedence and successivity, but one punctual event cannot be included within another; total or partial inclusion (D-E and G-F, H-I in Figure 2, respectively) is the relation characteristic only of the events extended over time, i.e. time-intervals (Lyons, 1977;710). Consequently, perfective, representing punctual events is the aspect used for denoting sequential events and imperfective, representing intervals denotes overlapping events.

Punctual events do not necessarily need to be interpreted in sequence; because they hold at a particular moment in time, another punctual event can take place at the same moment. In other words, as Lyons (1977;710) points out, two punctual events can be simultaneous. Punctual events may also be included within an interval, and the two intervals can co-exist in time. Of these three ordering relations, only the latter two can be represented in SC. On the other hand, although two punctual events can indeed take place at the same time, simultaneity cannot be represented by perfectives.

So far, we have mentioned that perfectives refer to punctual events, which are momentary in time, and imperfectives refer to time-intervals, or the events that are

\textsuperscript{20} Lyons (1977), Comrie (1985), Binnick (1991), Smith (1994) all recognise ‘segments’ and ‘intervals’ of
extended in time. The latter are actually time phases which necessarily have a beginning and an end, i.e. they are time-bound. These lower and upper boundaries, or the end-points of an event, extended over time are referred to not by imperfectives, but by perfectives. Examples illustrating this semantic role of the perfective were given in Section 2.2.

In this section, we have seen that the primary role of perfective aspect is to refer either to an event as a whole which is not extended in time, or to the end-points of an event extended in time. Imperfective aspect, on the other hand, is used to denote events taking place over time. As such, the perfective form of a verb necessarily intrinsically contains in itself the meaning of the beginning, completion, or a result of an event. In contrast, the meaning of the imperfective form of a verb (habitual or progressive) has to be determined from the context. This suggests that the perfective is defined in more detail than the imperfective. I shall argue below that a more detailed definition of the perfective reflects the role it plays in SC which is wider than the role of the imperfective. This asymmetry between the perfective-imperfective opposition is due to the secondary role aspect plays in SC grammar. Before going into that, a note should be made in relation to durativity and iterativity, the two important notions related to aspect. We will see that these two aspectual notions do not play a role in selecting aspctual morphology in SC.

5. 3  

**Durativity and Iterativity**

In the text above, the basic difference between punctual and non-punctual events was outlined: while punctual events are momentary, referring to time-segments, non-punctual events, referring to time-intervals are extended in time. This implies that the difference between the two is one of duration. However, as pointed out by Chung and Timberlake (1985), it is possible to measure duration of both punctual and non-punctual events. For example, the event of ‘getting in’, expressed by the imperfective in (21c) lasts longer (as denoted by adverb polako ‘slowly’) than the same event expressed by the perfective in

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21 According to Chung and Timberlake’s (1985) terminology, the perfective is ‘more narrowly defined’ than the imperfective, which is ‘broadly defined’. This is the result of the way languages organise their aspctual systems, i.e. around either of the two qualitative aspctual parameters: **dynamicity**, grammaticalising progressivity and narrowly defining imperfective, or **closure**, grammaticalising closure (completion, boundedness, limitation, including telicity), and narrowly defining perfective. As far as SC is concerned, it appears that this generalisation is correct up to a certain point; the SC perfective indeed seems to have a wider application than the imperfective, but, contrary to Chung and Timberlake’s theory, perfectives are compatible with both telic and atelic predicates (as shown in Section 2.1).
(21b). Consequently, the element of duration is compatible with both imperfective and perfective aspect, as shown below.

21) a. perfective | imperfective  
   duratives: |  
   ispiti | ispiti | ‘examine’  
   navoziti | navažati ‘bring enough of something by driving’  
   ispisat | ispisivati ‘fill in by writing’  
   iteratives: |  
   poispijati | ispijati (Pf: popiti Impf: pititi) ‘drink’  
   podonašati | donašati (Pf: donijeti Impf: donositi) ‘bring’  
   poislikavati | islikavati (Pf: islikati Impf: slikati) ‘take a picture’  

b. Ivo je polako ustao/ ustajao.  
   I. is slowly got up. Pf/Impf.  
   ‘Ivo slowly got up/Ivo was slowly getting up.’

c. Žene su poispijale/ ispjale čaše jednu po jednu.  
   women are drink. Pf/Impf Pf iter Impf iter glasses one by one  
   ‘Women drank glasses one by one/Women were drinking glasses one by one.’

As a result, contrary to widely accepted assumptions, the aspect of a verb is chosen independently of the duration of an event. In other words, durativity and aspect are not directly related (ibid.). Since, as shown above, both perfective and imperfective aspects are compatible with iterativity as well, we may conclude that quantitative properties of aspect (durativity and iterativity) do not play a role in selection of aspectual morphology in SC. Instead, SC aspect is closely related to the notion of closure\(^{22}\), which, as we saw above, defines the primary role of aspect in SC. The secondary role of SC aspect is described below.

5.4 The Secondary Role of Serbo-Croatian Aspect

So far, we have seen that time can be viewed from two perspectives; it has dynamic and static structure. The dynamicity of time is usually referred to by the concepts of past,

\(^{22}\) After Chung and Timberlake (1985).
present, and future and its static structure concerns temporal points and intervals. Tense
and aspect are the two grammatical modes for performing a temporal function: the former
makes reference to the dynamic structure of time and the latter to its static structure. In
languages that do not grammaticalise tense, temporal interpretation is still possible through
the aspectual system of the language\textsuperscript{23}. It has been suggested above that SC is such
language. In the text that follows, it will be explained how temporal interpretation derives
from semantic properties of aspect.

The primary role of aspect is to refer to temporal points and intervals through the
perfective-imperfective opposition, respectively. Since the perfective refers to points in
time that can be contained within intervals, the perfective is necessarily used to refer to
end-points of an event signalling a change of state that follows either the beginning or the
end of an event. If the final end-point of an event is being referred to, the change of state
that follows is either of completion or a result of the event that took place. In order to view
an event as completed (either producing a result of some kind or not), the event has to be
seen from the ‘outside’, in its entirety and in retrospect as an event that has already taken
place. In other words, if the event is to be seen as completed, with or without a result, the
time the event took place must precede the time of viewing the event. We find the same
situation with the inchoatives (e.g. \textit{zaplakati} ‘to start crying’): the perfective must be used
to denote the beginning of an event since it is a point in time at which a change of state
begins. In order to see the change of state, its initial point must necessarily be seen in
retrospect. If, on the other hand, the event is viewed from the ‘inside’, i.e. from the point at
which it is still taking place, the completion of the event, or its end-point cannot be seen,
only anticipated. In other words, we cannot see whether the event is bound to be completed
or not, i.e. we cannot see the temporal boundaries of an event.

Therefore, in order to see an event as completed, we have to see it as having taken
place some time \textit{before} we judge whether the event is completed or not. In that way, the
perfective, by virtue of its reference to the language-independent concept of ‘completion’
\textit{intrinsically} conveys the meaning of the time \textit{anterior} to some other point in time. The
perfective therefore, by a single definition captures the meanings of both the aspectual
notion of completion (or result) and the tense-notion of past time, where the temporal
component necessarily accompanies the interpretation of an event as

\textsuperscript{23} Mood also contributes to temporal interpretation (Comrie (1985), Chung and Timberlake (1985)).
completive/resultative. In other words, the perfective uniquely refers to both static and dynamic structure of time. As such, the inflection encoding perfective aspect necessarily encodes the temporal feature [anteriority]. In contrast, imperfectives, by virtue of referring not to points in time, but intervals, do not convey the same meaning. In fact, since imperfectives refer to intervals, which can be anterior to, simultaneous with, or posterior to another interval, they do not convey any temporal meaning at all. Therefore, they remain unspecified for any temporal feature. In that case, temporal specification must be done by other means. Since SC temporal representation is not ternary (past, present, future), but binary (past, non-past), imperfectives not marked with a person feature like so-called present tense verbs convey past time meaning by default. In that way, it is possible for tense not to be grammaticalised in SC and yet, the clause can be temporally interpreted.

VI Summary

I have shown here that the traditional description of SC aspect and tense systems does not adequately account for all the data. Instead, I argued that a three-way distinction between the basic characteristics of time (past, present, future) is not reflected in the SC temporal system: SC has a binary past/non-past distinction in its linguistic temporal representation. I also argued that SC is one of the languages in which tense is not grammaticalised. I argued that instead, it is possible to derive temporal interpretation from two other temporal categories: aspect and mood. I have shown how it is possible to derive past time temporal interpretation from perfective aspect. The SC perfective-imperfective opposition has two functions: its primary function is to represent the static structure of time (time-segments

Lyons (1977:683) argues that a dynamic conception of time is not essential to the definition of tense. However, the notions of anteriority, simultaneity and posteriority still reflect the dynamic nature of time (i.e. the time flows from being anterior towards being posterior through being simultaneous). Rather, the notions of past, present, and future (which are necessarily related to the dynamicity of time) are not essential to the definition of tense. In other words, ‘tense’ always refers to the dynamic conception of time, whereas the grammatical category of TNS (tense) refers to the notions of past, present, and future. It will be argued later in the text that grammatical category TNS refers to primary tense and the grammatical category ASP (aspect) to secondary tense, both of which make reference to the same, dynamic conception of time.

This is reminiscent of Giorgi and Pianesi’s (1998) theory of aspect and tense according to which temporal representations are reducable to morphological properties of the language in question. Hence, one morpheme represents one temporal relation, whereas no morpheme encodes no temporal specification. On the other hand, Giorgi and Pianesi also argue that not every temporal relation is morphologically realised. Giorgi and Pianesi’s theory cannot be applied here since in this model of aspect and tense, temporal relations are always
and time-intervals, respectively), and its secondary role is to represent temporal relations. Past time temporal interpretation is derived from the semantics of perfective aspect: by virtue of its reference to the language-independent concept of ‘completion’, it intrinsically conveys the meaning of time anterior to some other point in time. Imperfective, by not being marked for the person feature with which other verbs indicating present time meaning are marked, conveys the notion of past time by default.

morphologically realised although not by tense morphology. And secondly, in this model, temporal relations are implicatures of the semantic properties of categories other than TNS.
References


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