

Complex predicates in Bangla: An event-based analysis

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Abstract

This study analyzes complex verbal predicates in Bangla (Bengali) in an event structure based linguistic framework. This approach is based on a semantic syntactic mapping of the lexical verb and its argument structure. The two types of complex predicates in Bangla vary in terms of the type and number of events they represent. Verb Compounds (VCs) represent single events, while Serial Verb Constructions (SVCs) represent multiple events consecutive to each other. Though overtly similar in the linear order representation, the VCs and SVCs reflect different kinds of events. VCs look at sub-event levels of representation, namely inception, continuity and completion, while SVCs code multiple events. The syntax-semantics interface based event structure framework (Ramchand, 2002, 2004) is used to analyze these complex predicates as the sub-event phases of events.

Keywords: verb compound, serial verbs, event structure, semantics, Bangla (Bengali)

1 Introduction

The main objective of this study is to show that overtly similar complex predicates (verb compounds and serial verb constructions), which have different event structures at the predicate argument level, also have different event manifestations and behave differently with respect to syntactic tests. The event manifestations of telicity, causation and other aspectual functions are laid out by the event semantics, and different languages use different mechanisms to overtly express them. Bangla (Bengali, Indo-European) has bleached verbal morphemes that contribute to these aspectual interpretations as shown in verbal compounds (VCs). These complex predicates, along with serial verb constructions (SVCs), are analyzed in an event-based syntactic framework (Ramchand, 2004). This framework is used as it relates to verbs and their basic arguments at the core syntactic level, where the mapping of semantics to syntax is laid out. By ‘complex predicate’ we mean two or more verbs with their arguments that appear in a single clause. The verbs appear in a series and the clause boundary is determined by the tense and agreement marking on the final verb.

Bangla has two kinds of complex predicates: VCs, which are two-verb (V1V2) structures coding a single event, and SVCs, two (or more) verb (V1V2) structures representing two or more events. The restriction on verb complexes is that only one tense/aspect and person agreement marking is allowed per clause, always the final verb of

the sequence. In the case of VCs representing one single event, the core semantic content of the second verb in the series is bleached and the V2 contributes to the aspectual meanings like initiation, completion, benefaction and others. In SVC structures, all the verbs in the series retain their core meanings and the events denoted by the verbs follow each other sequentially.

In VC structures, two verbs appear next to each other without any intervening elements (e.g., adverbials, object NPs). Crucially, the two verbs together represent only one single event. There is a fixed set of 14 verbs (Paul 2004) that can function as the second verb (V2). V2s lose their core semantic content but impart other semantic notions like benefaction, completion, suddenness, inception and ongoing eventualities. In (1), the verb ‘eat’ is followed by the V2 glossed as ‘throw’, which loses its core meaning in this construction and instead imparts the notion of event completion.

- (1) *John aam-ta khe-ye phel-lo*
 John.NOM mango-CL¹ eat-PERF throw-PST.3PRSN
 ‘John ate the mango.’ (He finished the mango.)

In contrast, SVCs represent two or more sequential events in a single clause, again with only one tense and agreement marking on the final verb of the sequence. In both SVCs and VCs, the first verb (and subsequent verbs in SVCs) is marked by a perfective marker *-e*; the last verb is marked for aspect/tense and person agreement. Verbs in SVCs do not undergo any semantic bleaching and retain their meaning, each verb encoding a different event. In (2a), Mary performs two actions/events; she picks up the letter and keeps it (in another place).

- (2a) *Mary chithi-ta tul-e rakh-lo*
 Mary.NOM letter-CL pick.up-PERF keep-PST.3PRSN
 ‘Mary moved the letter and kept it’

However, in an SVC series, that has more than two verbs one of the events may be represented by two verbs that are a VC unit. In (2b), the V2 unit ‘keep-give’ is a VC by itself meaning keep away something completely.

- (2b) *Mary chithi-ta [tul-e]V1 [rekh-e di-lo]V2*
 Mary.NOM letter-CL pick.up-PERF keep-PERF give-PST.3PRSN
 ‘Mary moved the letter and kept it’.

Keeping these basic characteristics of VCs and SVCs in mind, and their similarities and differences in the overt constructions, we will test the two kinds of complex predicates for their syntactic behavior with respect to intervening object NPs, inflection marking, scope of adverbs and negation. Our claim is that VCs follow a strict verb adjacency principle, while SVCs are more flexible in that they allow optional intervening elements (object NPs, adverbs, overt coordination markers). However, in both VCs and SVCs, verbs share the same subject and there is only one tense and agreement marking on the final verb of the

¹ The following abbreviations stand for the corresponding morphological markers: CL=classifier, PERF= perfective, PRSN=person, 1=first, 2=second, 3=third, PST=past tense, PRES=tresent tense, FUT= future tense, NOM=nominative case, DAT=dative case, LOC=locative case.

series. We claim that their differences with respect to syntactic tests stems from the differences in the basic event structure at the syntactic-semantic interface level. The VC predicates are single events with sub-events of initiation, with ongoing and completed event predication overtly reflected in syntax, while the SVC structures are simply multiple sequential events in the same clause performed by the same subject.

The layout of this paper is as follows: in Section 2, we review the basic concepts and literature of event structure and telicity and their relevance to the Bangla complex predicates. In section 3, we lay out the detailed description of VCs in Bangla and their functions and in Section 4, we describe the SVC structures in detail. In Section 5, we test these two types of complex predicates with intervening object NP, inflections, adverb, in an hour /for an hours (Dowty, 1979) and other tests and show their behavioral differences with respect to these tests. In Section 6, we lay out the syntax for the VC and SVC constructions followed by the conclusion on Section 7.

2 Main issues

This study highlights the main difference between VCs and SVCs: VCs express single events whereas SVCs express more than one. Earlier studies claim SVCs and VCs are underlyingly similar, generated by a verb in a VP shell framework (Collins 2002, on Hoan). Though such analysis accounts for subject sharing, agreement marking, and adjacency, it fails to recognize that VCs represent single events and SVCs represent multiple events.

We have therefore adopted an event structure analysis, which highlights the sub-events of initiation, causation, completion (Pustejovsky, 1995). According to this framework, VCs are analyzed as a *single* event having overtly grammaticalized internal sub-events, whereas SVCs have *multiple* events in them. This difference will be highlighted in the following analysis. In addition, we will show that the event structure framework focusing on the first-phase syntax, where verbs and their arguments are realized at the semantics-syntax interface level, is so far the best suited framework to address this type of constructional anomaly.

2.1 Event structure

In this section, we lay out a basic description of events and their sub-event breakdowns and how languages may reflect them for linguistic comprehensibility. Event structure represents a semantic-syntactic mapping of verbs and their basic argument structures comprising of aspectual requirements needed to satisfy event-internal temporal stipulations of the core semantics of the verbs. Differences in event structure would be laid out in sets of verbs like ‘love’ and ‘kill’, where ‘love’ is a stative verb that dictates that the meaning holds true unless otherwise specified, whereas ‘kill’ is a dynamic verb where an agent is required to perform an overt action resulting in the death of some other living entity. Verkuyl (1993), Dowty (1979), and Smith (1997) propose basic event types. They distinguish between states (static events) and dynamic events. Vendler (1967) lays out a four-way typology comprised of states, activities, achievements and accomplishments. This classification is based on temporal duration, temporal termination, and internal temporal structure of the verb:

- *States* do not undergo any internal change during the period they exist (e.g. ‘hate’ in ‘John hates pizza’).
- *Dynamic events* include:
 - *Activities*: ongoing events with duration and temporal change but no endpoints (‘I walked along the beach’);
 - *Achievements*: instantaneous endpoints and no duration (‘Joan arrived at 5 o’clock’); and
 - *Accomplishments*: duration and also endpoints (‘I consumed the liquor’).

Pustejovsky (1992) uses a classification system comprising of states, processes, and transitions. A state (S) is defined as a single ongoing event without any internal transformations and is evaluated relative to no other event (e.g. love, is tall). A process (P) is a sequence of events identifying the same semantic expression, which if divided at any point will result in phases of the same event as the whole undivided event(e.g. *run, sleep*). A transition (T) identifies an event which undergoes a change and is evaluated relative to its opposition, and therefore has a final state that is different from its initial state. Pustejovsky points out that prior to the final state there is either a state (that is opposite of final state) or a process leading up to the final state.

The event semantics most relevant here are dynamic events, distinguished on the basis of their termination. Atelic events could continue indefinitely and do not have semantically specified endpoints (activities/processes and states). Telic events have specified endpoints (transitions: accomplishments and achievements).

We show that in Bangla, VCs represent the different event semantics of verbal predicates. Depending on V2, some represent telic *transitions* and others atelic *processes*.

2.2 Telicity in event structure:

Van Hout (2000) considers atelic events to be homogenous, that is, having no internal transitions or changes of state. She terms telic events as being heterogeneous, with transitions from one state to another state or from a process to a state (Figure 1).

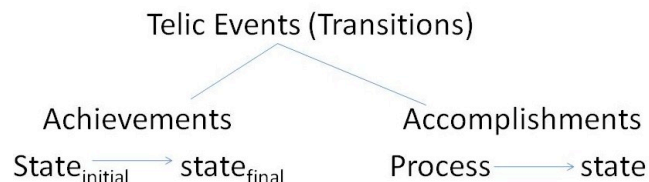


Figure 1. Heterogeneous telic events (Van Hout, 2000)

There are some English verbs that can appear in both telic and atelic contexts, for example ‘ran’ in ‘John ran to the store’ (telic) versus ‘John ran along the river’ (atelic). A number of factors, along with the lexical meaning of the verb, seem to play a role in determining telicity. Quantified internal arguments are said to play a very important role, rendering a telic reading. Van Hout (2000) and Borer (2002) posit a feature [+telic], present in syntactic structure, which is checked when a quantified/quantized NP is

present. This contrasts with Ramchand's (2004) claim that no strict correspondence exists between quantized internal arguments and [+telic]. According to Ramchand (2004), verbs are not obligatorily telic but can be interpreted as telic as a result of entailments triggered by the direct object and/or the final state in syntax. If the event endpoint is related to object's "material extent", a telic entailment will result. We agree with Ramchand that the mere existence of quantized NPs do not entail telicity as there are many instances in Bangla where the clause has a quantized object but is not telic (3). The object *boi* 'book' is quantized but the event is not telic. In (4a) the telic reading is present even without quantized NP.

(3) *John du ghonta dhore ek-ta boi por-che*
 John.NOM two hour for one-CL book read-be.2PRSN
 'John is reading one book for two hours'.

(4a) *Ami ek minit-e dudh khe-ye-chi*
 I.NOM one minute-in milk eat-PERF-BE.1PRSN
 'I drank milk in a minute'.

2.3 Complete and incomplete telic events

Another important factor for telic readings is the presence of 'path PP or location/goal' (e.g. 'John ran to the store'), which helps to get the telic reading. Telic events have semantic endpoints; reaching the endpoint is *completion* whereas failure is *incompletion*. Telic events can be terminated before reaching endpoints - *incomplete* - but they do have a potential *completion* point ('John ran to the store but Mary stopped him before he could get there'). In the following example (4b), the event of drinking up the milk, which is a telic event, was not completed as it was terminated by the intervention of another person calling.

(4b) *Ami dudh-ta khe-ye ni-chi-lam kintu o amake tokhon dak-lo*
 I.NOM milk-CL eat-PERF take-be-PST.1PRSN but he I.DAT then call-PAST.3PRSN
 'I was drinking up the milk, but he called me right then.'

3 Verbal predicate functions

In this section, we lay out the details of the aspectual functions of VCs in Bangla. We describe each class of V2s marking initiation, ongoing or completion of events with examples in detail and also show that each V2 can only be used with the main verb in isolation and two V2s cannot be clustered in a series.

3.1 VCs

On the basis of the existing literature on Bangla verbs (Paul 2004, Basu 2005) we know that V2s in VCs impart aspectual meanings of completion, benefaction, suddenness. In addition to these we propose that some of them also mark initiation, ongoing and completed telic sub-events. They render finer aspectual modifications to the single event readings and the following table lays out which verbs in V2 positions impart which type of meaning (Table 1).

| V2 | Original meaning | New meaning as V2 |
|------|------------------|--|
| phel | throw | Completion, clear endpoint |
| di | give | Completion, action directed to beneficiary |
| ni | take | Completion of action, self directed |
| por | fall | Resultative, suddenness |
| bosh | sit | Accomplishment of event, suddenness |
| uth | rise | Commencement of event |
| ja | go | Ongoing |
| tol | lift | Culmination |
| ash | come | Ongoing |
| chol | go | Ongoing |
| path | send | Ongoing |
| mor | futile | Ongoing |
| rakh | keep | Ongoing |
| bera | roam | Ongoing |

Table 1. Complete set of possible V2s in Bangla

From Table 2 we see that there are five V2s that mark event completion or telicity; there are seven ongoing markers but some are very restricted and used only in specific contexts as exemplified later. There are only two inception markers and they also focus on unexpected suddenness. This table shows what sub-event structure each V2 falls into.

| | phel | di | ni | por | tul | uth | bosh | path | rakh | ash | mor | chol | ja | bera |
|-----------|------|----|----|-----|-----|-----|------|------|------|-----|-----|------|----|------|
| endpoint | + | + | + | + | + | - | - | - | - | - | - | - | - | - |
| inception | - | - | - | - | - | + | + | - | - | - | - | - | - | - |
| ongoing | - | - | - | - | - | - | - | + | + | + | + | + | + | + |

Table 2. Target sub-events of V2s

3.1.1 Inception marker V2s

The two verbs *uth* 'rise' and *bosh* 'sit' mark the sudden, unexpected initiation of an event. In (5) and (6) the V2s impart the meaning of blurting out something unexpectedly.

- (5) *Ram kotha-ta bol-e uth-lo*
Ram.NOM words-CL say-PERF rise-PST.3PRSN
'Ram said those words (unexpectedly).'

- (6) *Ram kotha-ta bol-e bosh-lo*
Ram-NOM words-CL say-PERF sit-PST.3PRSN
'Ram said those words (unexpectedly).'

3.1.2 Ongoing marker V2s

The V2s impart meaning of ongoing repeated iterations of the same event over a period of time. Most of these verbs are semantically 'go' type motion verbs that mean something happening over a period of time. In (7), the event of talking goes on for a period of time and similarly in (8), the speaker mentions repeating some words over a period of time.

- (7) *Meye-ti kotha bol-e ja-cchi-lo*
girl-CL word say-PERF go-BE-PST.3PRSN
'The girl was going on talking'.

- (8) *Ami toma-ke kob-e theke bol-e ash-chi*
I.NOM you-DAT when from say-PERF go-be.PRES.1PRSN
'I have been telling you for a long time'.

3.1.3 Completion telic marker V2s

Lastly, the completed telic marking V2s also impart additional meanings of benefaction, self directed and other but only with *-ni-* and *-di-* as shown in the following examples. The other telic V2s are purely completion markers.

- (9) *Ram chithi-ta likh-e ni-lo*
Ram.NOM letter-CL write-PERF take-PST.3PRSN
'Ram wrote the letter (finished it for himself).'

- (10) *Mary kagoj-ta chur-e di-ye-che*
Mary.NOM paper-CL throw-PERF give-PERF-BE.3PRSN
'Mary has thrown the paper.' (other direction)

4 SVCs in Bangla

SVCs are complex predicate constructions that closely resemble VCs. Collins (1993; 1997a:462) defines SVC as “a succession of verbs and their complements (if any) with one subject and one tense value that are not separated by any overt markers of coordination or subordination.” The event denoted by the first verb is followed by the event of second/subsequent verbs; they share the same subject, but, unlike VCs, may have different objects. In the following example (11), the three verbs wash and eat have their own objects, hands, rice and water respectively.

- (11) *Ami haath dhuy-e bhaath khe-ye jol kha-bo*
I.NOM hands wash-PERF rice eat-PERF water eat-PST.1PRSN
'I will wash my hands, eat the rice, and then drink water.'

In (12) the forms for 'tear' and 'throw' appear consecutively, sharing subject 'Mary' and object 'letter', with tense marked on the second verb *phel*, a full verb and not a bleached V2.

- (12) *Mary chithi-ta chir-e mati-te phel-lo*
Mary.NOM letter-CL tear-PERF ground-LOC throw-PAST.3PRSN
'Mary tore the letter and threw it on the ground'.

The SVCs can have optional intervening elements (adjuncts) between them. In (13) there are no intervening element between the verbs, while in (14) the NP table intervenes between move and keep.

- (13) *Mary chithi-ta shor-iye rakh-lo*
Mary.NOM letter-CL move-PERF keep-PST.3PRSN
'Mary moved the letter and kept it'
- (14) *Mary chithi-ta shor-iye tebil-e rakh-lo*
Mary.NOM letter-CL move-PERF table-LOC keep-PST.3PRSN
'Mary moved the letter and kept it on the table'.

The crucial differences between SVCs and VCs are:

- (i) SVCs can have intervening constituents between the verbs, while VC verbs must be strictly adjacent.
- (ii) VCs represent a single event, while SVCs always represent more than one event.

As for the similarities, in both VCs and SVCs, the verbs share the subject, have tense marked on the last verb, and have non-final verbs marked by *-e-*, an aspectual marker. We lay out the basic claim in this study, that SVCs and VCs have different syntax at the event structure level and the following semantic/syntactic properties need to be remembered for each type.

- VCs:
 - Analyzed as single events having sub-events.
 - V1 + V2 together count as a single main Verb.
 - There is only 1 Tense and Person Agreement marking.
- SVCs:
 - Two or more events which may have sub-events.
 - A single complex VP with multiple main Verbs, including VCs.
 - There is only 1 Tense and Person Agreement marking.

5 Syntactic tests for VCs and SVCs

To establish that VCs and SVCs are syntactically different, we apply the following tests to both types of structures and lay out the diverse results.

- Intervening object NPs
- Intervening adverbs
- Intervening inflections
- Intervention and scope of negation
- Question formation

5.1 Intervening object NPs test

In all tests, VCs do not allow intervention between Vs whereas SVCs do. In the following examples, (15b) is ungrammatical because the object NP separates the two verbs.

(15a) *John apel-ta khe-ye ni-lo*
 John.NOM apple-CL eat-PERF take-PST.3PRSN
 'John ate up the apple'. (no apple remains)

(15b) **John khe-ye apel-ta ni-lo*
 John.NOM eat-PERF apple-CL take-PST.3PRSN

This is true for all fourteen V2s. Thus, VCs do not allow intervening NPs. However, SVCs do allow object NP intervention between the two verbs (16b).

(16a) *John aam ket-e khe-lo* (SUBJ OBJ V1 V2)
 John.NOM mango cut-PERF eat-PST.3PRSN
 'John cut the mango and ate it'.

(16b) *John aam-ta ket-e (o-ta) khe-lo* (SUBJ DO_i V1 DO_i V2)
 John.NOM mango-CL cut-PERF (that-CL) eat-PST.3PRSN
 'John cut the mango and ate it.'

SVCs can also have non-shared objects which can intervene between verbs (17, 18).

- (17) *John bari giye bhaat kha-be* (SUBJ DO_i V1 DO_j V2)
 John.NOM home go-PERF rice eat-FUT.3PRSN
 'John will go home and eat rice.'
- (18) *Ma ranna kor-e kaaj-e ge-lo* (SUBJ V+do [V1] NP-LOC V2)
 Mother.NOM cook do-PERF work-LOC go-PST.3PRSN
 'Mother cooked and went to work.'

5.2 No intervening inflection test

The VCs in (19a, b) are ungrammatical because there is an intervening inflectional marking (*chi-lo*, 'be-PAST') on V1. In true VCs, V1 can only get the perfective marker *-e* (Ramchand 2004). In Bangla, perfective marking in VCs is obligatory; an unmarked form would get an impossible imperfect reading.

- (19a) **John apel-ta khe-ye-chi-lo ni-lo*
 John.NOM apple-CL eat-PERF-PST.3PRSN take-PST.3PRSN
- (19b) **John apel-ta kha-be ne-be*
 John.NOM apple-CL eat-FUT take-FUT.3PRSN

Like VCs, SVCs allow only perfective *-e* marking between Vs. No other inflection is allowed between the two verb forms, as is true of V1 of the VC structures. All the verbs share one tense, which is marked at the end of the last verb of the sequence. The ordering of the events determines the ordering of the verbs. In (20a), Mary first said the words and then left.

- (20a) *Mary kotha-ta bol-e ge-lo* (SUBJ V1-PERF V2-PAST.3PRSN)
 Mary.NOM word-CL say-PERF go-PST.3PRSN
 'Mary said the words and left'.
- (20b) **Mary kotha-ta bol-lo ge-lo* (SUBJ V1-PAST.3PRSN V2-PAST.3PRSN)
 Mary.NOM word-CL say-PST.3PRSN go-PST.3PRSN

This structure is also correct with an overt coordination or subordination marker. But in such a case, the first verb *bol-lo* 'say-PAST.3' would also be marked for tense/person as in example (21). This is not an SVC but two adjoined clauses.

- (21) *Mary kotha-ta bol-lo tarpor/aar ge-lo*
 Mary.NOM word-CL say-PST.3PRSN then/and go-PST.3PRSN
 'Mary said the words and/then left'.

5.3 Intervening adverbs between the V1 and V2

Adverbs that modify VCs must come before or after the VC (22a); they cannot intervene between the Vs (22b). Also, adverbs modify the whole compound and cannot have narrow scope over V2 only.

(22a) *John apel-ta taratari khe-ye ni-lo*
 John.NOM apple-CL quick eat-PERF take-PST.3PRSN
 'John quickly ate up the apple.'

(22b) **John apel-ta khe-ye taratari ni-lo*
 John.NOM apple-CL eat-PERF quick take-PST.3
 'John ate the apple (quickly finished it).'

In SVCs, adverbs modify events depending on location in the construction. In (23a) the adverb *taratari* 'quickly' modifies both tearing and throwing. In (23b) an adverb is located between 'tear' and 'throw', and thus only modifies the lower VC, the action of throwing. If it occurs before 'tear,' it would modify both actions. The adverb before the lower verb has narrow scope and the adverb before the higher V has wide scope.

(23a) *Mary chithi-ta taratari chir-e phe-le di-lo*
 Mary.NOM letter-CL quick tear-PERF throw-PERF give-PST.3PRSN
 'Mary quickly tore the letter and threw it away.'

(23b) *Mary chithi-ta chir-e taratari phel-e di-lo*
 Mary.NOM letter-CL tear-PERF quick throw-PERF give-PST.3PRSN
 'Mary tore the letter and quickly threw it away.'

Adverbs like *praye* 'almost' seem to scope over the lower VP, which represents the core event. The 'almost' test works for VCs only with wide scope (24b), not narrow (24a).

(24a) **John apel-ta khe-ye praye phel-chi-lo*
 John.NOM apple-CL eat-PERF almost throw-BE-PST.3PRSN

(24b) *John apel-ta praye khey phel-chi-lo*
 John.NOM apple-CL almost eat-PERF throw-BE-PAST.3PRSN
 'John almost ate the apple (he did not start eating).'

The scope of the adverb 'almost' changes depending on where it appears in the sentence. In (25a) the action of tearing almost began but did not start; in (25b) the tearing took place but the throwing did not; 'V1 V2 almost V3' is ungrammatical (25c). This gives clear evidence that there are two separate VPs in SVCs that are linked together.

(25a) *Mary chithi-ta pra-ye chir-e phe-le di-cchi-lo*
 Mary.NOM letter-CL almost tear-PERF throw-PERF give-BE-PST.3PRSN
 'Mary almost tore the letter and threw it away.'

(25b) *Mary chithi-ta chir-e pra-ye phel-e di-chchi-lo*
 Mary.NOM letter-CL tear-PERF almost throw-PERF give-BE-PST.3PRSN
 'Mary tore the letter and almost threw it away.'

- (25c) **Mary chithi-ta chir-e phel-e praye di-lo*
 Mary.NOM letter-CL tear-PERF throw-PERF almost give-PST.3PRSN

5.4 Negation Test

In simple sentences, the negative particle *na* follows the tensed verb in Bangla.

- (26) *Ami kha-bo na*
 I.NOM eat-PST.1PRSN NEG
 'I will not eat.'

The negation particle cannot intervene between Vs in VCs (27a), nor can VCs with telic markers be negated as in (27b), because once completion is marked, negating the truth value of a completed event is ungrammatical.

- (27a) **John apel-ta khe-ye na ni-lo*
 John.NOM apple-CL eat-PERF NEG take-PAST.3PRSN
 'John didn't eat the apple.'

- (27b) **John apel-ta khe-ye ni-lo na*
 John.NOM apple-CL eat-PERF take-PAST.3PRSN NEG
 'John didn't eat the apple.'

The SVC can be negated (28a), meaning Mary did not tear or throw the letter. To negate an SVC partially, a pause can be inserted between the two verbs 'tear' and 'throw' and then NEG would have scope only over the lower V (28b). I would like to point that although the VC in (27b) cannot be negated but the VC of the second event in (28a-b) can be negated. This is because in (27b) the event is marked for past tense, so the event is read as a completed perfective event. Since, the completion is already reached there is no way to negate the telic endpoint achievement that is entailed by the VC along with the past tense marker. In (28a-b) the V2s are marked only as perfective but not as past. The sentences do not overtly mark completion but only indicate potential 'reaching the telic endpoint achievement', so it is possible to negate the VC, or rather terminate the action before the endpoint is reached. The semantic stipulations that rise out of the interaction with perfective aspect and past tense create this kind of discrepancy with the scope of negation on these structures.

- (28a) *Mary chithi-ta chir-e phel-e dey ni*
 Mary.NOM letter-CL tear-PERF throw-PERF give-3PRSN NEG
 'Mary did not (tear the letter and throw it away).'

- (28b) *Mary chithi-ta chir-e, phel-e dey ni*
 Mary.NOM letter-CL tear-PERF throw-PERF give.3PRSN NEG
 'Mary tore the letter and did not throw it away.'

5.5 The question formation test

Since VCs form a single event unit, question formation tests do not allow partial question extraction from the V1V2 unit as shown in (29b) and (29c). In (29b), the question formation on the V2 is not grammatical. In (29c), just questioning the V1 without the V2 is ungrammatical in a sentence where the V2 is already present. The correct question would be formed as in (29d), where the entire V unit is questioned.

- (29a) *Ram apel-ta khe-ye phel-lo*
Ram.NOM apple-CL eat-PERF throw-PST.3PRSN
'Ram ate up the apple.'
- (29b) **Ram apel-ta khe-ye ki kor-lo?*
Ram.NOM apple-CL eat-PERF what do-PST.3PRSN
- (29c) **Ram apel-ta ki kor-e phel-lo?*
Ram.NOM apple-CL what do-PERF throw-PST.3PRSN
(for 'What did Ram do (completive)?')
- (29d) *Ram apel-ta ki kor-lo?*
Ram.NOM apple-CL what do-PAST.3PRSN
'What did Ram do with the apple?'

However, with SVCs each of the verbal units can be singled out and questioned separately as shown in (30b) and (30c). Since (30a) has two different events of eating followed by going somewhere, each event can be questioned separately.

- (30a) *Tumi khe-ye esh-o*
You.NOM eat-PERF come-2PRSN
'You eat and come.'
- (30b) *Tumi khe-ye ki kor-be?*
You.NOM eat-PERF what do-FUT.2PRSN
'What will you do after eating?'
- (30c) *Tumi ki kore ash-be?*
You.NOM what do-PERF come-FUT.2PRSN
'What will you do before coming?' (lit. 'What will do and come?')

Hence, from the above tests, we see that VCs form a single event unit and show the properties of strict adjacency, while SVCs behave differently and allow intervening elements (e.g., object NPs and inflectional particles), suggesting that they are separate syntactic units. The following section lays out the syntactic event structure trees for VCs and SVCs.

6 Syntactic representation

We follow Ramchand's (2004) analysis of the first phase event structure and discuss the verbs and their assigned arguments from this perspective. This approach enables us to clearly lay out the semantic-syntactic interactions of the verbal predicate. This framework does not correspond to the linearly ordered syntax of sentences, but the sub-atomic level of events are represented. There is a light verb in Ramchand's framework, which she analyses as initiator/causer. Here we have renamed this as $V_{\text{INITIATORP}}$ (V_{IP}) and the regular VP as $V_{\text{UNDERGOER P}}$ (V_{UP}) after the roles of their arguments. Process events have initiation but no overt endpoints as shown in the tree in Figure 2.

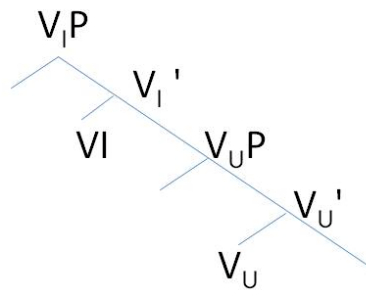


Figure 2. Events with overt initiation

From Ramchand's analysis, V_{UP} can combine with the last sub-event, which has a final endpoint, V_{RESULTP} (V_{RP}) to create a telic pair (Figure 3).

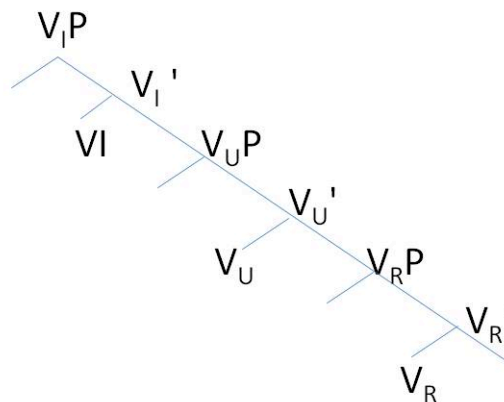


Figure 3. Events with endpoints (telic)

6.1 VCs

Bangla VCs code a single event that is subdivided internally. V2s focus on three possible kinds of sub-events: endpoints, processes, and inceptions. VCs have V_{IP} and V_{UP} , and those with telic V2s also have V_{RP} :

- Beginning/inceptive VCs have V_IP and V_UP
- Ongoing action VCs have V_IP and V_UP
- Telic completed VCs have V_IP and V_UP and V_RP

In (31) V2 marks the inception of singing but the event is atelic; there is no V_RP. The syntactic tree for this structure is represented in Figure 4.

- (31) *Ram gaan ge-ye uth-lo*
 Ram.NOM song sing-PERF rise-PST.3PRSN
 ‘Ram started to sing the song.’

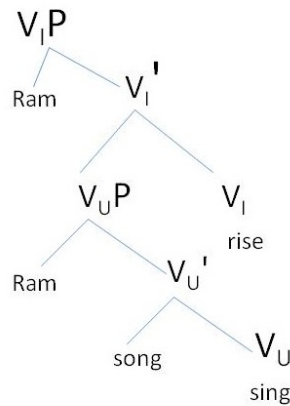


Figure 4. Atelic Bangla VC focusing on inception

In (32) (Figure 5), V2 *ja* ‘go’ focuses on ‘ongoing action’ which lacks V_RP. The adverbial *kobe theke* could appear before the dative object, subject or after the verb (pragmatically determined). Since the event is read a quantified ongoing occurrence, I project an aspectual event quantifier phrase just above V_IP. This QP analysis would be applicable for all V2s that render the meaning of ongoing eventuality.

- (32) *Ami toma-ke kobe theke bol-e ja-chch-i*
 I.NOM you.DAT when from say-PERF GO-be-PRES.1PRSN
 ‘I have been telling you for a long time’.

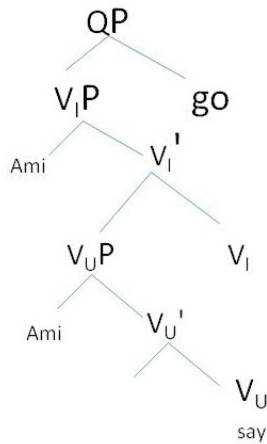


Figure 5. VC focusing on ongoing action

In telic VCs, V2 focuses on event endpoints (33). The V2 *phel* selects for V_{RP} as light verbs are responsible for adding telicity. The initiator is the subject, but what is initiated is the completion. The final state that is achieved is described by V₁, which is overtly present in V_{RP} (Figure 6).

- (33) *Ram chithi-ta likh-e phel-lo*
 Ram.NOM letter-CL write-PERF throw-PST.3PRSN
 ‘Ram wrote (finished) the letter.’

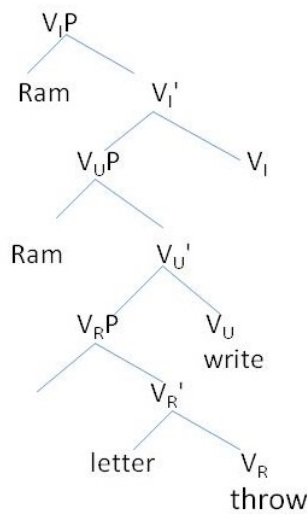


Figure 6. VC focusing on endpoint

6.2 SVC trees

In SVCs, all the verbs share the same subject, which is generated in what I call V_{COMPLEXP}. The verbs are sequenced to follow the temporal order of the events. In the following, the event of ‘eating’ takes place before ‘going home’. The tense is marked at the end of the last

event. Each event is marked by *-e* which indicates termination of one event and start of the next. There could be further internal sub-event complexity, but I avoid this and use only simple two-event constructions.

- (34) *Ami khabar khe-ye bari ash-chi*
 I.NOM food eat-PERF home come-BE.1PRSN
 'I will eat and then come home.'

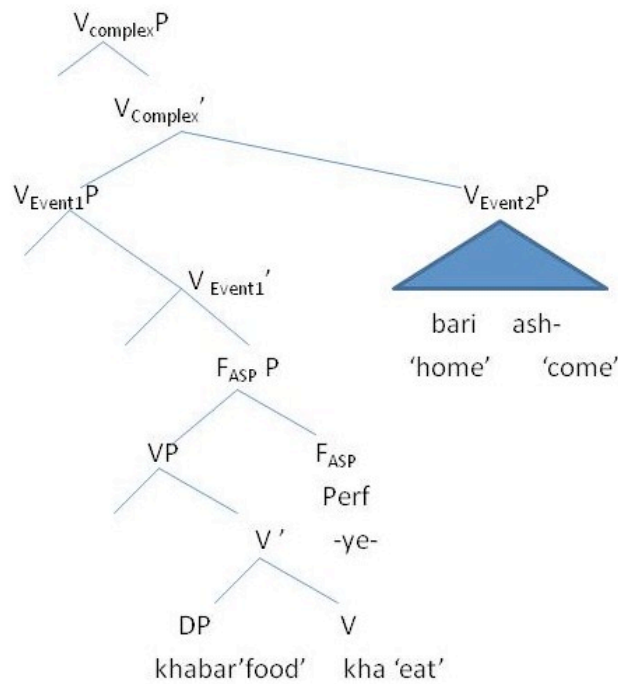


Figure 7. Syntax tree for SVC structures

SVCs differ from conjoined clauses, which have two TPs (35; Figure 8), and tense is marked on both Vs.

- (35) *Ami khabar kha-bo tarpor bari ja-bo*
 I.NOM food eat-FUT.PRSN then home go-FUT.1PRSN
 'I will eat food and then go home'.

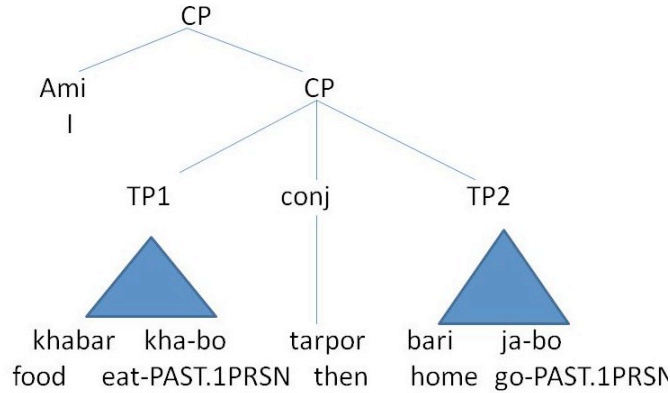


Figure 8. Conjoined clauses

Furthermore, conjoined clauses can have different subjects, while SVCs cannot. In (35) the subject in the second clause is phonologically empty because it is already established in the discourse by the first clause.

7 Conclusions

It can be seen from the above analysis that VCs and SVCs behave in syntactically different manners in Bangla. The VCs focus on parts of an event, namely the inception, continuation, or endpoint of the event. VCs code only single events, while SVCs represent more than one event. In terms of standard syntactic tests, VCs require strict adjacency while the SVCs allow intervening NPs and adverbs. There are two main commonalities between VCs and SVCs. One is that both verbs share the same subject. The second is that the last verbal element in the sequence carries the tense/aspect/person inflectional markings.

The event-based analysis presented herein accounts for the different targets of the V2s, namely the inception, ongoingness, and endpoint of the events, by mapping them onto V_{IP} (with overt initiation/causation), V_{UP} (for all V2s), and V_{RP} (only for V2s that focus on the endpoints) in the syntactic trees. This reflects the fact that the single event is in fact two or three distinct sub-events which focus on three possible temporal phases in the events: beginning, middle and end. This model also reflects that SVCs generate their events separately and then merge them higher up in the tree in what we have labeled $V_{COMPLEXP}$. It allows for the sequential ordering of the events in a single clause as long as they share the same subject.

To conclude, this approach has accounted for the differences between the two kinds of Bangla verbal predicates and allows a strong semantic-syntactic mapping between overt structure and semantic content.

References

- Butt, Miriam, King, Tracy Holloway, and Ramchand, Gillian, eds. 1994. *Theoretical Perspectives on Word Order in South Asian languages*. Stanford, California: CSLI Publications.
- Butt, Miriam, and Ramchand, Gillian. 2002. *Complex Aspectual Structure in Hindi/Urdu*. UMIST, Oxford University.
- Chatterjee, Suniti Kumar. 1926. *The Origin and Development of Bengali Language*. Allen and Unwin, London.
- Collins, Chris. 2002. Multiple Verb Movement in Hoan. *Linguistic Inquiry*. Volume 33. No.1. 1-29.
- Pustejovsky, James. 2000. Events and Semantics of Opposition. *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Ed. by Carol Tenny and James Pustejovsky. 39-96. Stanford, CA: CSLI Publications.
- Ramchand, Gillian. 1997. *Aspect and Predication: the semantics of argument structure*. Clarendon Press. Oxford.
- Ramchand, Gillian. 2004. *First Phase Syntax*. Oxford University Press.
- Ramchand, Gillian. Forthcoming. Two Types of Negation in Bengali. *Clause Structure in South Asian Languages*. V. Dayal & A. Mahajan (eds.). Dordrecht: Kluwer.
- Tenny, Carol. 2000. Core Events and Adverbial Modifications. *Events and Semantics of Opposition. Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Ed. by Carol Tenny and James Pustejovsky. 39-96. Stanford, CA: CSLI Publications.
- Tenny, Carol., and Pustejovsky, James. 2000. A History of Events in Linguistic Theory. *Events and Semantics of Opposition. Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Ed. by Carol Tenny and James Pustejovsky. 39-96. Stanford, CA: CSLI Publications.
- Travis, Lisa. 2000. Event Structure in Syntax. *Events and Semantics of Opposition. Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Ed. by Carol Tenny and James Pustejovsky. 39-96. Stanford, CA: CSLI Publications.
- Van Hout, Angelik. 2000. Event semantics and Lexicon Syntax Interface. *Events and Semantics of Opposition. Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Ed. by Carol Tenny and James Pustejovsky. 39-96. Stanford, CA: CSLI Publications.