The Case of Temporal Bare-NP Adverbials in Serbo-Croatian

Maša Bešlin, University of Novi Sad

Abstract: This article examines the properties of temporal Bare-NP Adverbials (BNPAs) in Serbo-Croatian, arguing that they are structurally PPs. It is posited that genitive-, accusative- and instrumental-marked BNPAs are licensed by distinct null Ps. The presence of a null P does not only provide a neat account for the appearance of different morphological cases, but also explains instances of non-NP-like behavior of these phrases. Certain lexical restrictions and the subtle differences in the interpretation of genitive and accusative BNPAs are suggested to arise due to different semantic contributions of their case assigning Ps. Moreover, the realization of temporal adverbials as BNPAs or as overt PPs is linked to the way the free variable of the temporal noun in these expressions is bound. Ps are taken to have a quantification function, and P-drop licensing with genitives and accusatives is related to the obligatory presence of indexicals and quantifiers. On the other hand, instrumental BNPAs consistently surface as bare nouns and only combine with imperfective verbs. It is proposed that the bareness of instrumental BNPAs can potentially be related to the unbounded nature of the situation they modify, thus explaining why overt Ps, quantifiers and indexicals are systematically ruled out.

1. Introduction

Many languages, including Serbo-Croatian (SC), can express adverbial meanings through the use of Bare NP-Adverbials (henceforth BNPAs), "a class of NPs that have the ability to function as adverbial modifiers, unaccompanied by a preposition or any other indicator of adjunct status" (Larson 1985:595), as in (1).

(1) a. Marko je   video Mariju taj   dan.
      Marko AUX seen Marija that.ACC day.ACC
      'Marko saw Mary that day'

   b. Marko je   video Mariju tog   dana.
      Marko AUX seen Marija that.GEN day.GEN
      'Marko saw Mary that day'

   c. Marko je   ponedeljkom igrao   košarku.
      Marko AUX Monday.INST played   basketball
      'Marko used to play basketball on Mondays'

   d. Marija je   šetala   šumom.
      Marija AUX walked forest.INST
      'Mary walked in/through a/the forest'

   e. Marija je   govorila tihim   glasom.
      Marija AUX spoken quiet.INST voice.INST
      'Mary spoke in a low voice'

   f. Marija je   isekla hleb   nožem.
      Marija AUX cut   bread knife.INST
      'Mary cut the bread with a knife'

The sentences in (1) are examples of temporal (a-c), locative (d), manner (e), and instrument (f) BNPAs. The aim of this paper is to provide an analysis of temporal BNPAs in SC, with a focus on their internal structure and case licensing conditions.

Given that the peculiar outward appearance of BNPAs is problematic for traditional case-assignment theories, two opposing analyses have been proposed to account for their properties. I discuss these in Section 2, and claim that the rich case morphology of SC provides evidence that goes directly against the proposal in Larson 1985, which relies on the presence of inherent case features on nominal heads and adverbial θ-role assignment. I adopt the gist of Bresnan & Grimshaw's (1978) null-P hypothesis, in that I assume all temporal BNPAs to have a PP structure. However, in Section 3 I argue, unlike Bresnan & Grimshaw, that genitive, accusative and instrumental BNPAs in SC are licensed by distinct Ps. Specifically, the accusative and genitive will be shown to be licensed by the null counterparts of the Ps *u*/*na* (in/on) and *tokom* (during), respectively, whilst the instrumental is licensed by the P *sa* (with). It is furthermore argued that overt Ps in time-denoting expressions function as (existential) quantifiers which pick out a time interval contained in the denotation of the temporal noun. This assumption will be related to the licensing of P-drop with genitive/accusative BNPAs: in the absence of P, genitives/accusatives must be bound by other material, either a quantifier or an indexical. Unlike genitives/accusative, instrumental BNPAs are shown to consistently surface as bare nouns, and observe aspectual restrictions in that they only combine with imperfective verbs. I propose that instrumental BNPAs are modifiers of AspP. Since Ps, quantifiers and indexicals act as binders to temporal nouns, it is suggested that expressing them overtly with instrumentals would cause a clash with the imperfective (unbounded) interpretation of the situation they modify. In Section 4, I discuss the consequences and potential benefits of the present analysis, both in terms of streamlining case theory, as well as accounting for how the θ-roles of these elements are interpreted at the LF interface. Section 5 concludes the paper.
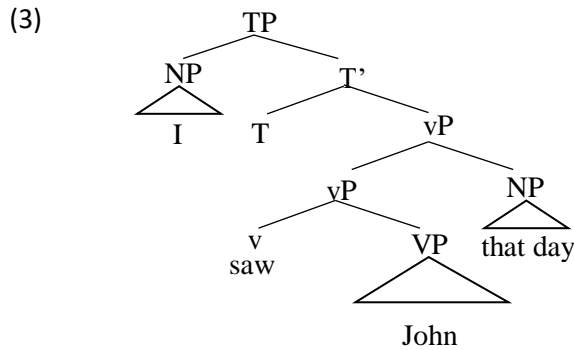
2. Previous accounts of BNPAs

Most accounts of BNPAs found in the literature (Bresnan & Grimshaw 1978, Larson 1985, Emonds 1987, Kobayashi 1987, McCawley 1988, Stroik 1992, Kobayashi 1999, a. o.) are concerned with the English counterparts of the above-given SC examples (2).

(2) a. I saw John that day.

b. John was headed that way.

c. Max pronounced my name every way imaginable.   (Larson 1985:595)

Hence, English also has mechanisms which allow it to express temporal, locative and manner meanings in the form of BNPAs. As previously mentioned, this phenomenon is problematic for traditional approaches to syntax which link category membership to specific distributional properties. Namely, the distribution of NPs is considered to be mainly constrained by the Case Filter (Chomsky 1981) and, more recently, by the visibility condition (Chomsky 1986), which postulates that each overt NP needs to be assigned Case in order for it to be visible for θ-marking (required by the θ-criterion). The simplified tree representation of (2a) in (3) shows why this is problematic for BNPAs.[1]

---

[1] I revise the adjunction site of temporal BNPAs in Section 3.3., but they still remain 'too far' for the verb to case-mark them.

(3)

```
                    TP
              ┌──────┴──────┐
            NP              T'
           ╱╲          ┌────┴────┐
          ╱──╲         T        vP
          I        ┌────────┴────────┐
         saw?      vP              NP
                ┌───┴───┐         ╱╲
                v      VP        ╱──╲
               saw    ╱╲      that day
                     ╱──╲
                    John
```

Under most standard proposals, a head can case-mark either its complement or its specifier. In (3), the BNPA *that day* is neither the complement nor the specifier of the verb, meaning that the verb is unable to case-mark it. As there are no other overt elements capable of assigning case to the BNPA *that day*, it should not be able to pass the Case Filter, the θ-criterion should be violated, and the derivation should crash; yet, the sentence is perfectly grammatical.
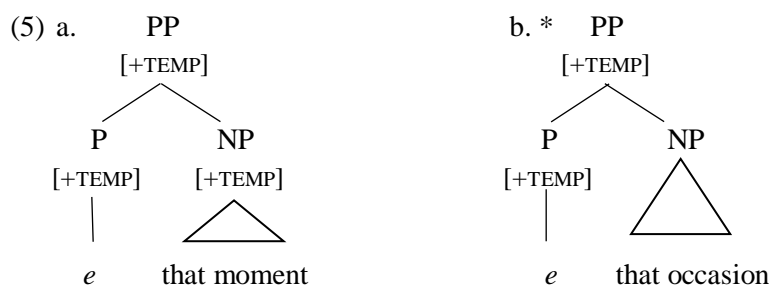
Even under the assumption that (non-structural) case does not need to be assigned under particular structural configurations, the issue of how these adverbials are correctly interpreted at the LF interface remains largely unresolved. In Section 3, which deals with SC data, it also becomes obvious that any analysis which relies on inherent (θ-role-related) case assignment faces serious challenges due to the diversity of morphological case-marking on BNPAs, which would largely have to be subsumed under identical θ-roles (e.g. temporal). The above suggests that the case-licensing conditions for BNPAs should be defined in different terms.

2.1. Bresnan and Grimshaw 1978: BNPAs as PPs

Bresnan & Grimshaw (1978) argue that BNPAs are, in fact, PPs, headed by a zero P element, i.e. an empty head. In such circumstances, P assigns Case to the NP at deep structure, which allows the NP to pass the Case Filter and yield a grammatical sentence. Since some NPs are able to fulfil adverbial roles both with and without the P element being overtly present, Bresnan and Grimshaw propose a P-Deletion Rule (4).

(4)   P → ø /—— NP
        [+F]   [+F]

Essentially, the P can be elided if the complement NP agrees with it on a [+F] feature, where F can be temporal or locative. It then follows that it is precisely the presence or absence of this feature that determines whether an NP can appear as a BNPA; only certain lexical heads seem to be marked [+F]. Iwasaki (2004) provides the following illustration (5).

(5) a.   PP   b. *   PP
          [+TEMP]   [+TEMP]
          ╱   ╲   ╱   ╲
         P   NP   P   NP
       [+TEMP] [+TEMP]   [+TEMP]   ╱╲
         │   ╱╲   │   ╱──╲
         e   that moment   e   that occasion

The nominal head *moment* in (5a) is said to carry a temporal feature, which allows the temporal P that combines with it to be dropped. On the other hand, *occasion* in (5b) carries no such feature, hence the temporal P must be overtly present.

Some evidence for the PP approach stems from (6) and (7).

(6) I saw John that day and on Monday.

(7) Please step right this way!

Putting aside here some exceptional cases, such as the coordination of copular complements, in the vast majority of cases coordination targets phrases which belong to the same syntactic category (e.g. NP+NP). In (6), the BNPA *that day* freely coordinates with the PP *on Monday* to yield a grammatical sentence. One conclusion which could be drawn from such data is that *that day* is also a PP, even though the P element is not overtly present. Furthermore, intensifiers such as *right* and *straight* have traditionally been said to modify PPs (e.g. *straight into the water*). As shown in (7), *right* readily modifies the BNPA *this way*, which again leads to the conclusion that *this way* should be analyzed as a PP.

Whilst I will not address the question of why only certain nouns appear as heads of BNPAs, noting only that they are mostly restricted to calendrical units, a closer look at BNPAs shows that the properties of the noun itself are not the only factor responsible for the fact that P drop is or is not allowed. Taking a look at the internal structure of BNPAs, it becomes obvious that other factors, such as the presence or absence of particular premodifiers plays a crucial role in whether the P can be elided. Bresnan & Grimshaw's analysis as so far given does not provide an explanation for this phenomenon, nor does Larson's analysis which I present in the following section. I address this issue in Section 3.

2.2. Larson 1985: Inherent Oblique Case

In his alternative analysis, Larson (1985) offers an account in which he attempts to divorce distribution from category membership. Arguing against the PP-hypothesis, he points out that BNPAs also freely coordinate with other types of phrases which function as adverbials (8).

(8) They will be arriving Thursday and/or subsequently.   (Larson 1985:599)

From this, Larson suggest that it is their adverbial status, rather than their internal structure, that allows BNPAs to coordinate with adverbial PPs. However, McCawley (1988) notes that the adverbial status of BNPAs does not determine their distributional properties, as neither BNPAs (9a) nor their PP counterparts (9b) can appear as left-adjoined modifiers of VP, a position which is restricted to adverbs (9c).

(9) a. *Smith may have that day withdrawn his lawsuit.

b. ??Smith may have on a subsequent day withdrawn his lawsuit.

c. Smith may have subsequently withdrawn his lawsuit.   (McCawley 1988:585)

In order to advance his proposal that BNPAs are NPs, Larson postulates the existence of adverbial θ-roles, which are optionally assigned to any phrase when no other θ-role is assigned. What prevents bare NPs in general from occurring in adverbial positions is that they must be assigned Case, usually by an external case assigner. Larson further hypothesizes that noun heads of NPs which appear as BNPAs

have some 'special way' of assigning case to the entire NP, which, once they are assigned an adverbial θ-role, allows them to pass the Case Filter, and converge in adverbial contexts. What Larson is essentially arguing for is an inherent oblique case of some noun heads. Seeing that such an analysis would pose a problem for these inherently marked nouns appearing in structural contexts, Larson suggests that the nominal head only optionally 'discharges' its case value, presumably when no other case assigner is available. In this way, case clash is avoided.

Nevertheless, not only is such an analysis ad hoc in that it lacks strong empirical motivation, but McCawley also notes that Larson's analysis would require an additional semantic rule which would combine the interpretation of each NP with the interpretation of the particular adverbial θ-role it is assigned. This is avoided under the PP-analysis, as the P contributes its own semantics to the interpretation of the BNPA. In fact, in Section 3 it will be shown that the meanings of specific Ps are understood in the interpretation of BNPAs.

Furthermore, Larson's analysis challenges some widely held views about inherent case-marking. Inherent case has in most previous accounts been associated with argument positions such as dative goals and ergative external arguments (Woolford 2006), whilst adverbials have not received a similar treatment. Additionally, inherent case is attributed to traditional case assigners (e.g. *v*), whereas in Larson's analysis a completely new mechanism is constructed to accommodate the behavior of a very restricted set of elements, namely BNPAs. It would be desirable to offer a viable analysis of BNPAs which does not require such drastic departures from more well-attested case-assigning mechanisms. If adverbial NPs can truly be shown to exhibit the same syntactic and semantic properties as their more straightforward PP counterparts, then the main goal should be to determine the precise conditions under which BNPAs appear, and to explain why Ps are not phonologically realized in those contexts.

3. SC data and evidence for the null-P hypothesis

An immediate observation that can be made about Larson's approach is that it is extremely difficult to implement in a case-rich language such as SC. An analysis which is only concerned with English (poor in terms of morphological case-marking) easily misses some of the more fine-grained distinctions between BNPAs marked for different cases, both in terms of their syntactic behavior and their semantic contribution. Whereas English, in principle, allows for an analysis which treats *Fridays* and *last Friday* as having the same oblique case (the only difference being in number), a closer look at SC shows that this is problematic (10).

(10) a. Marija je   videla Jovana prošli   petak.
        Marija AUX seen   Jovan last.ACC Friday.ACC
        'Mary saw John last Friday'

     b. Marija je   videla Jovana prošlog   petka.
        Marija AUX seen   Jovan last.GEN Friday.GEN
        'Mary saw John last Friday'

     c. Marija je   išla u bioskop petkom.
        Marija AUX gone in cinema   Friday.INST
        'Fridays, Mary used to go to the cinema'

The examples in (10) show that the same nominal head in SC can appear in genitive-, accusative- and instrumental-marked BNPAs. The syntactic and semantic differences between these BNPAs will be

discussed in the remainder of this paper, but it is clear that Larson's analysis of BNPAs, which relies on particular nominals carrying inherent case features, fails to account for any such case distinctions in languages with richer inflectional morphology than English. I will therefore attempt to implement the PP analysis to all instances of temporal BNPAs in SC. My aim is to show that the case differences in (10) are brought about by the presence of different Ps which license these constructions. Before turning to a more detailed account of each of the constructions, I will provide some additional evidence for the PP status of BNPAs from SC.

An interesting property of BNPAs in SC is that they do not cliticize (11). SC has non-argument clitics (12), the so-called ethical datives (for the non-argument status of ethical datives, see Rákosi 2008 and the references there). If BNPAs were NPs, there would be no principled reason why they could not be clitics.

(11) *Volim leto,   ali ga celog nigde   nisam išao.
       love summer but CL. whole nowhere AUX   gone
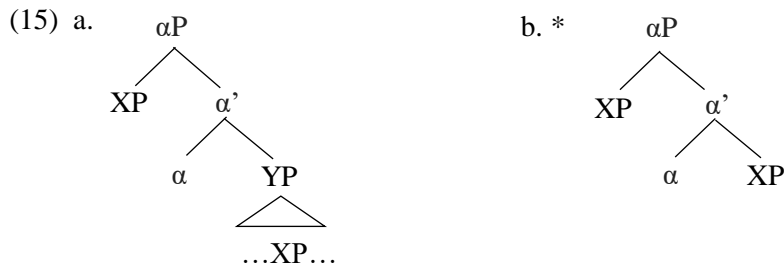   'I love summer, but I have not been anywhere for the whole of it'

(12) Budi mi dobro.
      be   CL. well
      'Be well'

However, if BNPAs are analyzed as PPs, the fact that they do not appear as clitics can be accounted for in a straightforward way. Namely, Abels (2003) observes a restriction that holds across languages which disallow P stranding – in those languages, clitics cannot be complements of Ps (13), as shown for SC in (14).

(13)   *[P clitic]

(14)   *prema mu
         towards CL.
         'towards him'

An explanation for this ban involves an interplay of two factors. First, clitics always occur in derived positions, i.e. they must move, either overtly or covertly. In SC specifically, there is a requirement that clitics overtly move to the second position in their relevant domain (Bošković 2004). If PPs in SC are taken to be phases (Bošković 2013), then the complement NP must move successive cyclically, meaning that it must first move to the edge of the phase to escape the domain of the phase head. Moreover, assume that pronominal clitics are structurally deficient, i.e. unlike structurally complex NPs, they are bare heads (Chomsky 1995, Bošković 2001). Consequently, whereas a complex NP crosses a phrase boundary on its way to the specifier of the phase head (15a), moving the clitic to the edge of the PP phase involves movement of the immediate complement of the head to its specifier position (15b). Given that it does not bring the complement any closer to the phase head, this kind of movement qualifies as movement that is 'too short' (Grohmann 2003), and is therefore consistently ruled out as an anti-locality violation.

(15) a. αP
.
```
        αP                              b. *      αP
       /  \                                      /  \
     XP    α'                                  XP    α'
          /  \                                      /  \
         α    YP                                   α    XP
              /\
            …XP…
```

This kind of indirect evidence provides further support for the PP status of BNPAs. As shown in (12), there is no principled reason why non-argument NPs should not be able to cliticize. Rather, BNPAs do not cliticize because they are not NPs at all; they are PPs and clitic movement to the edge of the PP phase is too short.

Unlike Bresnan & Grimshaw (1978), who assume that the P licensing the BNPAs is an empty element (*e*), I will argue that a distinct P is responsible for assigning each of the three cases observed with BNPAs in SC. Support for this claim stems from the fact that some genitive and accusative BNPAs can appear with overt Ps as well (16).[2,3]

(16) a. Marija je otišla na odmor (u) prošlu   subotu.
     Marija AUX gone on vacation (on) last.ACC Saturday.ACC
     'Mary went on vacation last Saturday'

   b. Marko je   odlazio na bazen (tokom) prošle   godine.
     Marko AUX gone   on pool (during) last.GEN year.GEN
     'Marko used to go to the swimming pool (during) last year'

I therefore assume that BNPAs are case-marked in the same way as their overt PP counterparts. The accusative case on BNPAs is licensed by the presence of a (phonologically null) P *u/na* (in/on), whilst the genitive is assigned by the P *tokom* (during). Before discussing some minor differences in the interpretation of genitive and accusative-marked BNPAs, I now turn to their common features in terms of the semantic contribution of their respective Ps and the conditions under which P-drop is licensed.

3.1. Genitive and accusative BNPAs: Ps and P-drop licensing

Verkuyl (1973) discusses precisely the above-mentioned Ps *in*, *on* and *during*, arguing that they belong to a specific set of Ps which he calls Setting Prepositions (SPs), as opposed to Relational Prepositions (RPs), such as *since* or *from*. He notes that only adverbials with SPs can drop them in certain contexts because they provide a binary relation between the event and the place/time to which the adverbial is referring. Although Verkuyl's examples are largely limited to the spatial domain, they can quite easily be implemented with temporal adverbials as well. Hence, in (17a), there is a binary relation between the event 'going to the cinema' and the time referred to as 'Wednesday'. On the other hand, (17b) gives a ternary relation between the event 'going to the cinema', the time referred to as 'Wednesday', and the time in which Marko has actually not gone to the cinema. The fact that SPs, but not RPs, can be dropped can therefore be linked to the fact that SPs give the domain immediately.

---

[2] I discuss the issue of why instrumental BNPAs never occur with overt Ps in Section 3.3.
[3] It should be noted here that native speakers report using such constructions only in emphatic contexts.

(17) a. Marko je   išao u bioskop u sredu.
Marko AUX gone in cinema on Wednesday
'Marko went to the cinema on Wednesday'

b. Marko nije bio u bioskopu od   srede.
Marko AUX been in cinema   since Wednesday
'Marko hasn't been to the cinema since Wednesday'

Another observation made by Verkuyl (also found in König 1974) is that temporal Ps *in*, *on* and *during* function as existential quantifiers. In addition to their standard case-marking function, these temporal Ps can then be said to bind the variables expressed by their complement NPs. This is exemplified in (18).[4]

(18) a. Marko je   ubijen   tokom noći.
Marko AUX killed   during night.GEN
'Marko was killed during the night'

b. Marko je   ubijen   u subotu.
Marko AUX killed   on Saturday.ACC
'Marko was killed on (a) Saturday'

Hence, in terms of the external temporal anchoring of the event in question, both (18a) and (18b) can be paraphrased as 'there is at least a *t* (in our Domain of Discourse), such that Marko was killed at *t*', formally represented in (19).

(19) $(\exists t)\ K(x_1, t)$

Recall that both previous analyses of BNPAs assume that only nouns bearing special features (e.g. +temp in the case of temporal BNPAs) can appear as BNPAs. Whilst it is true that calendrical units are much more likely to appear as BNPAs than other time-denoting nouns (e.g. occasion, meeting), this would predict (20) to be grammatical.

(20) a. *Marko je   video Jovana dan   /subotu.
Marko AUX seen Jovan day.ACC/Saturday.ACC
'Marko saw Jovan day/Saturday'

b. *Marko je   video Jovana dana   /subote.
Marko AUX seen Jovan day.GEN/Saturday.GEN
'Marko saw Jovan day/Saturday'

Clearly, the features of the nominal itself are not sufficient to license P-drop with BNPAs. Moreover, not only are genitive and accusative BNPAs in SC never completely bare, but the choice of suitable premodifier is restricted, so that it excludes qualitative adjectives, for example (21).

---

[4] Of course, as the English translation of (18b) suggests, the existential reading (i.e. *on a Saturday*) is one of the two possible interpretations of this sentence. Alternatively, the sentence can refer to the most recent occurrence of the time interval *Saturday*, but I take this reading to arise from the context. Klein (1994) observes that the different interpretations of such adverbials may result from their interaction with the rest of the clause. Since the temporal adverbial is taken to scope over the finite verb, "it assumes the particular temporal character of the latter, including the possibility of generic or habitual usage" (Klein 1994:157).

(21) a. *Marko je video Jovana lepi dan.
     Marko AUX seen Jovan beautiful.ACC day.ACC.
     'Marko saw Jovan beautiful day'

    b. *Marko je video Jovana lepog dana.
       Marko AUX seen Jovan beautiful.GEN day.GEN.
       'Marko saw Jovan beautiful day'

In fact, the set of elements which appear as premodifiers in BNPAs includes only the following: indexicals *ovaj/taj/onaj* (this/that),[5] *prošli* (last), *sledeći* (next) isti (same), and quantifiers *jedan* (one), *oba* (both), ordinal numbers, *neki* (some), *bilo koji* (whichever) and *svaki* (every). I will refer to these quantifiers as 'real quantifiers' (RQs). The data thus indicates that temporal phrases must be quantified or else must contain an indexical element which determines the location of the event on the temporal axis. The ungrammaticality of (20) further suggests that the element which binds these BNPA must be overt, which will be relevant for the discussion of instrumental BNPAs in Section 3.3.

Interestingly, indexicals and RQs in SC behave differently in the presence of overt Ps. For example, it is possible to combine an indexical with the temporal Ps *u* (in) and *tokom* (during), as in (22a-b),[6] whereas P+RQ constructions are degraded (22c).

(22) a. U prošlu subotu je išao na bazen.
        in last Saturday AUX gone on pool
        'Last Saturday, he went to the swimming pool'

     b. Tokom prošle godine je išao na bazen.
        during last year AUX gone on pool
        'Last year, he (repetitively) went to the swimming pool'

     c. ?*U svaku subotu je išao na bazen.
         in every Saturday AUX gone on bazen
         'Every Saturday, he went to the swimming pool'

As mentioned above, SPs in time-denoting expressions have two functions. In addition to case-marking (and θ-marking) their complement NPs, they function as existential quantifiers. The contrast in (22) is then expected if the basic function of both the RQ *svaki* and the SP *u* in (22c) is to bind the temporal noun in adverbial position. In a sense, the RQ in (22c) clashes with the quantificational function of the P, whereas this does not seem to be the case in (22a-b). The situation here looks similar to the ban on multiple quantifiers modifying the same NP (23).[7]

(23) *Marko je išao na more jedan neki mesec.
      Marko AUX gone on seaside one some month
      '*Marko went to the seaside one some month'

---

[5] But see King 2001 for a quantificational account of complex demonstratives.

[6] (22a) with the P *u* seems to place a kind of contrastive focus on *prošlu*, and the P *tokom* in (22b) emphasizes the iterative nature of the action.

[7] Argument NPs behave in the same way with respect to multiple quantification.

Whereas in English this ban can receive a straightforwardly syntactic explanation, given that all Q-elements compete for the same position in the structure, it has been widely argued that Qs (and Ds) in SC are adjectives which adjoin to NP (cf. Bošković 2005, a.o.). Unlike English, SC allows for sentences like (24) where a demonstrative and possessive pronoun modify the same NP. This suggests that the ungrammaticality of (23) stems from semantic reasons, namely from the incompatibility of two elements with the same type of semantic contribution. If Ps in time-denoting expressions are taken to have a quantificational function, then the ungrammaticality of (22c) can be accounted for in a similar way.

(24) Ovaj moj drug je   krenuo na fakultet.
    this   my friend AUX started on college
  '*This my friend has started college' (This friend of mine has started college)

However, although indexicals were shown to be more tolerant to the presence of overt Ps than RQs, I note that (in non-emphatic contexts) in SC, P is overtly present only in the absence of both indexicals and RQs. It therefore seems that the quantificational function of the overt temporal P can be dispensed with if its complement NP is quantified or else its location on the temporal axis is determined via an indexical. I nevertheless pursue the analysis that P is present in the structure of temporal BNPAs. In the following section, I show that the subtle differences in the distribution and interpretation of overt temporal PPs headed by the Ps *u/na* (in/on) and *tokom* (during) are also be observed with their BNPA counterparts.

3.1.1. Some differences between genitive- and accusative-marked BNPAs

All examples seen so far allow for the appearance of both genitive- and accusative-marked BNPAs. However, a subtle difference does exist between the two, but it becomes more obvious in a small number of instances to which I now turn.

An interesting contrast can be observed in (25).

(25) a. Marko je   dobio   informacije (na) taj   dan   /(tokom) tog dana.
      Marko AUX received information on that.ACC day.ACC / during that.ACC day.ACC
      'Marko got the information (on) that day'

    b. Marko je   živeo u Italiji (*u/na) tu   godinu   /(tokom) te   godine.
      Marko AUX lived in Italy   in/on that.ACC year.ACC/ during that.GEN year.GEN
      'Marko lived in Italy in/during that year'

Whereas both the accusative and the genitive are possible in (25a), (25b) only yields a grammatical result with the P *tokom* (during) and the genitive case. The same observation holds for the BNPA versions of (25). Since all examples contain the demonstrative *taj* (that) and accusatives are not in general intolerant to this type of premodification (cf. 25a), the reason for the ungrammaticality of the accusative BNPA in (25b) seems to be the incompatibility of the noun *godina* (year) with the accusative-assigning Ps *u/na* (in/on). Whereas genitive-marked BNPAs do not show any restrictions in terms of the length of the time interval expressed by their referent nouns, accusative BNPAs/PPs are unable to express periods which are longer than seasons (e.g. *summer*). Although the division seems somewhat arbitrary, such a clear-cut split indicates that the ungrammaticality of these constructions is connected to the length of the time interval that is involved.

The question of why this should be so is an interesting one. It is possible that whereas both the genitive P *tokom* (during) and the accusative Ps *u/na* (in/on) function as existential quantifiers and, therefore, fulfil the same role in terms of the external temporal anchoring of the event, they contribute different information about the internal structure of the time interval they refer to. In other words, the P *tokom* with the genitive case provides an interpretation where the time interval is seen as a divisible unit, whereas this does not seem to be the case with the Ps *u/na* and the accusative case. A similar observation is made by Talmy (1985), who points out that lexical items can have varying degrees of extensionality: point, bounded extent and unbounded extent. Hence, the temporal Ps *u/na* can be said to introduce a point referent, whereas the P *tokom* introduces a referent which is interpreted as a bounded (time) interval.

One explanation for the incompatibility of the accusative-assigning Ps *u/na* with nominal heads such as *godina* (year), *decenija* (decade) and *vek* (century) could then be in terms of an inability to conceptualize periods of a certain length as indivisible units. Clearly, a more formal analysis of this phenomenon is needed, which I will have to leave for further research. Below I provide some additional evidence that such an analysis would be on the right track.

Bearing in mind the properties of the genitive- and accusative-assigning Ps discussed above, consider (26).

(26) a. Marko je išao na klizanje svaku   subotu   te   zime.
          Marko AUX gone on skating every.ACC Saturday.ACC that.GEN winter.GEN

      b. Marko je išao na klizanje svake   subote   te   zime.
          Marko AUX gone on skating every.GEN Saturday.GEN that.GEN winter.GEN

      c. ?*Marko je išao na klizanje svaku   subotu   tu   zimu.
          Marko AUX gone on skating every.ACC Saturday.ACC that.ACC winter.ACC
          'Marko went ice-skating every Saturday that winter'

The interpretation of (26) involves an iterative event which occurs within the time interval 'that winter' and contains every instance of 'Saturday' in that time interval. If, as it has been argued, accusative-assigning Ps introduce a referent which is understood as a point in time, then the fact that (26c) is unacceptable should not be surprising.[8] In a sense, the accusative 'winter' is seen as indivisible and one can therefore not talk about its constituent 'Saturdays'. On the other hand, genitive-marked BNPAs are introduced by a P whose referent is understood as having an internal structure and which can, therefore, be segmented.

Such cascades of temporal adverbials (Pratt & Francez 2001) can be further restricted by BNPAs referring to smaller units of time, e.g. *svaki minut* (every minute). As shown in (27), the smallest unit of time can be both genitive- and accusative-marked, whereas the rest are obligatorily genitive.

(27) Marko je gledao Mariju svaki   minut   /svakog   minuta
      Marko AUX looked Marija every.ACC minute.ACC /every.GEN minute.GEN

---

[8] There appear to be some regional differences in the case-marking of BNPAs, with speakers from the southern regions of Serbia showing a clear preference for accusative case-marking on BNPAs in all contexts. These speakers consider (26c) to be marginally acceptable. For speakers from Vojvodina (northern part of Serbia) who use both genitive- and accusative-marked BNPAs, such sentences are unacceptable.

    a. jedne   subote   te   zime.
       one.GEN   Saturday.GEN that.GEN winter.GEN

    b. *jednu   subotu   tu   zimu.
        one.ACC   Saturday.ACC that.ACC winter.ACC
      'Marko looked at Marija every minute of one Saturday that winter'

The ungrammaticality of (27b) again goes to show that if a BNPA is to be segmented into its constituent parts, it must be marked genitive so as to introduce a referent which is understood as a divisible interval of time.

Additional evidence for the different interpretations of the Ps *u/na* and *tokom* and the temporal adverbials they introduce comes from the homonymy of words denoting 'week' and 'Sunday' (both *nedelja* in SC). Although both genitive- and accusative-marked *nedelja* can appear in contexts where it is ambiguous between the two readings, there are also instances where one interpretation becomes more salient (28).

(28) a. Marko je   kupio   auto (u) prošlu   nedelju.
      Marko AUX bought.PF car (in) last.ACC Sunday/week.ACC
      'Marko bought a car last Sunday'

    b. Marko je   odlazio   na plažu (tokom) prošle   nedelje
      Marko AUX gone.IMP on beach (during) last.GEN Sunday/week.GEN
      'Marko (repetitively) went to the beach last week'

In (28a), the BNPA modifies the event 'buying a car', which is usually perceived as occurring at a particular point in time. Here, both the BNPA *prošlu nedelju* and the PP *u prošlu nedelju* are interpreted as 'last Sunday'. If the sentence is uttered with the intended meaning that buying the car occurred sometime during the last week, there is a strong tendency towards using the genitive case. Conversely, the iterative nature of the event 'going to the beach' expressed by the imperfective verb in (28b) makes it highly unlikely that *prošle nedelje* will be interpreted as 'last Sunday' (it makes no sense that Marko repetitively went to the beach one Sunday). Even in that improbable scenario, the BNPA is much more likely to be marked for accusative. Although such examples show tendencies rather than true either/or situations, they are indicative of the way in which the case-marking of the nominal (and the underlying P) affects the interpretation of the time interval the adverbial refers to.

3.2. Instrumentals and Instrumental BNPAs

In SC, instrumental case is assigned to NPs carrying a wide variety of meanings and functions, from what appear to be theme internal arguments (29a), to adverbials denoting instrument (29b) and accompaniment (29c), to manner (29d), locative (29e) and temporal adverbials (29f).[9]

(29) a. Marko je   ovladao   tom   zemljom.
      Marko AUX conquered that.INST   country.INST
      'Marko conquered that country'

---

[9] Instrumental is also used as a predicative case, but I will not discuss it here.

b. Marija je   isekla tortu nožem.
   Marija AUX cut   cake knife.INST
    'Mary cut up the cake with a/the knife'

c. Marko je   išao u školu sa   Marijom.
   Marko AUX gone in school with Marija,INST
   'Marko went to school with Mary'

d. Marko peva tihim   glasom.
   Marko sings quiet.INST voice.INST
   'Marko is singing in a low voice'

e. Marija trči šumom.
   Marija runs forest.INST
    'Mary is running in/through a/the forest'

f. Marko svira gitaru ponedeljkom.
   Marko plays guitar Monday.INST
   'Marko plays the guitar on Mondays'

I will first describe some general properties of instrumentals in SC, which will be relevant for the analysis of temporal instrumental BNPAs. As can be seen above, NPs marked for instrumental can appear both bare and preceded by Ps, the most common one being *sa* (with). Whereas accompaniment adjuncts (29c) always require the presence of *sa*, it has been noted in the literature (Franks 2005, Bošković 2006) that the P is only overtly present with arguments (29a) and instrument adjuncts (29b) as a 'last resort'. Such cases occur when morphological case marking cannot be expressed on the noun itself, for example because of the presence of a higher numeral (30).[10]

(30) a. Marko je   ovladao   sa   pet zemalja.
        Marko AUX conquered with five countries.GEN
        'Marko conquered five countries'

   b. Studenti su   isekli tortu sa   pet noževa.
       students AUX cut   cake with five knives.GEN
       '(The) students cut up a/the cake with five knives'

Both the existence of bare instrumental phrases in argument and adjunct positions as well as last resort *sa*-insertion are problematic in their own right. The first question that naturally arises is how these bare instrumentals are licensed, and the second is why *sa* must be inserted in particular contexts. Milićev & Bešlin (in press) note that last resort strategies present with instrumentals are not seen with other cases (whether structural or inherent). In (31a), the verb *buy*, which usually assigns structural accusative to its internal argument, allows for this case to be overridden in the presence of the numeral, which assigns genitive. On the other hand, dative recipients, which are widely considered to be inherently assigned, are outright ungrammatical in this context (31b). Milićev & Bešlin take the fact that the instrumental patterns with neither the accusative nor the dative as an indication that instrumental case is assigned in a different way.[11]

---

[10] In SC, higher numerals are regularly caseless and they assign genitive case to their complement NPs.

[11] Milićev & Bešlin also point to potential issues regarding analyses which assume verbs such as *ovladati* in (30a) to be

(31) a. Marko je   kupio pet čaša.
Marko AUX bought five glasses.GEN
'Marko bought five glasses'

b. *Marko je   poslao poklone pet devojaka   /devojkama.
Marko AUX sent   gifts   five girls.GEN /girls.DAT
'Marko sent gifts to five girls'

In this paper I assume, with Milićev & Bešlin, that all instances of instrumental in (29) are structurally PPs, headed by the P *sa* (with). Furthermore, *sa* can be either obligatorily overt, last-resort or obligatorily null. The choice of the P *sa* (with) as the head of all instrumental phrases is based partially on the fact that *sa* always appears in last resort contexts, but also on the fact that its semantics seem to underlie all bare instrumental phrases in SC. Other Ps that appear with instrumentals either require plural referents (*među* (between)), or they provide additional information about the spatial positioning of an object in relation to the instrumental referent (*nad* (above), *pod* (below), *pred* (in front of), *za* (behind)). In what follows, I provide a brief summary of the relevant notions concerning the semantics of *sa* in order to motivate the analysis of temporal instrumental BNPAs as PPs. For a more detailed description, the reader is referred to Milićev & Bešlin and the references there.

Hale & Keyser (2005) and Rapoport (2014) propose that *with* is a P of central coincidence. Central coincidence is defined as an atelic relation where, as far as this is practically possible, the center of the Figure coincides with the center of the Ground (Hale 1986). More specifically, Rapoport observes that the relationship that *with* establishes between the Figure and the Ground is a locative relation of accompaniment. She further states that the different interpretations of accompaniment, instrument or manner adverbials containing the P *with* are simply due to different context-dependent interpretations of the basic notion 'accompaniment'. Although I will not discuss this in detail, the relation of central coincidence seems to underlie all instances of *sa*+instrumental in SC.

Nevertheless, the basic relation of central coincidence can also be said to underlie temporal instrumental BNPAs. I therefore address the possibility that the P *sa* is present in their structure as well. The idea that temporal instrumental BNPAs are PPs requires further research; they are, in fact, never realized as overt PPs. However, an approach along these lines would not only provide a unified analysis of temporal BNPAs and of instrumentals in SC (both desirable outcomes), but it would also account for the interpretation of temporal instrumental BNPAs which I discuss below. An alternative approach that relies on inherent case and adverbial θ-role assignment would face difficulties in capturing the semantic nuances present with BNPAs marked for different cases, which naturally arise if the PP analysis is adopted.

---

inherently marked for instrumental case. Given the assumption that inherently marked verbs must assign case in order to be able to θ-mark their complement, Bošković (2006) suggests that the P *sa* is inserted in (30a) because it contains a matching instrumental case feature, which allows the verb to check its case. However, since inherent case-marking is linked to θ-role assignment, it remains unclear to what extent the θ-roles assigned by the verbs *ovladati* (conquer) and, for example, *savladati* (defeat), where the former assigns instrumental and the latter (structural) accusative, are different. Furthermore, such an analysis would presumably require some additional assumptions, since last-resort *sa*-insertion also occurs with optional adjuncts (30b). Whereas Bošković does refer the reader to Larson's 1985 account of adverbial θ-roles, it has been shown that this analysis is difficult to implement in a case-rich language such as SC.

3.2.1. Temporal instrumental BNPAs

A couple of notes are in order at the beginning of this section. At first glance, the constructions which may be grouped under the name 'temporal instrumentals' are quite heterogenous, and include both singular and plural instrumental phrases. However, at closer look, these expressions can be divided into two groups, which I will refer to as temporal instrumental phrases (32a) and durative instrumental phrases (32b).

(32) a. Ponedeljkom   sam   išao na plivanje.
          Monday.INST.SG AUX gone on swimming
          'I went swimming on Mondays'

       b. Godinama   su   gradili kuću.
          year.INST.PL   AUX built   house.
          'They built the house for years'

There is a crucial difference in the meanings of these two types of phrases; whereas the instrumental in (32a) answers the question *when* the event happened, the instrumental in (32b) provides information about *how long* the event in question lasted. Since this paper is concerned with temporal BNPAs, I will focus on clear-cut cases such as (32a) and leave durative instrumentals for further research.[12] I should also clarify that the number of occurrences of temporal instrumental BNPAs is far smaller than that of genitives/accusatives. In fact, temporal instrumental adverbials only appear with nouns denoting days of the week.[13]

As already mentioned, what temporal instrumental adverbials contribute to the proposition is the notion of central coincidence. However, whereas with, for example, instrument adjuncts this relationship is formed between the agent and the instrument, with temporal instrumentals it is established between the event and the time expressed by the instrumental BNPA. Hence, (32a) has the interpretation where the event 'going swimming' is in central coincidence with the time referred to as 'Monday'. In addition to a locative relation of accompaniment (Rapoport 2014) which holds between entities, the P *sa* can then also be said to establish a temporal relation of accompaniment between an event and a time interval.

---

[12] But see e.g. Szucsich 2002 for an account of accusative and instrumental duratives in Slavic.

[13] Additionally, the forms *danju* (generally during the day) and *noću* (generally during the night), which are presently classified as adverbs in SC, were derived from nouns marked for instrumental in previous stages of the language.

Although a similar observation could be made for genitive/accusative BNPAs, what distinguishes temporal instrumentals is that their interpretation is not limited to any particular instance of the time interval expressed by their referent noun. In other words, they are unbounded temporal expressions.[14] Furthermore, instrumental BNPAs are only possible if the verb is marked for imperfective aspect (33).

(33) Marko je   išao   /*otišao   na plažu ponedeljkom.
     Marko AUX gone.IMP gone.PF   on beach Monday.INST
     'Marko went to the beach on Mondays'

The incompatibility of instrumental BNPAs with the perfective is expected if we assume that perfective verbs in Slavic languages introduce a bounded interpretation of the event in question, in that they imply a change from a situation s_1 into situation s_2 (Szucsich 2001). If the temporal location of such a change is to be determined, then a bounded (genitive or accusative) temporal expression must be used.[15]

It should also be noted that, in addition to not allowing overt Ps, instrumental BNPAs are a mirror image of genitives/ accusatives in that they do not seem to tolerate any type of premodification (35).

(35) *Prošlim /tim   ponedeljkom sam išao   na plažu.
      last.INST that.INST Monday.INST AUX gone.IMP on beach
      'I went to the beach last/that Monday'

We have so far observed that temporal instrumentals in SC are unbounded expressions which do not appear with overt premodifiers and which only combine with imperfective verbs.[16] In the following subsection, I attempt to relate the differences between genitive/accusative and instrumental BNPAs to two proposed adjunction sites. The properties of the constituent to which the instrumental BNPA adjoins will be argued to be responsible for the fact that the P *sa* is never overtly realized.

---

[14] In fact, singular instrumental BNPAs seem to be delimited only by the boundaries of their referent nouns. Unlike plural instrumental duratives, e.g. *mesecima* (for months) which produce cumulative interpretations, singular instrumental BNPAs produce iterative readings given that they do not refer to time intervals which immediately follow one another. They are, however, underspecified in that they do not provide information about the number of occurrences of the event in question. Note also that the interpretation of instrumental BNPAs does not involve universal quantification, i.e. the instrumental BNPA *ponedeljkom* (Mondays) is not synonymous with the accusative/genitive BNPAs *svaki ponedeljak/svakog ponedeljka* (every Monday). This is illustrated below:

  a. Ponedeljkom   idem na plivanje.   Prošlog meseca nisam išao.
     Monday.INST go   on swimming last   month AUX gone.
     'I go swimming on Mondays. I didn't go last month'

  b. #Svaki   ponedeljak idem na plivanje.   Prošlog meseca nisam išao.
     every.ACC Monday.ACC go   on swimming last   month AUX gone
     '#I go swimming every Monday. I didn't go last month.'

Moreover, (a) freely combines with the adverb *ponekad* (sometimes), whereas this leads to ungrammaticality in (b).

[15] In English, which does not express aspectual information on the verb, the difference can be observed in terms of the presence/absence of determiners and plural morphology on the BNPA. Whereas the English counterparts of genitive/accusative BNPAs are always preceded by determiner-like elements which yield a bounded interpretation (*that day*), the counterpart to the SC temporal instrumental is a bare plural (*Mondays*).
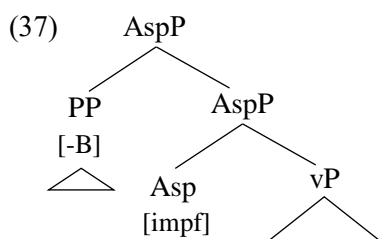
[16] A potential issue is a small number of nouns such as *zora* (dawn) which appear as instrumental BNPAs, but also exhibit some properties characteristic of accompaniment phrases, e.g. they can appear with perfective verbs and some speakers allow them with overt *sa* (with). A closer examination of such borderline cases, which pattern with accompaniment adjuncts in some ways, yet also appear as BNPAs, may help to illuminate the unresolved issue of why some non-temporal adjuncts must appear as overt PPs, whereas the P is regularly dropped with arguments and instrument adjuncts, only appearing overtly as a last resort.

3.3. Adjunction sites of temporal BNPAs

As far as the adjunction sites of temporal BNPAs in general are concerned, the first observation to be made is that unlike phrases denoting accompaniment, instrument or manner, temporal adverbials do not modify the event structure of the verb.[17] Given that the main function of temporal BNPAs is clearly to provide time-related information, it is reasonable to assume that they are modifiers of the higher functional projections of the verb. I focus first on instrumental BNPAs, which have been shown to exclusively combine with imperfective verbs. Although the majority of verbs in SC are lexically specified as either perfective or imperfective, it should be noted that the lexical aspect of a verb does not independently determine the possibility of modification by an instrumental BNPA. Hence, (36) shows that the lexically perfective *kupiti* (buy) can be modified by the instrumental BNPA *ponedeljkom* (Mondays), but only if the present tense verb is understood to have a habitual (unbounded) interpretation.

(36) Ponedeljkom   kupim kilogram jabuka.
     Monday.INST buy.PF kilogram apples.GEN
     'Mondays, I buy a kilogram of apples'

I therefore assume that instrumental BNPAs adjoin to AspP, an aspectual projection which immediately dominates vP (37).[18] Asp contains viewpoint (grammatical) aspectual information, which can be either perfective or imperfective (Smith 1991). Moreover, instrumental BNPAs seem to adjoin to AspP when Asp is marked imperfective [impf].[19] If, as argued, Ps, RQs and indexicals act as binders to temporal nouns, expressing them overtly with instrumentals would cause a clash with the imperfective (unbounded) interpretation of the event. Hence, overt Ps, RQs and indexicals are systematically ruled out with instrumental BNPAs.

(37)   AspP
           /   \
        PP   AspP
        [-B]   /   \
        /\   Asp   vP
       /__\ [impf]   /__\

I now turn to genitive and accusative BNPAs. Based on evidence from Russian (38) which I exemplify with SC data (39),[20] Szucsich (2002) argues that accusative BNPAs are modifiers of AspP, given that they only yield a grammatical result with imperfective verbs.

(38) Ona každyj god   pokazyvala /*pokazala ego vračam.
      she every   yearACC showed.IMP /*PF   him physicians
      'Every year, she had him examined by physicians'

---

[17] Additionally, there may be several temporal adverbials per clause, which is not the case with typical VP/vP adjuncts.

[18] See Szucsich (2002) for a proposal that instrumental duratives in Russian adjoin to AspP.

[19] Given that adjuncts are not introduced to satisfy the features of their target, I assume with Szucsich (2002) that they freely 'pick out' the appropriate host. The feature that instrumental BNPAs seem to be sensitive to is [impf].

[20] I use the noun *dan* (day) instead of *godina* (year) because *godina* is ungrammatical with the accusative in SC, as discussed in Section 3.1.1.

(39) Marija   ga   je   svaki   dan   pokazivala   /*pokazala doktorima.
     Marija   CL AUX   everyACC dayACC   showed.IMP   /*PF   physicians
     'Every day, Mary had him examined by physicians'

Although (39) seems to support Szucsich's conclusion for SC, a closer examination shows that the incompatibility of (39) with the perfective verb is not a property of accusative-marked BNPAs in general, but that it is rather a result of the appearance of the premodifier *svaki* (every). Given that the use of any of the other premodifiers which license accusative BNPAs, e.g. *taj* (that), admits both perfective and imperfective verbs (40), I conclude that accusative- (and genitive-) marked BNPAs in SC are not in general sensitive to the perfective/imperfective distinction.

(40) Marija   ga   je   taj   dan   /tog   dana   pokazala   /pokazivala doktorima.
     Marija   CL AUX that.ACC day.ACC /that.GEN day.GEN showed.PF /IMP   physicians
     'That day, Mary had him (repetitively) examined by physicians'

In addition, word order facts suggest that instrumental BNPAs adjoin lower than genitives and accusatives. Although SC is a scrambling language, native speakers report that whereas the word order in (41a) is neutral, (41b) is marked, thus possibly involving topicalization of the instrumental BNPA.

(41) a. Tog   meseca   sam ponedeljkom   išla   na plivanje.
       that.GEN month.GEN AUX Monday.INST   gone on swimming
       'That month I went swimming on Mondays'

     b. Ponedeljkom   sam tog   meseca   išla   na plivanje.
       Monday.INST AUX tog   meseca   gone on swimming
       'On Mondays I went swimming that month'

If genitive/accusative BNPAs are located higher than instrumentals, the most obvious candidate for their attachment is the TP domain (cf. Alexiadou 1997 for a cross-linguistic perspective, Protopopescu 2014 for English and Romanian counterparts). Nevertheless, Todorović (2016) provides compelling arguments that the TP layer is absent in SC. Her proposal, therefore, has some interesting consequences for the interpretation of temporal adverbials in SC. For illustrative purposes, I take the periphrastic future, which Todorović argues is composed of a viewpoint aspectual layer and the modal component *woll*.[21] Importantly, whereas TP is considered to be a deictic category which is always ordered in relation to the Utterance Time (UT) (Klein 1994), *woll* can also be ordered in relation to another salient time interval in the discourse (Ref-T). In SC simple clauses, the Ref-T provided by temporal adverbials is ordered in relation to UT (42a), but this is not necessarily the case in embedded clauses (42b).[22]
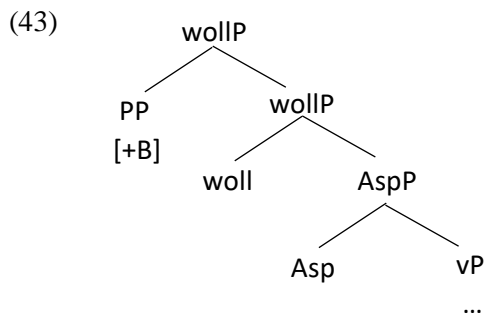
(42) a. Marko će   ići na more   sledeće nedelje.
       Marko AUX go on seaside next   week
       'Marko will go to the seaside next week'

---

b. Marko je   drugog   maja   rekao da će zasaditi baštu sledeće   nedelje.
   Marko AUX second.GEN May.GEN said   that will plant   garden next.GEN week.GEN
   Sad je petnaesti maj i još to nije uradio.[23]
   now is fifteenth May and still that AUX done
   'On 2nd May, Marko said that he would plant a garden the following week.
   It's 15th May now and he still has not done it'

In (42b), *woll* in the embedded clause extends forward not from the UT, but from the Ref-T of the main clause, namely *drugog maja* (2nd May). Since the BNPA *sledeće nedelje* (next week) is interpreted as 'the week following 2nd May', it is possible that *sledeće nedelje* gets its interpretation by adjoining to wollP (43).

(43)

On this account so far, no positional distinctions have been assumed to exist between temporal BNPAs and overt temporal PPs. However, since the focus of this paper has been to investigate the properties of BNPAs, I will refrain from making explicit claims about overt PPs. It therefore remains to be seen whether the realization of the P as null or overt influences the adjunction site of the temporal adverbial in any way.

4. Implications and further research questions

The implications of this research are twofold. In addition to accounting for the peculiar appearance of a rather restricted set of elements, the analysis of BNPAs as PPs has theory-internal consequences in terms of minimizing the role of so-called inherent cases. If further research on both temporal and non-temporal BNPAs yields satisfactory results, it will be possible to limit the notion of inherent case to a small number of well-defined contexts. The data considered so far also suggest that the PP account may be able to resolve the issue of how the θ-roles of BNPAs are interpreted at the LF interface.

So far, I have argued that the case-marking mechanisms present with BNPAs in SC do not significantly differ from what has been proposed for languages with poorer case systems. However, the correlation that has been observed between aspect and the morphological case marking of BNPAs suggests an alternative way to account for the licensing of temporal BNPAs in SC. It might be possible to argue that aspect plays a greater role in the case-marking of BNPAs, and that the differences in morphological case arise due to the different featural specifications of the aspectual layers. Nevertheless, such an analysis would inevitably exclude non-temporal BNPAs, and much further research is needed before an attempt at any generalizations of this kind can be made. Further research also remains to be undertaken in order to offer a clearer and more precise account of the role of quantification in the licensing of BNPAs.

---

[23] The example is based on Todorović (2016:207).

Finally, an interesting question that this course of research might be able to shed light on is whether something as superficial as the presence or absence of morphological case marking in a language can really be said to influence the fact that certain categories can or cannot assign case. If true, this would imply that the two types of languages differ in fundamental ways and raise a plethora of new questions, not least how it is possible that morphology influences the syntactic properties of lexical items or where the locus of θ-role assignment lies in such constructions.

5. Conclusion

In this paper, I presented two competing analyses of BNPAs, and argued that the behavior of temporal BNPAs in SC can be accounted for if they are analyzed as PPs. More specifically, accusative and genitive BNPAs are case-licensed by the null counterparts of the Ps *u/na* (in/on) and *tokom* (during) respectively, whereas instrumental is assigned by the P *sa* (with). It was argued that the PP account provides a straightforward explanation for the semantics of temporal BNPAs, without the need to postulate the existence of inherent case features on nominal heads or any additional rules for their interpretation. Treating BNPAs as PPs was furthermore shown to overcome the difficulties that an analysis which relies on inherent case would face in accounting for the morphological case-marking and distinct interpretations of the three types of temporal BNPAs.

It was observed that genitive- and accusative-marked temporal adverbials are never completely bare, i.e. they appear either as overt PPs or as BNPAs introduced by RQs or indexicals. Given some previous analyses of the Ps that introduce these BNPAs as existential quantifiers, and the fact that they may combine with indexicals, but not with RQs, I argued that both RQs and Ps in time-denoting expressions have a quantificational function. Since both elements contribute the same type of semantic information, it was argued that the overt presence of both would cause a clash. It was moreover suggested that the distinct semantics of the Ps present with genitive and accusative BNPAs in terms of the internal structure of the temporal frame they introduce can account for the incompatibility of accusatives with certain nominal heads.

I also expanded on the analysis of SC instrumentals in Milićev & Bešlin (in press), by assuming that temporal instrumentals are licensed by the P *sa* (with). Seeing that temporal instrumentals only occur with imperfective verbs, it was suggested that they adjoin to AspP when Asp is marked [impf]. I attempted to account for the obligatory bareness of instrumental BNPAs by suggesting that the bounded nature of BNPAs introduced by Ps, RQs and indexicals would clash with the unbounded interpretation of the event introduced by an imperfective verb, which is why Ps, RQs and indexicals are never overtly realized in this context.

6. References

Abels, K. (2003). Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation, University of Connecticut.

Alexiadou, A. (1997). *Adverb Placement: A case study in antisymmetric syntax*. Amsterdam/Philadelphia: John Benjamins.

Bošković, Ž. (2001). *On the Nature of the Syntax-Phonology Interface: Cliticization in South Slavic.* London: Elsevier

Bošković, Ž. (2004). Clitic placement in South Slavic. *Journal of Slavic Linguistics*, 37-90.

Bošković, Ž. (2005). Left branch extraction, structure of NP, and scrambling. In J. Sabel & M. Saito (Eds.), *The free word order phenomenon: Its syntactic sources and diversity* (pp. 13-73). Berlin: Mouton de Gruyter

Bošković, Ž. (2006). Case checking versus case assignment and the case of adverbial NPs. *Linguistic Inquiry* 37, 522–533

Bošković, Ž. (2013). Phases beyond clauses. *The nominal structure in Slavic and beyond*, 75-128.

Bresnan, J., & Grimshaw, J. (1978). The syntax of free relatives in English. *Linguistic inquiry*, *9*(3), 331-391.

Chomsky, N. (1981). Lectures on Government and Binding. *Dordrecht: Foris.*

Chomsky, N. (1986). *Knowledge of language: Its nature, origin, and use*. New York: Praeger

Chomsky, N. (1995). Bare phrase structure. In G. Webelhuth (ed.), *Government and binding theory and the minimalist program* (pp. 383-439). Oxford: Basil Blackwell.

Franks, S. (1995). *Parameters of Slavic Morphosyntax*. Oxford: OUP.

Grohmann, K. (2003). *Prolific Domains: On the Anti-Locality of Movement Dependencies*. Amsterdam: John Benjamins

Hale, Ken. (1986). Notes on world view and semantic categories: Some Warlpiri examples. In P. Muysken & H. van Riemsdijk (eds.), *Features and Projections* (pp. 233-254). Dordrecht, Foris.

Hale, K., & Keyser, S. J. (2005). Aspect and the Syntax of Argument Structure. In N. Erteschik-Shir & T. Rapoport (eds.), *The Syntax of Aspect: Deriving Thematic and Aspectual Interpretation* (pp. 11-41). Oxford:OUP.

King, J. C. (2001). *Complex Demonstratives: A Quantificational Account*. Cambridge, MA: MIT Press.

Klein, W. (1994). *Time in Language.* London: Routledge.

Kobayashi, K. (1987). A note on bare-NP adverbs. *English Linguistics*, *4*, 336-341.

Kobayashi, K. (1999). Another Approach to Bare-NP Adverbials as Nominals. *English Linguistics*, *16*(2), 353-380.

König, E. (1974). The semantic structure of time prepositions in English. *Foundations of Language*, *11*(4), 551-563.

Larson, R. (1985). Bare-NP adverbs. *Linguistic inquiry*, *16*(4), 595-621.

McCawley, J. (1988). Adverbial NPs: bare or clad in see-through garb?. *Language*, *64*(3), 583-590.

Milićev, T. & Bešlin, M. (in press). Instrumental: Why It is Absent from the Clitic System in Serbian/Croatian. In: V. Lopičić, B. Mišić-Ilić (eds.), *Jezik, književnost, teorija*. Niš: Faculty of Philosophy.

Pratt, I., & Francez, N. (2001). Temporal prepositions and temporal generalized quantifiers. *Linguistics and Philosophy*, *24*(2), 187-222.

Protopopescu, D. (2014). *A Syntactic Approach to Adverbs in English and Romanian: Temporal and Aspectual Adverbs*. Bucharest: Editura Universității din București.

Rákosi, G. (2008). Some remarks on Hungarian ethical datives. *When grammar minds language and literature*, 413-422.

Rapoport, T. (2014). Central coincidence: The preposition with. *Faits de langues*, *44*(2), 159-173.

Smith, C. (1991). *The Parameter of Aspect*. Dordrecht: Kluwer.

Stroik, T. (1992). On the distribution of temporal and locative NP adverbials. *The Linguistic Review*, *9*(3), 267-284.

Szucsich, L. (2001) Adjunct Positions of Nominal Adverbials in Russian. *Current Issues in Formal Slavic Linguistics, Frankfurt/Main*, 106-116.

Szucsich, L. (2002). Case licensing and nominal adverbials in Slavic. In J. Toman, (ed.), *Formal Approaches to Slavic Linguistics 10.* Michigan Slavic Publications, Ann Arbor.

Talmy, L. (1985). Lexicalization Patterns: Semantic Structure in Lexical Forms. In: T. Shopen (ed.), *Language Typology and Syntactic Description* (vol. 3, pp. 36-149). Cambridge: CUP

Todorović, N. (2016). On the Presence/Absence of TP: Syntactic Properties and Temporal Interpretation. Doctoral dissertation, University of Connecticut.

Verkuyl, H. J. (1973). Temporal prepositions as quantifiers. In F. Kiefer & N. Ruwet (Eds.), *Generative grammar in Europe* (pp. 582-615). Dordrecht: Springer

Woolford, E. (2006). Lexical case, inherent case, and argument structure. *Linguistic inquiry*, *37*(1), 111-130.