On clausal complementation in Kannada light verbs

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Abstract

Abstract: As a case study of an S-selection based system in which predicates select complements based on their semantic rather than morpho-syntactic properties, we carry out an investigation of clausal complementation within light verb constructions in Kannada. In particular, we establish that clause-embedding predicates in Kannada follow a three-way semantic distinction that has previously been proposed as a cross-linguistic typological universal by Rochette (1988) and Wurmbrand & Lohninger (2019). We also provide syntactic analyses for the infinitival and participial complements commonly selected by Kannada light verb predicates. The infinitival complements are shown to be obligatorily restructured arguments to the light verb, while participial complements are analyzed as optionally restructured arguments to the predicate nominal within the light verb construction. In doing so, we argue against the claim that clausal complements to nouns are restricted to adjunct-only status (e.g., Moulton 2009), with our arguments drawing in part upon Grimshaw & Mester's (1988) *Argument Transfer* hypothesis in light verb constructions.

Keywords: S-selection, clausal complementation, light verb constructions, restructuring, deverbal content nouns, argument selection, Kannada.

1 Introduction

In this paper, we present novel data pertaining to complex[1] light verb constructions in the Dravidian language Kannada, which bears on the issue of cross-linguistic clausal complementation. Specifically, we present evidence in favor of the idea that complementation is driven primarily by semantic rather than syntactic factors. Complex light verb constructions in Kannada are shown to instantiate the basic thesis of semantic selection that certain semantic classes of predicates combine with certain semantic complement types—despite variation in the morpho-syntactic forms of these complements. We find instances in this data that verify both of the central predictions made under theories of semantic selection, as stated below (Grimshaw, 1979):

1. Complements of different semantic types are selected by different predicates.
2. Complements of the same semantic type are selected by the same predicates.

We moreover establish that the semantic complementation paradigm followed by the Kannada complex light verbs fits the 3-way split posited recently by Wurmbrand and Lohninger (2019), as well as an older classification paradigm proposed by Rochette (1988) that is stated differently from but is consistent with the one proposed in Wurmbrand and Lohninger (2019).

We then provide syntactic analyses for two (of the three) types of morpho-syntactic complements selected by clause-embedding light verb constructions in Kannada: the *infinitival* complement, and the *participial* complement[2]. The infinitival complements are shown to be obligatorily restructured arguments to the verb (following Agbayani and Shekar (2007)), while the previously unstudied participial complements are analyzed as optionally restructured arguments to the nominal head within the light verb construction. As a part of justifying this latter analysis, we draw upon Grimshaw and Mester (1988)'s *Argument Transfer* hypothesis to argue against Moulton (2009)'s claim that clausal complements to content nouns are restricted to adjunct status.

The rest of this section is structured as follows. In §1.1, we provide some background on the two most prominent theories of clausal complementation that have been discussed in the literature: C(ategory)-selection and S(emantic)-selection. §1.2 introduces two specific instantiations of an S-selection based theory—one from 1988 by Rochette, and another more recent one from 2019 by Wurmbrand & Lohininger. These two proposals are in fact equivalent to each other, differing only in terminology and the level of abstraction at which the semantic factors are considered. This provides the necessary set-up to later sections of the paper, where we argue that the Kannada light verbs data also fits with either of these paradigms. We close the section by providing an outline of the rest of the paper.

1.1 S-selection *vs.* C-selection

The main debate within the literature on clausal complementation concerns the mechanism by which the properties of an embedding predicate determines the (syntactic or semantic) properties of the complement, or vice versa[3]. There are two main views with respect to how this

[1] We term a light verb construction *complex* if it selects a clausal or clause-like (content) argument.

[2] The third type of complements selected by these light verb complexes are finite clausal complements containing complementizer *anta*. We do not separately discuss the syntactic structure of these complements here; instead we take all of these constructions to be headed by a CP (Amritavalli, 2013).

[3] The idea that verbs select their complements has been more influential than the converse in which embedded complements determine properties of embedding verbs; but see Moulton (2009) for a defense of the latter view.

occurs. Under the first, traditional view (Bresnan, 1972; Chomsky, 1973), known as C-selection or Subcategorization, the verb selects for the syntactic category of the complement that it combines with. Under the competing view known as S-selection, first proposed by Grimshaw (1979), the verb selects instead for the semantic properties of the clausal complement.

A set of sentences that are better accounted for under a theory of C-selection than S-selection is shown below in (1)-(4). Both verbs *ask* and *wonder* select for complements that denote questions. However, *ask* is grammatical with questions expressed as either constituent questions (CPs) or concealed questions (DPs), while *wonder* is compatible with CPs alone. This pattern is unexpected under a theory that posits that both *ask* and *wonder* select for the semantic complement type of "questions", regardless of its syntactic form (i.e., S-selection). Instead, there seem to be constraints specified on the structure of the complement selected by each verb over and above satisfying the criterion of being a question, as predicted under C-selection.

(1) I asked John what the time was.

(2) I asked John the time.

(3) I wondered what the time was.

(4) *I wondered the time.

On the other hand, focusing on (1)-(2) while ignoring (3)-(4) highlights the redundancy involved in listing both CP and DP complements as being potentially compatible with the verb *ask*. This specification is further complicated by the observation that not just any DP can act as a valid complement to this verb, as indicated by the ungrammaticality of (5). Only those DPs are allowed that represent concealed questions. In the case of *ask* then, it does seem to work better to simply say that it selects for complements having the semantic type of *questions*—a characterization consistent with S-selection, but disallowed under C-selection.

(5) *I asked John Mary.

A consideration of such factors led Grimshaw (1979) to the intermediate view that both C-selection and S-selection are independently necessary to account for complementation patterns (in English)[4]. A more extreme view favoring S-selection was subsequently taken by Pesetsky (1982), who claimed that it is possible to explain the English complementation data even while doing away altogether with C-selection. Instead, he proposed that it is the Case-assigning properties of the verbs that S-select for questions that are responsible for whether or not concealed DP-questions are allowed as complements (i.e., *ask* assigns Case and can hence take DPs, while *wonder* does not assign Case thereby disallowing DP-complements). Ultimately though, Pesetsky admits for some idiosyncratic "syntactic residue" which is not completely explained by S-selection alone.

Following Pestesky, there have been several other proponents of theories based primarily on S-selection. For instance, Rochette (1988) proposed that any sentential complement can be identified as being one of three types of semantic entities (*actions*, *events* or *propositions*),

[4]To deal with problems of over-generation—for e.g., cases like *wonder* where S-selection would predict that it is compatible with concealed question DP-complements—Grimshaw (1981) invokes the idea of **C**anonical **S**tructure **R**ealization (CSR) in which certain semantic types of clauses map most readily onto a certain structural realization. For instance, questions map most readily to CP. In the absence of any evidence, a verb selecting for questions is only taken to license the CSR (CP) by a child learner. The learner posits concealed DP-questions as a possible argument to *ask* only in light of further positive evidence. This avoids, as desired, the existence of verbs that select for questions only in the form of DPs but not CPs.

such that verbs—which themselves belong to one of three semantic types (*effective*, *emotive* or *propositional*)—select for one of the three types of complements. A second type of 3-way semantic classification of embedding predicates is given in Wurmbrand and Lohninger (2019). Here, embedding verbs once again belong to one of three classes (*Tenseless*, *Irrealis* or *Attitude*), each of which selects complements consistent with certain semantic properties but not others. Despite the variation in terminology, what is common to both these approaches (as discussed in more detail in §1.2) is the idea that it is not only the embedding predicate but also the embedded sentential complement that is associated with semantic propertie—see also Moulton (2009), and that a predicate-complement pair is grammatical when the semantics of these two entities are compatible with each other regardless of the specific morpho-syntactic properties of the complement clause. One important goal of the current paper is to establish the equivalence between Rochette's and Wurmbrand & Lohninger's paradigms, and show that complex light verb constructions in Kannada exhibit properties compatible with such a 3-way classification.

1.2 3-way semantic classification of predicates and complements

Here, we discuss the semantic classification of predicates and complements proposed in Rochette (1988) and in Wurmbrand and Lohninger (2019), which we see as essentially being equivalent to each other modulo differences in terminology. In Section 3, we will discover that the combined properties of the classification scheme proposed by these authors also fit the Kannada light verbs data well.

Following Long (1974), Rochette (1988) defends a version of S-selection in which embedding predicates are taken to belong to one of three "natural semantic classes", namely *effective* predicates, *emotive* predicates, and *propositional* predicates. Each class is said to select for a different type of complement: actions (realized as VPs) are selected by *effective* predicates, events (realized as TPs) are selected by *emotive* predicates, and propositions (CPs) are selected by *propositional* predicates. In a similar vein, Wurmbrand and colleagues (Wurmbrand 2017; Wurmbrand & Lohninger 2019) have more recently put forth the idea of an implicational hierarchy of complements, where they propose a 3-way semantic split in the "restructuring signatures" of predicates as a potential linguistic universal. Once again, according to this idea, predicates that select for clausal complements fall into one of three categories: *Tenseless*, *Irrealis*, or *Attitude* predicates. These predicates types also differ from one another with respect to the semantic properties of the complements that they select.

The *effective* or *Tenseless* predicates are exemplified by aspectual verbs like *begin* and *end*, and causal verbs such as *try* and *force*. In essence, what these predicates have in common is that they describe the subject's relationship to the performance of a particular *action*. For instance, (6) conveys a causal relationship between the subject of *try* (George) and the action indicated by the infinitival complement (the act of sleeping).

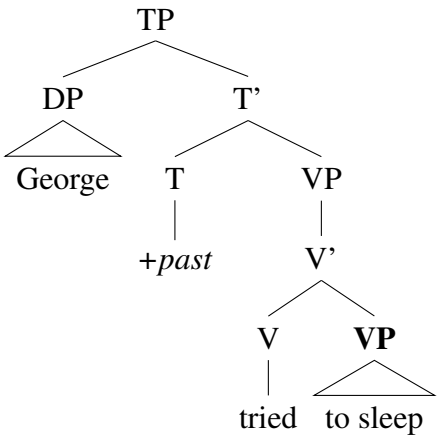
(6) George tried to sleep.

These predicates are said to be capable of combining with sentential complements that denote actions only (Rochette, 1988), as opposed to those that denote events or propositions. Actions are differentiated from events in that only the latter are associated with an independent time of occurrence—in this sense, actions can be thought of as "reduced events". Given the lack of an independent time specification, the embedded complement is interpreted as occurring at the same time as the matrix clause event. For instance, the act of sleeping in (6) is understood to

occur at the same time (in the past) as the trying event. As shown in (7), it is ungrammatical to attempt to separate the time of the embedded clause event from that of the main clause event by adding an inconsistent temporal adverbial phrase. Given the lack of independent tense specification, the structural realization of the embedded complement in (6) is headed by a V head (or little *v*, rather than T or C)[5]. Action complements are thus "restructured" in the sense of Wurmbrand (1998; 2004). The tree corresponding to (6) under this analysis would resemble the monoclausal structure in (8). Note that an overt embedded subject is also not licensed—a natural consequence of the absence of a nominative Case checking finite TP.

(7) *John tried to go to the mall next week.

(8)



The second type of clause-taking predicates are the *emotive* predicates such as *want*, *prefer*, *promise* or *decide*, which Rochette describes as predicates that are usually used to express the matrix subject's inclination or disinclination towards a particular *event*. These correspond closely with predicates classified as *Irrealis* under Wurmbrand and Lohninger (2019)'s paradigm. An example of a sentence that contains this type of predicate is shown in (9). Here, despite the complement being infinitival like in the case of *Tenseless* predicates, it represents an event (rather than an action or proposition), and may be paraphrased as follows: "Danielle is positively inclined towards the occurrence of an event in which Sarah comes home".

(9) Danielle wanted Sarah to come home.

With these predicates, the embedded clause eventuality has restricted tense. It can be interpreted to occur in the future of the main clause event, however no other tense interpretation is allowed. This behavior is shown in the example sentences below. In (10), a future adverbial modifying the embedded verb is acceptable. However, a past adverbial (relative to the main clause event) in (11) is ungrammatical.

(10) John wanted to go to the mall next week.

(11) *Yesterday, John wanted to go to the mall last week.

This observation has two consequences for the structure of (9). First, since the embedded complement may occur at a time other than the matrix predicate, a TP projection must be posited. Second, given that the embedded predicate is necessarily future-oriented, the T-head

[5]As Wurmbrand & Lohninger (2019) discuss, there are a few exceptions to this cross-linguistically. In languages like Greek, even Tenseless predicates are known to appear with overt clause markers suggesting that the complement is a CP.

within the TP projection is restricted to carry the feature [+*future*] (or [+*irrealis*]) only. Taken together, these consequences lead us to expect a structure in which the maximal projection in the embedded complement is a restricted TP. Note that the lack of unrestricted tense feature renders the embedded T "defective" and incapable of checking nominative Case in a sentence like (9), thus disallowing overt embedded subjects.

There can however be exceptions to this generalization, as shown in (12) and (13) with the predicates *decide* and *regret* respectively. Some *emotive* predicates can combine with embedded complements realized as finite CP projections containing overt complementizers. Despite the complements being finite in such exceptional cases, Rochette argues that they are still *events* and not *propositions*, and therefore do not count as exceptions to the idea that complements are S-selected. This is because propositions are associated with undecided/at-issue truth values, but these complements have truth values that are either undefined—as in (12), or presupposed—as in (13). Alternatively, we may simply think of these predicates as lying in between the emotive predicates and propositional predicates on the semantic spectrum of clause-embedding predicates. This view is in line with what Wurmbrand and Lohninger (2019) say regarding *Irrealis* predicates: these are intermediate categories that in many languages tend to have a more complex distribution of complements and are often only optionally restructuring, in that they may also occur with finite complements with overt complementizer *that*.

(12) John decided [that he would go to college].

(13) John regrets [that Sarah had gone to the party with Bill].

Finally, *propositional* or *Attitude* predicates such as *think*, *hear*, *say*, *believe* etc. only select sentential complements that denote propositions. An example is shown in (14), where the complement "John loves Mary" is a declarative proposition having a truth-value that is independent of Sarah's beliefs. Here, the embedded clause event can have a temporal reference that is independent of the main clause event. Given that illocutionary properties such as declarations are encoded within the CP projection, the embedded complements in (14)-(15) are thought to be associated with the highest projection CP. The complements of such predicates are almost never restructured.

(14) Sarah believes [that John loves Mary]$_{\text{CP}}$.

(15) John heard yesterday [that Mary had gone to the mall last week]$_{\text{CP}}$.[6]

In sum, Rochette's thesis about the categorization of predicate-complement types as well as Wurmbrand and Lohninger (2019)'s implicational hierarchy of complementation both claim that predicates come in three different types, categorized by the interpretive properties of the complement that they select: e.g., relative time of the complement and existence of an independent external argument. The differences in the semantic type of the embedded complements are usually mirrored by differences in their syntactic structure. Specifically, the highest projection associated with each complement type varies (VP, TP, CP).

1.3 Structure of the paper

The rest of the paper is structured as follows. In Section 2, we introduce the main data of interest in Kannada—i.e., complex **L**ight **V**erb **C**onstructions (henceforth, LVCs) and the dis-

[6]Note that omitting the complementizer *that* makes the sentence ungrammatical, further emphasizing the point that the complement must be a CP projection.

tributions that they appear in. Section 3 takes up the project of establishing that the 3-way split in predicate-complement types proposed by Rochette (1988) and Wurmbrand and Lohninger (2019) also exists within the Kannada complex light verb data. Section 4 presents an interim summary, highlighting particularly the specific instances within the data so far discussed that favor a theory of S-selection for clausal complementation.

Following this, in Section 5 and 6, we discuss syntactic structures for two types of complements selected by LVCs in Kannada: the *infinitival* complements and the *participial* complements respectively. Infinitival complements in Kannada have previously been analyzed as restructured complements by Agbayani and Shekar (2007). Our contribution here is to refine the syntactic analysis provided by these authors that is driven by insights from the LVC data. Participial complements in Kannada have to the best of our knowledge not been previously discussed in the literature. A detailed investigation of the properties of such participial complements leads to three main findings: (i) first, participial complements may also be associated with reduced clausal structures, (ii) second, they are nominal complements that attach to the nominal head within the LVC, (iii) third, they are arguments (not adjuncts) to the predicate nominal within the LVC. Each of these insights interacts with previously made theoretical claims, either imparting additional evidence in their favor or counteracting them—for e.g., saying that participial complements are arguments of the LVC nominals goes against Moulton's (2009) claim that content nominals do not select clausal arguments, and showing the existence of LVCs in which the nominal is associated with an overt argument lends support to Grimshaw and Mester (1988)'s *Argument Transfer* hypothesis. Section 7 summarizes the main contributions of the paper and concludes.

2 Data of interest: LVCs in Kannada

Light verb constructions are very productive in Kannada. Many clause embedding predicate nominals, e.g., *thought*, *decision*, *force*, *try*, *desire*, combine with light verbs such as *do* (most common), *put* or *give* to form complex LVCs (meaning *to think*, *to decide*, *to force*,..., and so on). In this section, we introduce a range of data pertaining to clausal complementation in complex LVCs in Kannada.

While there exist other clause-embedding lexical verbs that we could have potentially investigated to study clausal complementation, we restrict ourselves to LVCs here because they exhibit a wider range of complementation strategies in Kannada. Unlike lexical verbs, LVCs are capable of combining with *participial* complements (introduced in §2.2), which need to be licensed by a nominal element (evidence for this claim is provided in §6.2). Such a licensing noun is absent in lexical verb constructions, but available in LVCs in the form of the nominal head within the LVC. The existence of such participial complements that in many ways form a morpho-syntactic minimal pair with infinitival complements proves to be convenient as a way to demonstrate a basic prediction made under a theory of S-selection: i.e., that an embedding predicate may select for complements that differ in their morpho-syntactic forms as long as they resemble each other in their semantic properties.

Below, we introduce three types of LVCs in Kannada, classified on the basis of the surface forms of the embedded complements[7].

[7]Note that this classification is based simply on the surface forms of the complements embedded under the LVCs, and this is *not* the 3-way semantic typology. That follows in Section 3.

2.1 Infinitival LVCs

In one of their distributions, Kannada complex LVCs select for infinitival complements, i.e., complements in which the embedded verb is suffixed with the infinitival morpheme *-alu*. We will refer to such constructions henceforth as infinitival light verb constructions, or **Infinitival LVCs**. Examples of such LVCs are shown in (16)-(18)[8]. Note that the basic word order in Kannada is SOV.

(16) Raama-nu [mane-ge hoog(u)-**alu**] nirdhaara maaDidanu.
Raama-NOM house-DAT go-INF decision did-3.SG.M
"Raama decided to go home."

(17) Raama-nu Siite-ge [haNN-annu tar(u)-**alu**] aadeesha neeDidanu.
Raama-NOM Siite-DAT fruit-ACC bring-INF order gave-3.SG.M
"Raama ordered Siite to bring fruit."

(18) Raama-nu [haNN-annu tar(u)-**alu**] prayatna maaDidanu.
Raama-NOM fruit-ACC bring-INF attempt did-3.SG.M
"Raama tried to bring fruit."

2.2 Participial LVCs

In addition to infinitival LVCs which select for infinitival complements, there exists a second type of LVC in Kannada referred to here as **Participial LVCs**. In participial LVCs, the light verb complex selects for a participial complement, characterized by the presence of the Relative Participle (RP; Caldwell (1875)) morpheme *-a* on the embedded verb[9].

Examples of participial LVCs are shown in (19)-(21)[10]. Note that the surface forms of these

[8]Retroflex sounds are denoted by upper case letters, and the sounds represented in parentheses are the ones that are assumed to be deleted during *sandhi* formation.

[9]The relative participle *-a* is highly productive in Kannada, with participial LVCs being only one among several constructions it can occur in. In the literature, it has most commonly been discussed with respect to its role in relative clauses—hence the name "Relative Participle" (Caldwell, 1875; Nadkarni, 1970; Balundgi, 1983; Bhat Tirumaleshwara, 1979). An example of a relative clause containing this morpheme is given in (i).

(i) Mane-ge baru-**a** nenTaru haNNu taru-(v)aru.
house-DAT come-RP guests fruit bring-FUT-3.PL
"Guests who come home will bring fruit."

The relative suffix can also occur in complex noun constructions, as in (ii).

(ii) Raama-nu haNNu taru-**a** vishaya nama-ge talupitu.
Raama-NOM fruits bring-RP news us-DAT reached
"The news that Raama will bring fruits reached us."

Finally, *-a* is also the genitive suffix in the language, as seen in (iii).

(iii) Avan-**a** gaLipaTa
He-GEN kite
"His kite"

[10]In this paper, we take the verb root to end with the vowel *-u*, e.g. *hoogu* in (19). The root is shown directly to combine directly with the relative participle *-a*. But, as pointed out to us by an anonymous reviewer, it is possible to gloss the embedded verb in infinitival and participial LVCs in a different way, as shown in (i). Here, the verb root is taken to be minus the ending vowel (*hoog*). The *-u* is instead taken to denote "non-past" tense. We believe that precisely which of these two conventions is adopted does not matter for the analyses discussed in this paper,

constructions are minimally different from the infinitival LVCs in (16)-(17), such that it is only the morphological inflection on the embedded verb that varies between the two. Intuitively as well, these infinitival LVCs and participial LVCs do not differ from each other in their meaning.

(19) Raama-nu [mane-ge hoogu-**a**] nirdhaara maaDidanu.
Raama-NOM house-DAT go-RP decision did-3.SG.M
"Raama decided to go home."

(20) Raama-nu Siite-ge [haNN-annu taru-**a**] aadeesha neeDidanu.
Raama-NOM Siite-DAT fruit-ACC bring-RP order gave-3.SG.M
"Raama ordered Siite to bring fruit."

(21) Raama-nu [haNN-annu taru-**a**] prayatna maaDidanu.
Raama-NOM fruit-ACC bring-RP attempt did-3.SG.M
"Raama tried to bring fruit."

2.3 Finite LVCs

Finally, it is also possible for light verbs to appear with finite clauses, as shown in (22)-(24) below, with finiteness indicated by the presence of the complementizer *anta* (Amritavalli, 2013).

(22) Siite-u Raaman-ige seere koDisu anta ottaaya maaDidaLu.
Siite-NOM Raama-DAT saree buy-HOR that(COMP.) force did
"Siite forced Raama to buy her a saree."

(23) Raajakumaara-nu huTTidaaga prajeyar-ig-ella hosa vastra hanchalaaguvudu
the.prince-NOM when.born subjects-DAT-all new clothes will.be.distributed
anta raaja ghooshaNe maaDidanu.
that(COMP.) the.king announcement made
"When the prince was born, the king announced that new clothes would be distributed to all his subjects."

(24) Raaja-nu ellaru-u muuru paTTu terige neeDabeeku anta
the.king-NOM everyone-EMPH three times tax must.give that(COMP.)
aadeesha neeDidanu.
order gave
"The king ordered that everyone must pay three times the (usual) taxes."

3 Evidence for the 3-way semantic split in Kannada LVCs

The goal of this section is to establish that the 3-way semantic classification proposed by Rochette (1988) and Wurmbrand and Lohninger (2019) is exhibited by complex LVCs in Kannada, thereby generally supporting an S-selection based theory of complementation, and specifically the universal typological instantiation of such a theory proposed by these authors. To do so, we focus our attention on the subset of predicates listed in Table 1, each of which is capable

resulting at most in cosmetic changes to the syntactic structures presented in Sections 5 & 6. See footnote (18) for further discussion of this point.

(i) Raama-nu [mane-ge hoog-u-**a**] nirdhaara maaDidanu.
Raama-NOM house-DAT go-NONPAST-RP decision did-3.SG.M
"Raama decided to go home."

of participating in a clause-embedding complex LVC. We believe that the predicates listed in Table 1 are representative of the general pattern of light verb predicates in the language.

	Meaning	**Predicate type**	**Embedded external argument**	**Independent tense?**	**Complement surface form**	**Highest projection in embedded complement**
praarambha	beginning	Tenseless	No	No	*-alu*	vP
ottaaya	force	Tenseless	No	No	*-alu*, *anta*	vP, CP
prayatna	attempt	Tenseless	No	No	*-alu*, *-a*, *anta*	vP, CP
nirdhaara	decision	Irrealis	With CP	Future only	*-alu*, *-a*, *anta*	Restricted TP, CP
oppige	agreement	Irrealis	No	Future only	*-alu*, *-a*	Restricted TP
aadeesha	order	Irrealis	No	Future only	*-alu*, *-a*, *anta*	Restricted TP, CP
prachaara	advertisement	Propositional	Yes	Yes	*anta*	CP
ghooshaNe	announcement	Propositional	Yes	Yes	*-a*, *anta*	Finite TP, CP
nambike	belief	Propositional	Yes	Yes	*-a*, *anta*	Finite TP, CP

Table 1: A representative sample of light verb predicates in Kannada.

A total of nine predicates are represented in Table 1, with three predicates belonging to each category in Rochette's or Wurmbrand & Lohninger's classification. We adopt Wurmbrand and Lohninger's terminology in referring to the *Tenseless* and *Irrealis* predicates as such, but drop the label *Attitude* predicates in favor of the more transparent label *Propositional* predicates used by Rochette (1988) and also Pesetsky (1992). The surface form *-alu* indicates an infinitival complement, *-a* indicates a participial complement and *anta* indicates a finite complement (these abbreviations have been used due to space constraints in the table). The embedded complements are identified in the table by semantic properties such as whether they permit external arguments or are capable of carrying temporal information independent of the matrix clause tense. The entries within the column labeled *Highest embedded projection* have been populated on the basis of the proposal in Wurmbrand and Lohninger (2019) regarding syntactic structures associated with the different complement types, and in anticipation of independent evidence for the reduced clausal structure of the infinitival and participial complements to be provided in Sections 5 & 6. The presence of complementizer *anta* is assumed to unambiguously denote a CP projection.

A cursory glance at Table 1 is sufficient to establish that while there is an almost complete one-to-one correspondence between the predicate type and the semantic properties of the embedded complement (i.e., whether it is able to accommodate embedded external arguments or independent tense), there is no similar correspondence between the predicate type and either the surface form of the complement or the highest projection within its syntactic structure[11]. This pattern strongly suggests that predicates select for complements based on semantic properties rather than morpho-syntactic ones. It is further apparent from Table 1 that there is no one-to-one correspondence even between the morphological signature of the complement clause and its actual syntactic structure. For instance, both *prayatna* ("attempt") and *nirdhaara* ("decision") can appear with infinitival *-alu* or participial *-a* complements. However, while the highest projection associated with these complements is indicated to be vP in the case of *prayatna*, it is a restricted TP in the case of *nirdhaara*. This means that infinitival and participial complements may be realized as either vPs or TPs. But even so, they only occur in one of their realizations with any specific predicate, as indicated in Table 1 and further discussed in Section 4.

[11]The one exception in the table to a one-to-one correspondence of predicate type with semantic properties is instantiated by the *Irrealis* predicate *nirdhaara* ("decision").

In the remainder of this section, we take a closer look at the entries in Table 1 to convince ourselves that the proposed grouping of predicates is indeed warranted. We start by considering the *Tenseless* predicates *praarambha* ("beginning"), *ottaaya* ("force") and *prayatna* ("attempt"). That the embedded complement selected by these predicates lacks independent tense is evident from examples (25)-(27) below[12], which show that independent temporal modifiers in the matrix and embedded clause are ungrammatical. We interpret this to mean that these complements denote *actions* but not *events* or *propositions* as defined under Rochette's classification, since they are associated neither with an independent time of occurrence nor a truth value.

(25) *Naanu [nenne patra bare-alu] ivattu praarambha maaDide.
I-NOM yesterday letter write-INF today beginning did-1.SG
"Today, I began to write the letter yesterday."

(26) *Avanu nana-ge [naaLe haNNu tar(u)-alu] ivattu ottaaya maaDida.
He-NOM I-DAT tomorrow fruit bring-INF today force did-1.SG
"Today, he forced me to bring the fruit tomorrow."

(27) *Naanu [nenne haNNu tar(u)-alu/taru-a] ivattu prayatna maaDide.
I-NOM yesterday fruit bring-INF/bring-RP today attempt did-1.SG
"Today, I tried to bring the fruit yesterday."

That there cannot be an overt external argument in the embedded clause is evident from the ungrammaticality of (28)-(30). Note that *ottaaya* ("force") in (29) is a ditransitive verb which takes an external nominative argument and an internal dative argument. In this case, the subject of the embedded complement is understood to necessarily be the internal argument of the matrix predicate. Thus, even here, the appearance of an overt embedded subject who does not participate in the matrix event is not permitted. Such a lack of overt subject strongly suggests that the embedded clause lacks a finite TP projection. In sentences where there is no overt complementizer, we assume that the structure also lacks a CP projection.

(28) *Naanu [Siite-yu patra bare-alu] prarambha maaDide.
I-NOM Siite-NOM letter write-INF start did-1.SG
"I started Siite to write the letter."

(29) *Naanu Siite-ge [Raama-nu haNNu tar(u)-alu] ottaaya maaDide.
I-NOM Siite-DAT Raama-NOM fruit bring-INF force did-1.SG
"I forced Siite for Rama to bring the fruit."

(30) *Naanu [Raama-nu haNNu tar(u)-alu/taru-a] prayatna maaDide.
I-NOM Raama-NOM fruit bring-INF/bring-RP attempt did-1.SG
"I tried for Rama to bring the fruit."

As shown in Table 1, these predicates can sometimes appear with an overt complementizer. At first glance, this seems surprising, given that the presence of a complementizer often indicates finiteness of the clause. However, it can be shown that the same semantic properties as those associated with infinitival/participial complements (i.e., lack of embedded external argument and independent tense) are also exhibited by the complements containing *anta*. The embedded verb in such cases is necessarily marked with the hortative/imperative marker, but any tense-indicating inflections are disallowed as indicated in (31). (32) further shows that independent temporal adverbials in the embedded complement that differ from the temporality of the matrix

[12] *prayatna* ("attempt") in (27) takes both infinitival and participial embedded complements, as indicated in Table 1. The incompatibility of independent tense specification is indicated for both types of complements.

clause are disallowed, and (33) indicates the ungrammaticality of overt external arguments in the embedded constituent.

(31) Naanu [haNN-annu tar(u)-aNa/*tande anta] prayatna maaDide.
I-NOM fruit-ACC bring-HOR/*brought that(COMP.) attempt did-1.SG
"I tried to bring the fruit."

(32) *Naanu [ivattu haNN-annu tar(u)-aNa anta] nenne prayatna maaDide.
I-NOM yesterday fruit-ACC bring-HOR.1 that(COMP.) today attempt did-1.SG
"Yesterday, I tried to bring the fruit today."

(33) *Naanu [Raama-nu haNN-annu tar(u)-ali anta] prayatna maaDide.
I-NOM Raama-NOM fruit-ACC bring-HOR.3 that(COMP.) attempt did-1.SG
"I tried for Raama to bring the fruit."

The predicates classified as *Tenseless* in Table 1 can thus be shown to disallow both embedded subjects and independent embedded tense, as expected under the 3-way semantic typologies discussed above.

Moving on now to the *Irrealis* predicates, represented by *nirdhaara* (decision), *oppige* (agreement) and *aadeesha* (order) in Table 1, we first observe that the eventuality denoted by the embedded complement can only have a future tense interpretation relative to the main clause, so that constructions such as (34)-(35) where the embedded clause appears with a past tense adverbial relative to the main clause are ungrammatical[13].

(34) *Naanu [nenne haNNu tar-alu] naaLe nirdhaara maaDtiini.
I-NOM yesterday fruit bring-INF tomorrow decision will.do-1.SG
"I will decide tomorrow to bring fruit yesterday."

(35) *Naanu Raaman-ige [nenne haNNu tar-alu] naaLe aadeesha koDtiini.
I-NOM Raama-DAT yesterday fruit bring-INF tomorrow order give-1.SG
"I will order Raama tomorrow to bring fruit yesterday."

However, as expected, a future tense adverbial within the embedded complement (with respect to the matrix clause) is permitted.

(36) Naanu [naaLe haNNu tar-alu] nirdhaara maaDide.
I-NOM tomorrow fruit bring-INF decision did-1.SG
"I decided to bring fruit tomorrow."

The future-tense-only restriction is indicative of a defective TP projection within the embedded complement—this is in line with what is suggested by Wurmbrand and Lohninger (2019). Given that defective Ts are unable to check nominative Case on embedded DPs, this analysis predicts that embedded subjects should be disallowed by *Irrealis* predicates as well. This prediction is borne out, as shown in (37)-(39). Note that like the Tenseless predicate *ottaaya* ("force"), *aadeesha* ("order") and *oppige* ("agreement") are also ditransitive and show similar behavior where the internal argument of the matrix predicate is interpreted as the embedded subject.

[13]We do not explicitly represent the embedded argument as PRO in our examples containing *Irrealis* predicates solely to simplify notation. We remain agnostic with respect to which theory of control—PRO (Landau, 2003) *vs.* movement (Hornstein and Polinsky, 2010)—is in fact correct, as our proposal in this paper is compatible with either.

(37) *Naanu [Siite haNNu tar-alu] nirdhaara maaDide.
I-NOM Siite fruit bring-INF decision did-1.SG
"I decided for Siite to bring the fruit."

(38) *Naanu Siite-ge [Raama-nu haNNu tar-alu] oppige koTTe.
I-NOM Siite-DAT Raama-NOM fruit bring-INF agreement gave-1.SG
"I gave Siite agreement for Raama to bring the fruit."

(39) *Naanu Siite-ge [Raama-nu haNNu tar-alu] aadeesha koTTe.
I-NOM Siite-DAT Raama-NOM fruit bring-INF order gave-1.SG
"I ordered Siite for Raama to bring the fruit."

As was the case with *Tenseless* predicates, *Irrealis* predicates may also sometimes co-occur with the overt complementizer *-anta*. However, even in these cases, the semantic properties of the embedded complement are often retained. That is, only future/unrealized interpretation of the embedded complement is allowed, and embedded external arguments are often not permitted. Accordingly, the embedded verb in such cases is allowed to be inflected with the future tense as shown in (40), or with the hortative/imperative mood as shown in (41), but no other verbal inflection is permitted. The presence of the future tense inflection in (40) indicates that the TP is finite within this construction. This has a clear empirical signature: embedded subjects are permitted when *nirdhaara* co-occurs with the non-restructured complement as in (42) containing the complementizer *anta*. In this sense, complements selected by this predicate are only optionally restructured, as also suggested by Wurmbrand and Lohninger (2019).

(40) Naan-u haNN-annu taru-ttiini/*tande anta nirdhaara maaDide.
I-NOM fruit-ACC will.bring-1.SG/brought.1.SG that(COMP.) decision did-1.SG
"I decided that I would bring fruit."

(41) John-u tanna magan-ige [shaale-ge hoogu] anta aadeesha
John-NOM his son-DAT school-DAT go-IMP that(COMP.) order
neeDidanu.
gave-3.SG.M
"John ordered his son to go to school".

(42) John-u [tanna maga-nu Harvard-ige hooguvanu anta] nirdhaara
John-NOM his son-NOM Harvard-DAT will.go-3.SG.M that(COMP.) decision
maaDidanu
did-3.SG.M
"John decided that his son would go to Harvard."

In sum, the predicates classified as *Irrealis* also do not allow embedded subjects (for the most part) and are only compatible with restricted (future) tense on the embedded complement.

Finally, we come to *Propositional* predicates, represented by *prachaara* ("advertisement"), *ghooshaNe* ("announcement") and *nambike* ("belief") in Table 1. These predicates are always compatible with finite CP complements introduced by complementizer *anta*. They freely allow for both embedded subjects as well as independent tense in the embedded complement, as shown in (43)-(45).

(43) Avaru [Raama-nu mane-ge tirugi baruttaane anta]
They-NOM Raama-NOM house-DAT turn.around has.come-3.SG that(COMP.)
oorallella prachaara maaDidaru.
all.over.town advertisement did

"They advertised all over town that Raama will return home."

(44) Avaru [Raama-nu mane-ge tirugi bandiddaane anta]
They-NOM Raama-NOM house-DAT turn.around has.come-3.SG that(COMP.)
oor-alli ghooshaNe maaDidaru.
town-LOC announcement did
"They announced in the town that Raama had returned home."

(45) Naanu [ondaanondu kaala-dalli Raama-nu Siite-annu pritisuttidda anta]
I-NOM once time-LOC Raama-NOM Siite-ACC loved that(COMP.)
nambike iTTukonDiddiini.
belief keep-1.SG
"I believe that Raama once loved Siite."

Even when these predicates appear with participial complements (where they are permitted as indicated in Table 1), these properties still hold. The participial morpheme itself carries tense inflections in such cases, as shown in (46)-(47). Notice the absence of infinitival complements in the case of *propositional* predicates. This makes intuitive sense, since infinitivals in Kannada cannot carry any tense inflections.

(46) Avaru oor-alli [Raama-nu mane-ge tirugi band-idd-a]
They-NOM town-LOC Raama-NOM house-DAT turn.around has.come-PAST-RP
ghooshaNe maaDidaru.
announcement did
"They announced in the town that Raama had returned home."

(47) Naanu [ondaanondu kaala-dalli Raama-nu Siite-annu pritisutt-idd-a] nambike
I-NOM once time-LOC Raama-NOM Siite-ACC love-PAST-RP belief
iTTukonDiddiini.
keep-1.SG
"I believe that Raama once loved Siite."

Propositional predicates in Kannada LVCs are thus shown to be compatible with embedded complements that are more self-sufficient, in that they may freely carry embedded subjects as well as independent embedded tense.

4 Taking stock

So far, we have accomplished the following. First, we outlined the 3-way semantic typology of predicate-complement pairs proposed by Rochette (1988) and the one proposed by Wurmbrand and Lohninger (2019). In essence, these typological schemes instantiate the idea that complementation is meaning-driven. That is, embedding predicates are associated with a certain semantics; embedded complements are also associated with some semantic properties (which are at least partly determined by their syntactic structures). Predicates and complements may then combine if their semantic properties are compatible.

We found that such a 3-way semantic distinction also exists within complex LVCs in Kannada. Specifically, predicates determine the semantic properties of the complements that they combine with, but these semantic properties may be realized by more than one syntactic structure as well as more than one surface (morphological) form of the embedded complement. This pattern indicates that selection of clausal complements in Kannada LVCs can be explained by appeal-

ing primarily to S-selection. In the following paragraphs, we discuss a few specific instances in which the Kannada data fulfill the two predictions made under a theory of S-selection. These predictions are repeated below from Section 1.

1. Complements of different semantic types are selected by different predicates.
2. Complements of the same semantic type are selected by the same predicates.

Consider first prediction #1. A consequence of this prediction is that in cases where the surface form of a complement is compatible with more than one semantic type (interpretation), a predicate may select the complement under one interpretation but not others. To see that this prediction is borne out in Kannada LVCs, we can compare the entries corresponding to *praarambha* ("beginning") and *oppige* ("agreement") in Table 1. Both these predicates can combine with an infinitival complement. However, while the infinitival is incapable of having any independent tense when it occurs with *praarambha* (thereby suggesting lack of a TP projection altogether), it is interpreted as having future/unrealized tense due to the presence of a restricted TP projection when it appears with *oppige*. Thus, even though the infinitival complement is compatible with being interpreted as an *action* headed by v or an *event* headed by a restricted T, each predicate selects the complement in only one of the two realizations.

Now, we move on to prediction #2. This states that complements that instantiate the same semantic type will be selected by the same predicates, despite differences in their morpho-syntactic realizations. This prediction is also fulfilled in Kannada LVCs. For instance, the *Tenseless* predicate *prayatna* ("attempt") selects complements that represent *actions*, i.e., they do not permit overt embedded external arguments and they are incapable of having an independent temporal signature. However, as per the entry for *prayatna* in Table 1, we know that these semantic properties do not have a uniform morpho-syntactic realization—they may be realized as infinitival (vP), participial (vP) or finite complements (CP)[14].

In the following sections 5 and 6 respectively, we will develop syntactic analyses of the infinitival and participial complements selected by Kannada light verb predicates. This investigation will first and foremost provide us with independent evidence that these complements are indeed associated with a reduced clausal structure, corroborating what is already expected within the 3-way semantic categorization. A study of the infinitival and participial complements also independently reveals interesting differences between the two structures that are not obvious from Table 1. For instance, while infinitival complements are verbal arguments attaching to the light verb complex as a whole, it can be shown that participial complements with identical semantic properties as the infinitival are in fact selected by the LVC nominal.

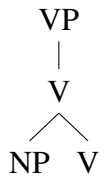
5 Infinitival LVCs

In this section, we develop detailed syntactic analyses for infinitival complements appearing in Kannada LVCs. In all syntactic trees presented in this section, we take the sub-tree in (48), inspired from Gallmann (1999), to represent the internal structure of the light verb construction. Here, the LVC nominal is assumed to be attached to the verbal head via adjunction. However, note that the exact structure of the LVC itself does not critically affect any of our main proposals in the paper, so any other proposal for the internal structure of the LVC should in principle

[14]It may be worth noting that in the case of predicates like *try*, Kannada provides more direct evidence for S-selection than English does. In English, for instance, *try* only combines with infinitival complements confounding the predictions made under both S-selection and C-selection.

be equally acceptable. We follow Wurmbrand (1998) in assuming vP as the accusative Case checking projection in our syntactic trees (instead of AgrOP as assumed in Chomsky (1989)), but nothing crucial hinges on this. We also assume nominals in Kannada to be syntactic NPs in sentences that do not contain an overt determiner.

(48)



We begin our discussion of infinitival complements to LVCs by providing independent evidence to show that these complements are associated with a reduced clausal structure, thereby corroborating what has been suggested in Section 3. We then propose a syntactic analysis that builds upon and refines Agbayani and Shekar (2007)'s general account of Kannada infinitival constructions (occurring within or outside of LVCs). Specifically, where those authors claimed that restructured infinitival complements are uniformly VPs, we establish that they are associated with a bit more functional structure when they occur within LVCs: i.e., in some infinitival LVCs they are vP projections, and in others they are defective TP projections.

5.1 Infinitival complements are restructured

Our analysis takes as starting point the proposal put forth by Agbayani and Shekar (2007) which analyzes all infinitival constructions in Kannada as instances of clausal restructuring within the verbal domain. According to them, Kannada verbs that select for infinitival complements are predicates that combine with a VP-sized infinitival constituent. The same analysis is predicted to apply to the infinitival complements of LVCs as well, such that the embedded clause in an example such as (49) is a VP.

(49) Raama-nu [homework-annu maaD-alu]$_{VP}$ praarambha maaDidanu.
Raama-NOM [homework-ACC do-INF] beginning did-3.SG.M
"Raama began to do the homework."

Agbayani & Shekar (2007) support their analysis of infinitivals as restructured complements by observing that these constructions can permit movement operations that are normally clause-bounded, for e.g., object scrambling[15]. (50)-(51) show examples of object scrambling in Kannada. (52) further establishes that this operation is not permitted across clause boundaries.

[15]The authors also suggest additional tests for restructuring that uses negative polarity licensing, weak-crossover and binding arguments under the rationale that the behavior of the restructured clauses in these cases is different from unrestructured, finite clauses. We do not discuss these tests here, due to concerns about these rationales being true in Kannada. In particular, Kannada seems to be generally more permissive in allowing for principle-A violations—as seen in (i) where a reflexive in the embedded finite clause is non-locally bound, or NPI licensing by negation across clause boundaries as seen in (ii):

(i) Raama-nu$_k$ [tanna$_k$ tande-u beega mane-ge maraLi barali anta]$_{CP}$ beeDidanu.
Raama-NOM his.REFL father-NOM fast house-DAT return come that(COMP.) prayed
"Raama prayed that his father would return home soon."

(ii) Naan-u [avan-u idar-a bagge yaariguu heLiruttaane anta]$_{CP}$ andukonDir-al-illa.
I-NOM he-NOM this-GEN about anyone(NPI) will.have.said that(COMP.) think-INF-NEG
"I did not think that he would have talked about this to anyone."

Here, the object in the embedded clause is disallowed from scrambling to a position in the main clause.

(50) haNN-annu$_k$ Raama-nu Siite-ge t_k koTTanu.
fruit-ACC Raama-NOM Siite-DAT gave
"The fruit, Raama gave to Siite."

(51) Siite-ge$_k$ Raama-nu t_k haNN-annu koTTanu.
Siite-DAT Raama-NOM
"To Siite, Raama gave the fruit."

(52) *haNN-annu$_k$ Raama-nu [Siite-u t_k ishTapaDuttaaLe] anta
fruit-ACC$_k$ Raama-NOM [Siite-NOM t_k likes-3.SG.F] that(COMP.)
gamanisidanu.
observed-3.SG.M
"The fruit, Raama observed that Siite liked."

Agbayani & Shekar find that infinitival utterances in Kannada behave like monoclausal structures when it comes to object scrambling, indicating that there isn't in fact a clausal boundary separating the infinitival clause from the main clause—in other words, the infinitival clause has been restructured. Examples corresponding to infinitival LVCs are shown in (53)-(54).

(53) haNN-annu$_k$ Raama-nu [t_k tar-alu] prayatna maaDidanu.
fruit-ACC$_k$ Raama-NOM [t_k bring-INF] attempt did-3.SG.M
"Fruit, Raama tried to bring."

(54) Siite-ge$_k$ Raama-nu [t_k vishaya-vannu heL-alu] nirdhaara maaDidanu.
Siite-DAT$_k$ Raama-NOM [t_k news-ACC tell-INF] decision did-3.SG.M
"To Sita, Raama decided to tell the news."

We have also already seen some additional evidence suggestive of a reduced clausal structure in infinitival complements when we developed the 3-way semantic distinction in Kannada LVCs. As established in Section 3, infinitival complements that appear as complements to *Tenseless* and *Irrealis* predicates cannot be associated with independent tense. In fact, for this reason, these complements are altogether banned from appearing with *Propositional* light verb predicates that necessarily select for finite complements. Given that restructured constructions across languages are known to similarly lack tense inflections on the embedded predicates, this in itself may be taken as evidence of a reduced clausal structure.

Other restructuring properties that are characteristic of both infinitival and participial LVCs will be presented in Section 6, where participial LVCs are discussed in detail. We note however that infinitival (or participial) LVCs do not permit the formation of grammatical "long passives" canonically used as evidence for restructuring, unlike what is observed by Agbayani and Shekar (2007) with respect to other infinitival constructions occurring with lexical verbs in Kannada. We discuss the reason for this in the following subsection, and this discussion will inform the syntactic structures for infinitival LVCs proposed in §5.3.

5.2 The status of the long passive construction in infinitival LVCs

Agbayani & Shekar (2007) observe that on par with scrambling, so-called "long-distance" passive constructions in which the embedded object is moved to matrix spec-TP upon passivization

of the matrix verb are also grammatical in non-light verb, infinitival constructions in Kannada. An example of this is shown in (55).

(55) a. Raama-nu [hosa mane-annu kaTT-alu] praarambhisidanu.
Raama-NOM new house-ACC build-INF started-3.SG.M
"Rama started to build the new house."
b. Hosa mane$_k$-u (Raama-ninda) [t_k kaTT-alu] prarambhisalpaTTitu.
new house$_k$-NOM (Raama-by) t_k build-INF started.PASSIVE
"The new house was started to be built (by Raama)."

In (55-b), the object *hosa mane* ("new house") moves long-distance from the embedded clause to the main clause when the aspectual verb in the main clause is passivized. This occurs for the following reason. Due to the restructured status of the infinitival constituent in (55), the embedded verb *build* lacks the functional projection required to check structural accusative Case, i.e., vP following Wurmbrand (1998) (and also Kratzer 1996). Instead, the accusative Case on the embedded object is checked by the main verb *start*. When *start* is passivized, as in (55), it loses its ability to check accusative Case, resulting in the object *new house* moving to the specifier of the main clause TP in order to check nominative Case instead.

Expectedly, such passives are disallowed when the embedded complement is finite and therefore not restructured, as shown in (56). In these cases, the accusative case on the embedded object can be checked by the functional projection vP present within the embedded clause, thus removing any dependency between the main verb and the embedded object.

(56) a. Raama-nu [taanu Siite-annu maduve maaDikoLLuvanu anta]
Raama-NOM he.REFL Siite-ACC marriage will.do.3.SG.M that(COMP.)
ghooshaNe maaDidanu.
announcement did-3.SG.M
"Rama announced that he would marry Siite."
b. *Siite$_k$-u (Raama-ninda) [t_k maduve maaDikoLLuvanu anta]
Siite$_k$-NOM (Raama-by) t_k marriage will.do.3.SG.M that(COMP.)
ghoshaNe maaDalpaTTitu.
announcement did.PASSIVE
"Siite was announced to be married to (by Raama)."

Given our claim that infinitival complements in Kannada LVCs are also restructured, we would expect them to behave similarly to (55-b) and permit formation of the "long passive". That is, we would expect (57-b) below to be grammatical. However, as indicated, this is not the case.

(57) a. Raama-(n)u [Siite-annu maduve maaDikoLL-alu] prayatna maaDidanu.
Raama-NOM Siite-ACC marriage do-INF try did-3.SG.M
"Raama tried to marry Siite."
b. *Siite$_k$-u (Raama-ninda) [t_k maduve maaDikoLL-alu] prayatna
Siite$_k$-NOM Raama-by t_k marriage do-INF attempt
maaDalpaTTitu.
did.PASSIVE
"Siite was attempted to be married to (by Raama)."

We explain the ungrammaticality of (57-b) by observing that the embedded object in these constructions does not depend on the main verb to check its accusative Case. The main verb in these constructions (which is the light verb itself) already checks accusative Case on the

predicate nominal within the LVC. The LVC nominal is allowed to occur with overt accusative Case, although this is often not pronounced. An example of this is in (58), where the nominal *attempt* occurs with overt accusative Case marking.

(58) Raama-(n)u [Siite-annu maduve maaDikoLL-alu] prayatna-vannu maaDidanu.
Raama-NOM Siite-ACC marriage do-INF attempt-ACC did-3.SG.M
"Raama tried to marry Siite."

Consequently, the embedded object *Siite* in (58) (which incidentally can also occur with overt accusative Case) must get its Case checked by the embedded predicate. This indicates that the embedded predicate does not lack the functional projection (vP) capable of checking structural accusative Case. Thus, we conclude that even though infinitival LVCs in Kannada do involve restructuring, it is not the case that all functional structure is absent in the restructured constituent (unlike non-LVC infinitivals in Kannada).

5.3 Non-uniform structures of infinitival complements

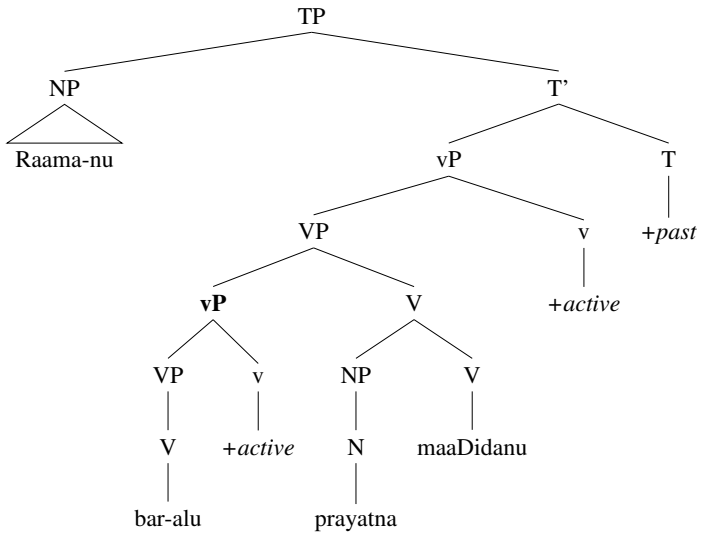
In Agbayani & Shekar (2007), the authors assume a uniform analysis for all restructured infinitival complements in Kannada—in that the infinitival complement is said to be devoid of any functional structure, projecting only up to the VP level[16]. In this section, we refine this analysis to be consistent with the information in Table 1, as well as the discussion in §5.2 showing that infinitival complements within LVCs in Kannada—though restructured—do not completely lack functional structure. In particular, the observation from Table 1 that both *Tenseless* and *Irrealis* predicates select infinitival complements points to the existence of two different structures for these complements. In one of these structures—i.e., those appearing with the *Tenseless* predicates—the highest projection in the embedded complement is a vP. In this case, no TP is required due to complete lack of independent tense[17]. The proposed structure for infinitival LVC constructions like the one in (59) that involves *Tenseless* predicates (*prayatna*; "attempt") is shown in (60).

(59) Raama-nu [bar-alu] prayatna maaDidanu.
Raama-NOM come-INF attempt did-3.SG.M
"Raama tried to come."

[16] Agbayani & Shekar further argue that Kannada clauses lack any functional structure at all, even within non-restructured sentences. Such a claim clearly has much larger scope than what we are intending to cover in this paper, and if correct, may interact with our proposed analysis in interesting ways. However, here we restrict our focus only to those claims that immediately concern restructured infinitivals in Kannada.

[17] Alternatively, it is possible to analyze the TP projection as one that cannot be omitted regardless of finiteness, and the non-past tense marking *-u* (see footnote 10) as the default overt realization of [-finite] Ts. Then, the structures in Section 5 & 6 that omit a TP as per our analysis would simply be redrawn with a [-finite] T without affecting any substantive ideas proposed in the paper. This approach is consistent with taking finiteness to be independent of whether or not a tense projection exists, as suggested by Amritavalli (2014).

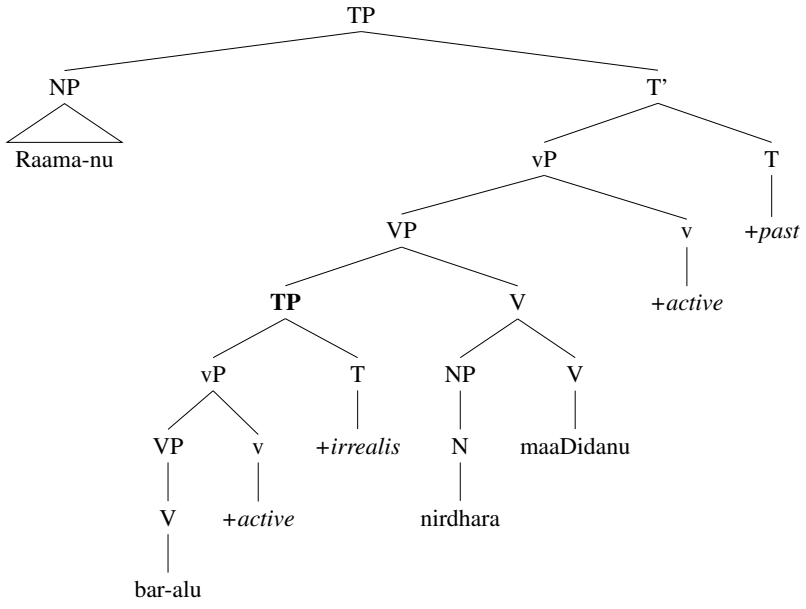
(60)



In *Irrealis* sentences on the other hand, a defective TP projection is additionally present within the infinitival complement to accommodate the unrealized tense. The structure for infinitival complements selected by *Irrealis* predicates like in (61) is shown in (62).

(61) Raama-nu [bar-alu] nirdhaara maaDidanu.
Raama-NOM come-INF decision did-3.SG.M
"Raama decided to come."

(62)



6 Participial LVCs

In this section, we turn towards previously unstudied participial complements in Kannada LVCs. From Table 1—for instance, the entry for *oppige* ("agreement")—it appears to be the case that participial complements are in many cases compatible with a structure very similar to infinitival complements, at least in terms of the highest projections that they each realize. We

will provide independent evidence for reduced clausal structure within participial complements to *Tenseless/Irrealis* LVCs (these arguments also hold in the case of restructured infinitival complements to LVCs, supplementing the ones discussed in §5.1). In doing so, these constructions become the second type of complements (aside from infinitivals) to be identified as being restructured in Kannada. But unlike infinitivals, participial complements are not arguments to an embedding verb, rather it can be shown that they are arguments selected by the predicate nominal head within the LVC.

In sum, we will establish the following three properties of participial complements before providing the relevant syntactic trees in §6.4:

1. Participial complements to embedding light verb predicates may be restructured. (§6.1)
2. Participial complements are complements to the nominal head within the LVC. (§6.2)
3. Participial complements represent *arguments* selected by the nominals that they attach to and are not necessarily *adjuncts*, contra Moulton (2009). (§6.3)

6.1 Participial complements may be restructured

Four arguments are presented below to show that the participial complements in Kannada LVCs are compatible with a reduced clausal structure:

(1) Lack of independent tense in the embedded participial constituent
As in the case of the infinitival complements, the lack of tense inflections on the embedded verb as well as the lack of embedded subjects when the participial complement appears with *Tenseless* or *Irrealis* predicates indicates that the complement is capable of being restructured (examples already discussed in Section 3). However, unlike the infinitival constituent which is necessarily restructured, the embedded verb within the participial complement can inflect for tense when it appears with *Propositional* predicates, as shown in (46) and repeated below in (63). This is also the case when the participial appears as part of a complex noun phrase construction, as shown in (64). Thus, the participial complement is only optionally restructured.

(63) Avaru oor-alli [Raama-nu mane-ge tirugi band-idd-a]
They-NOM town-LOC Raama-NOM house-DAT turn.around has.come-RP
ghooshaNe maaDidaru.
announcement did
"They announced in the town that Raama had returned home."

(64) Naanu [Raama-nu haNN-annu tand-a] vishaya keLide.
I-NOM fruit-ACC brought-RP news heard-3.SG
"I heard the news that Raama had brought fruit."

(2) Scrambling out of the participial constituent
As already discussed in §5.1, one of the main properties characterizing restructured constructions across languages concerns whether movement operations that are generally prohibited from applying across a CP boundary are allowed to grammatically occur, thereby indicating lack of a CP boundary. Here, we note that the operation of scrambling, where an argument from the embedded clause is fronted to the beginning of the sentence, is allowed in participial complements of *Tenseless/Irrealis* LVCs like (65) but not allowed in *Propositional* LVCs like (66) or in complex noun constructions like (67). We take this to be further evidence that participial LVCs in Kannada are restructured.

(65) haNN-annu$_k$ naanu [t$_k$ tinnu-a] prayatna/nirdhaara maaDide.
fruit-ACC I-NOM t$_k$ eat-RP attempt/decision did-1.SG
"I tried/decided to eat fruit."

(66) *mane-ge$_k$ avaru [Raama-nu t$_k$ tirugi band-idd-a] ghooshaNe
house-DAT They-NOM Raama-NOM t$_k$ turn.around has.come-RP announcement
maaDidaru.
did
"They announced that Raama had returned home."

(67) *haNN-annu$_k$ naanu [Raama-nu$_k$ tinnu-a] vishaya keLide.
fruit-ACC I-NOM Raama-NOM$_k$ eat-RP news heard-1.SG
"I heard the news of Raama eating fruit."

(3) Ungrammaticality of passivization of the embedded predicate

Cable (2004) suggests that in restructured constructions, passivization of the embedded predicate within the restructured clause should be impossible. An example of this is shown in (68), which contains a participial complement to the *Tenseless* predicate *prayatna* ("attempt"). This is expected for the following reason: when the embedded verb is passivized, the object of the embedded clause must move to the specifier position of the finite TP in the embedded clause in order to check nominative Case. However, due to the absence of a finite TP within the embedded clause of the restructured sentence, there is no such position available. Moreover, the specifier of the matrix clause TP is also unavailable, since it is occupied by the matrix subject. The same observation also holds for infinitival complements of LVCs in Kannada.

(68) *Raama-nu [patra-u bareyalpaDu-a] prayatna/nirdhaara maaDidanu.
Raama-NOM letter-NOM write-RP-PASS attempt/decision did-3.SG.M
"Raama tried/decided for the letter to be written."

In contrast, passivization of the embedded predicate is allowed in the complex noun construction shown in (69) , since these constructions do not involve restructuring and therefore contain a finite embedded TP whose head is capable of checking nominative Case. This is also the case for participial complements to *Propositional* predicates, as shown in (70).

(69) Raama-nu [patra-u bareyalpaTT-a] vishaya keLidanu.
Raama-NOM letter-NOM written-RP news heard-3.SG.M
"Raama heard the news of the letter being written."

(70) Avaru [Raama-ninda haNNu tinnalpaTTida] ghooshaNe maaDidaru.
They-NOM Raama-ABL fruit eaten-RP announcement did
"They announced that the fruit was eaten by Raama."

(4) Extraction is allowed out of *Tenseless* and *Irrealis* participial LVCs

While participial constituents within complex noun construction as well as those occurring with *Propositional* predicates act as strong islands for extracting of arguments out of the embedded complement (CNPC; Ross (1967))[18] [19], as shown in (71) and (72), a similar constraint does

[18]CNPC is expected to apply to complex NP/DPs due to the principle of *Subjacency* (Chomsky, 1973). According to this principle, extraction out of a complex DP violates a locality constraint, because of the movement crossing more than one bounding node. Bounding nodes involve cross-linguistic parametrization—e.g., they are parametrized to TP and DP in English (Chomsky, 1973) *vs.* CP and DP in Italian (Rizzi, 1978). For Kannada, we take DP to be one bounding node, and finite TP as another.

[19]It should also be noted that nothing in our account hinges on the original construal of the CNPC. It is assumed

not seem to apply to the participial LVC, as in (73)[20]. The reduced structure of participial complements to *Tenseless/Irrealis* light verb predicates accounts for why the expected strong island effects as per CNPC are mitigated[21].

(71) *Raama-nu$_i$ [pro$_k$ t$_j$ tinnu-a] vishaya keLida haNNu$_j$ koLetittu.
Raama-NOM$_i$ pro$_k$ t$_j$ eat-RP news heard-RP fruit$_j$ rotten
"The fruit that Raama heard the news to eat was rotten."

(72) *Avaru [Raama-nu t$_j$ tinda] ghooshaNe maaDida haNNu$_j$ koLetittu.
They-NOM Raama-NOM t$_j$ ate-RP announcement did-RP fruit rotten
"The fruit that they announced that Raama had eaten was rotten."

(73) Raama-nu [t$_j$ tinnu-a] nirdhaara/prayatna maaDida haNNu$_j$ koLetittu.
Raama-NOM t$_j$ eat-RP decision/attempt do-PST-RP fruit rotten
"The fruit that Raama decided/tried to eat was rotten."

Summing up, these four arguments provide strong evidence that participial complements to *Tenseless* and *Irrealis* light verbs are indeed restructured, consistent with the typology established in Section 3. Once again, the long passive construction is disallowed here as in the case of infinitival complements for the independent reason discussed in §5.2.

6.2 Participial complements are complements to the N head within LVCs.

In this subsection, we provide a set of arguments to show that unlike infinitival constituents in LVCs which are verbal complements to the head V in the light verb complex, like in (60) and (62), participial constituents are in fact extended projections of V that attach to the nominal head within the LVC.

(1) Morpheme *-a* appears on common nominal modifiers in multiple contexts
First, we note that the participial morpheme *-a* in Kannada is nominal morphology which commonly appears on adjectival elements modifying a nominal head N. It can occur in relative clause constructions like (74). It also acts as the genitive modifier of noun phrases like in (75).

(74) Mane-ge baru-**a** nenTaru haNNu taru-(v)aru.
house-DAT come-RP guests fruit bring-FUT-3.PL
"Guests who come home will bring fruit."

(75) Avan-**a** gaLipaTa
He-GEN kite
"His kite"

Furthermore, the participial morpheme *-a* can also occur in complex noun constructions like

here that this locality constraint can be rephrased in terms of a Phase-based approach.

[20]The discussion here takes for granted that the participial complement modifies the nominal within the LVC and is therefore expected to be constrained by CNPC. Extensive evidence that it is in fact a nominal complement is provided in §6.2.

[21]This lack of island effect in participial complements to *Tenseless/Irrealis* predicates is reminiscent of the contrast demonstrated in (i)-(ii) in English, first observed by Ross (1967). Island effects in extraction from complex DP islands are mitigated when the complex DP appears as argument to a light verb rather than a lexical verb.

(i) *Who$_j$ did John reject the claim that he robbed t$_j$?

(ii) ?Who$_j$ did John make the claim that he robbed t$_j$?

(76). Note that this does not hold of the infinitival morpheme *-alu*. The *-alu* construction is not allowed in complex noun constructions, as shown in (77).

(76) Naanu [[Raama-nu America-ge hogu-a] vishaya]$_{NP}$ keLide.
I-NOM Raama-NOM America-DAT go-RP news heard-1.SG
"I heard the news of Raama going to America."

(77) *Naanu [[Raama-nu America-ge hog-alu] vishaya keLide.]$_{VP}$
I-NOM Raama America-DAT go-INF news heard-1.SG
"I heard the news of Raama going to America."

(2) Intervening adverbs are not allowed

Our second argument to show that the participial constituent is a nominal complement comes from the observation that the participial *-a* complement does not allow intervening adverbial modification, but the infinitival *-alu* complement does. As shown in (78), no intervening adverb is allowed between the embedded participial constituent and the nominal head within the LVC. This is not surprising if the participial constituent and the nominal head together form an NP, or in other words, if the participial constituent is a nominal complement. On the other hand, adverbial modification in infinitival LVCs is freely allowed, as shown in (79), since the infinitival constituent is a verbal complement.

(78) *Ravana-nu [[Raama-nannu kollu-a] nenne nirdhaara]$_{NP}$ maaDidanu.
Ravana-NOM Raama-ACC kill-RP yesterday(ADV) decision did-3.SG.M
"Ravana made the decision [of killing Raama yesterday]."

(79) Ravana-nu [[Raama-nannu koll-alu] nenne nirdhaara maaDidanu.]$_{VP}$
Ravana-NOM Raama-ACC kill-INF yesterday(ADV) decision did-3.SG.M
"Ravana made the decision [of killing Raama yesterday]."

The complementary argument holds with respect to intervening adjectival elements in infinitival LVCs. While the participial *-a* construction allows adjectival modification, the *-alu* construction does not. This contrast is shown in (80)-(81).

(80) Ravana-nu [[Raama-nannu kollu-a] keTTa nirdhaara]$_{NP}$ maaDidanu.
Ravana-NOM Raama-ACC kill-RP evil(ADJ) decision did-3.SG.M
"Ravana did the evil decision of killing Raama."

(81) *Ravana-nu [[Raama-nannu koll-alu] keTTa nirdhaara maaDidanu.]$_{VP}$
Ravana-NOM Raama-ACC kill-INF evil(ADJ) decision did-3.SG.M
"Ravana did the evil decision of killing Raama."

(3) The participial complement together with the N head can act as a sentential subject

We further note that the participial *-a* complement together with the nominal head within the LVC can be separated from the light verb itself, and can act as a Subject NP in other independent constructions. This is shown in (82). However, the infinitival *-alu* constituent is not capable of behaving in this manner. Crucially, it cannot be separated from the matrix verb. Under our proposal, this is because the participial constituent is a complement of the nominal head within the LVC, while the infinitival constituent is a complement of the matrix LVC.

(82) [Mane-ge hogu-a nirdhaara]$_{NP}$ Raama-nannu kaaDitu.
house-DAT go-RP decision Raama-ACC troubled
"The decision of going home troubled Raama."

(83) *[Mane-ge hog-alu nirdhaara]$_{VP}$ Raama-nannu kaaDitu.
house-to go-INF decision Raama-ACC troubled
"The decision of going home troubled Raama."

(4) Other intervening nominal modifiers are allowed
The participial *-a* construction shows nominal properties such as being capable of modification by demonstratives like "that", quantifiers like "every", and genitive modifiers like "his". These nominal modifiers, in addition to adjectives, can intervene between the participial constituent and the nominal head within the LVC. Examples are shown in (84)-(86).

(84) Mane-ge hogu-a aa nirdhaara Raama-nannu kaaDitu.
house-DAT go-RP that decision Raama-ACC troubled-3.SG.N
"That decision of going home troubled Raama."

(85) Mane-ge hogu-a pratiyondu nirdhaara Raama-nannu kaaDitu.
house-DAT go-RP every decision Raama-ACC troubled-3.SG.N
"Every decision of going home troubled Raama."

(86) Mane-ge hogu-a Siite-a nirdhaara Raama-nannu kaaDitu.
house-DAT go-RP Siite's decision Raama-ACC troubled-3.SG.N
"Siite's decision of going home troubled Raama."

(5) The participial complement is ungrammatical with lexical verb constructions
Consider the infinitival LVC in (87) and the participial LVC in (88).

(87) Raama-nu [mane-ge hog-alu] nirdhara maaDidanu.
Raama-NOM house-DAT go-INF decision did-3.SG.M
"Raama made the decision to go home."

(88) Raama-nu [mane-ge hogu-a] nirdhara maaDidanu.
Raama-NOM house-DAT go-RP decision did-3.SG.M
"Raama made the decision to go home."

We have already said that (87) and (88) do not differ from each other in their meaning. They also resemble each other very closely in their surface forms, only differing with respect to the morpheme that occurs on the embedded verb. However, when the light verb is denominalized into its lexical verb form[22] (i.e., "do decision" is replaced with "decide"), we find that only the infinitival morpheme *-alu* can be grammatically embedded under the lexical verb. The analogous lexical verb construction with the participial morpheme *-a* is ungrammatical. This contrast is shown in (89) and (90). If the participial constituent is a complement of the LVC nominal, then the ungrammaticality of (90) which completely lacks the nominal is unsurprising. The participial constituent needs to be licensed by the presence of a nominal, but such a nominal head is absent in (90).

(89) Raama-nu [mane-ge hog-alu] nirdharisidanu.
Raama-NOM house-DAT go-INF decided-3.SG.M
Raama decided to go home.

(90) *Raama-nu [mane-ge hogu-a] nirdharisidanu.
Raama-NOM house-DAT go-RP decided-3.SG.M
Raama decided to go home.

[22]LV nominals often have a denominalized, lexical verb form in Kannada.

The arguments presented above show clearly that the constituent containing the relative participle *-a* attaches to the nominal head. The participial complement in participial LVCs is therefore the sister to the nominal head within the LVC (unlike the infinitival complement in infinitival LVCs). Syntactic trees are provided in Section 6.4.

6.3 Evidence for argument status of the participial complement

In §6.2, we established that participial complements are merged not with the light verb complex itself (which, following Gallmann (1999), we take to be a verbal projection as shown in (48)), but instead with the predicate nominal head within the light verb complex. However, there exists a long-standing view in the literature that clausal (or clause-like) complements to nouns are necessarily adjuncts and not true arguments. This view is at odds with the proposal defended in this paper that participial complements are semantically selected by the light verb constructions.

The goal of this section then is to argue—contra Stowell (1981), Moulton (2009) and others—that clausal complements can in fact be selected as "true" arguments to some clause-embedding nouns, specifically the predicate nouns within Kannada LVCs, thereby bolstering the claims about argument selection made in this paper that hinge upon the argument status of the participial complements. We start with a brief discussion of the justification provided in Moulton (2009) to support the idea that clausal complements of nouns are not arguments but adjunct modifiers. We then challenge such a position by way of specific counter-arguments that pertain both to the English data from Moulton (2009) and the Kannada LVC data that is the focus of the current paper.

6.3.1 Moulton (2009)

In Chapter 2 of his dissertation, Moulton (2009) gives primarily syntactic arguments[23] suggesting that content nouns such as *belief*, *thought*, *claim* and so on, which are known to take clausal content-denoting arguments in their verbal forms (*believe*, *think*, *claim*), do not similarly select clausal arguments in their nominal forms[24]. That is, while the *that*-clause in (91) is an argument to the verb *believe*, Moulton claims that the *that*-clause in (92) is not an argument selected by the noun *belief*—it is instead a modifying adjunct.

(91) John believes [that the earth is flat]$_{CP}$.

(92) John ridicules [the belief [that the earth is flat]$_{CP}$]$_{DP}$.

To support his claim, Moulton first establishes the diagnostic that if a (deverbal or non-deverbal) content noun does not accept canonical content-denoting DP arguments supported by the prepo-

[23]Moulton also provides the following semantic argument: standard compositional accounts claim that clausal complements combine with content nominals via Predicate Modification (PM). Under Moulton's view, composition via PM is indicative of adjunct status of the complement, since true arguments can only be composed via Function Application (FA). We will not discuss this further here, except to say that assuming such one-to-one correspondence between argument selection and method of semantic composition is problematic. A well-known counter-example to this view comes from neo-Davidsonian event semantics, where event participants including those selected by the event predicate combine with the predicate via PM and not FA (thanks to X (p.c.) for this insight).

[24]A view that has been expressed by several other researchers as well, most notably Higgins (1973) and Stowell (1981) for deverbal attitude nouns.

sition *of*, as shown in (93) for the non-deverbal noun *story*, then this means that the noun does not select content arguments in any form at all.

(93) I don't believe the story (*of that).

Moulton clarifies that although there are some examples like (94) where *story* does seem to co-occur with "*of* DP" complements, these arguments do not in fact represent the *content* of the story. Instead, they denote the *res* argument or *topic* of the story (i.e., what the story is about), which can be paraphrased with *about*-adjuncts as in (95).

(94) His story of Mary's birth is frightening. (pg. 24; ex. 11a)

(95) His story about Mary's birth is frightening.

Examples like (96) are further used to establish that *res* arguments are separate from content arguments. For instance, in (96), the story is about some *res*, Mary's birth, and the story about this *res* is that it was difficult.

(96) The story about Mary's birth is that it was difficult. (pg. 24; ex. 12a)

Thus, since the non-deverbal noun *story* cannot appear with a content-denoting argument of the form "*of* DP", it follows that any content-denoting clausal complement that appears with such a noun is also not an argument selected by the noun but only a modifier. So, in (97) the *that*-clause is not selected by the noun that it modifies.

(97) John believes [the story [that Bill loves Mary]$_{CP}$]$_{DP}$.

Applying this diagnostic to derived deverbal nouns, Moulton claims that generally speaking, these may or may not select "*of* DP" arguments depending on the process by which the nominal form is obtained from the verbal form. If the deverbal noun is an "event nominal" denoting the event itself (similar to the verbal form), internal arguments may yet be saturated. In other words, the event nominal in this case selects for the internal argument. However, if the deverbal noun is an "object nominal" denoting the object of the verb, it is not possible to further saturate the noun. In this case, the object nominal does not select for any internal arguments. This distinction between event nominals *vs.* object nominals is illustrated for the deverbal noun *love* in (98)-(99), which are variants of the examples given in Moulton (2009; pg. 43; ex. 55). Intuitively, in (98), the event nominal *love* is similar to the verbal form in (100), in that it denotes not the object of the love (Mary), but the act/event of John's loving. It is therefore capable of grammatically co-occurring with its internal argument ("*of* Mary"). In contrast, the object nominal in (99) denotes the object of the love, which is Mary herself. In this case, the internal argument may not be further saturated and the *love* is therefore said to not select for any arguments.

(98) John's love (of Mary) was unconditional.

(99) John's love (*of Mary) was a beautiful woman.

(100) John loved Mary unconditionally.

However, despite there technically being these two ways of deriving a noun from a verb (i.e., by forming event nominals or object nominals), Moulton observes that deverbal *content* nouns such as *belief*, *claim*, and *thought* derived from attitude-like verbs are always object nominals that themselves denote the content of the belief/claim/thought, and never event nominals de-

noting the event of believing/claiming/thinking. This is because they can never appear with "*of* DP" complements where the DP represents the internal content argument; see (101)-(103) taken from Moulton (2009). Thus, in Moulton's view, the deverbal content nouns are unable to saturate their internal argument, and consequently the clausal complements that they co-occur with, as in (92), must be adjunct modifiers.

(101) *John's belief of that idea (pg. 46; ex. 59a)

(102) *John's claim of something (pg. 46; ex. 60a)

(103) *Her thought of that (pg. 46; ex. 61a)

It is this claim that deverbal content nouns only form object nominals but never argument selecting event nominals that is of interest to us and that we will try to refute in the following subsection, since the nominals in Kannada participial LVCs also belong to this category.

6.3.2 Evidence that deverbal content nouns *can* form event nominals

We adopt a two-pronged approach to demonstrate that contra Moulton's claim, deverbal content nouns like the ones in complex participial LVCs in Kannada can in fact form event nominals capable of saturating the internal content argument. On the one hand, we take a closer look at some of the data from Moulton's thesis that has been used to argue against this claim and call into question the validity of some of the judgements that he presents. On the other hand, we consider specifically the Kannada participial LVC data and provide independent evidence showing that the nominal predicate in this type of LVC is indeed an event nominal, as diagnosed through a systematic application of the tests suggested in Grimshaw (1990) precisely for distinguishing between event *vs.* object nominals.

First, we observe that it is not always the case that when non-deverbal content nouns appear with "*of* DP" complements, these complements denote the *res* arguments. To see this, compare (104) with (105). Both are grammatical sentences; however, the intuition that the "*of* DP" phrase is a *res* argument is only strongly present in the case of (104). This intuition can be confirmed by observing that only (104) can co-occur with a *that*-clause, as shown in (106)-(107).

(104) His theory of crop circles' origins is crap. (variant of ex. 11c; pg. 24)

(105) The rumor of Mary's removal from the orchestra is untrue.

(106) His theory of crop circles' origins is that they were formed by UFOs.

(107) ??The rumor of Mary's removal from the orchestra is that she was removed because of incompetence.

A similar observation holds for deverbal content nouns as well: there are several attested occurrences of derived content nominals co-occurring with "*of* DP" complements. Some attested examples from COCA[25] are shown below in (108)-(111), with the relevant "*of* DP" complement underlined:

(108) They project an unshakeable belief of the rightness of their cause.

(109) His belief of the importance of the family as the foundation of the program...

[25]Corpus of Contemporary American English: *https://www.english-corpora.org/coca*

(110) Vietnamese have also been culturally imbued with the belief of the coexistence between yin and yang.

(111) He would reject Machiavelli's claim of the necessity of unlimited acquisition[26] as well as the unlimitedness of Hobbes's notion that happiness is the continual satisfaction of desire after desire, which ceases only in death.

Once again, it can be shown that these "*of* DP" continuations indeed represent the content and not the *res* argument, due to the ungrammaticality of modified COCA examples like (112)-(113).

(112) *Their belief of the rightness of their cause is that it is right.

(113) *Machiavelli's claim of the necessity of unlimited acquisition is that it is unnecessary.

Moreover, minimally different examples can be constructed to show that *belief*, like *love*, can be both an event nominal and an object nominal. Consider (114)-(115) both uttered in a context where John believes some claim which the speaker thinks is an obvious lie. For instance, imagine that John believes that the earth is flat—a notion that the speaker of the utterance wholeheartedly disagrees with. In this scenario, the noun *belief* in (114) is an object nominal, where it denotes the object of the belief itself, i.e., that the earth is flat. But in (115), the noun is an event nominal, since further saturation with *"of the earth being flat"* is allowed.

(114) John's belief is ridiculous.
(*Interpretation*: (The belief) that the earth is flat is ridiculous.)

(115) John's belief of the earth being flat must be reprimanded.
(*Interpretation*: John's act of believing that the earth is flat must be reprimanded.)

Thus, a reconsideration of the English deverbal content noun data discussed in Moulton (2009) calls into question the claim that such nouns never result in argument-selecting event nominals.

Moving now to the specific case of content nominals in Kannada participial LVCs, independent evidence may be found of their event nominal status by subjecting them to the diagnostic tests provided in Grimshaw (1990) to distinguish between event nominals *vs.* object nominals.

Grimshaw notes that many derived nominals in English are ambiguous between an interpretation in which they do take arguments obligatorily (these are the event nominals), and others in which they do not (these are object nominals[27]). For e.g., *examination* is an object nominal in (116), but an event nominal in (117) where an object argument (*the papers*) is obligatory. She proposes several tests that help determine which of these two types any occurrence of a given noun belongs to. In the next few paragraphs, we apply these tests to predicate nominals within the Kannada LVCs that co-coccur with participial complements, with a goal of showing that they are argument-selecting event nominals (that do in fact select for the participial complements attached to them).

(116) The examination took a long time.

(117) The instructor's examination *(of the papers) took a long time.

[26]This example and the one in (109) are further consistent with Grimshaw's (1990) characterization of deverbal nominals occurring with agentive possessives as event nominals.

[27]She terms these "simple event nominals" or "result nominals", but we will continue to refer to them as "object nominals".

First, Grimshaw notices that temporal possessives such as *yesterday's* and *today's* are permitted only with object nominals, and not with event nominals. An example of this is shown in (118) for English, where the temporal possessive is grammatical only with the version of the noun that does not select the "*of* DP" argument. We observe that such possessive modifiers are also disallowed in Kannada participial LVCs like (119), which we interpret to mean that the nominals within the participial LVCs are in fact event nominals.

(118) Tomorrow's assignment (*of difficult problems) will be hard to deal with.

(119) Avaru (*Raama-nu tirugi band-a) ivatt-ina ghooshaNe samaya-kke
They Rama-NOM turn came-RP today-GEN announcement time-DAT
sariyaagi maaDidaru.
correctly did-3.PL
"They made today's announcement (of Raama's return) right on time."

Second, while event nominals are able to be modified by purpose clauses, object nominals aren't. An example of this in English is shown in (120), where the argument is obligatory in order for the sentence to be grammatical. Such obligatoriness of the argument indicates that the noun indeed selects for it, and that the noun is therefore an event nominal. We find that this is true even of participial LVCs in Kannada, as shown in (121). This yet again suggests that the predicate nominal in (121) is an argument-selecting event nominal.

(120) The translation *(of the book) to make it available to a wider audience was a good idea.

(121) Siite$_k$-yu tanna$_k$ tande-ge sahaaya maaDakkoskara *(maduve
Siite-NOM her(REFL.) father-DAT help to.do marriage
maaDikoLLuva) nirdhaara maaDidaLu.
do-RP decision did-3.SG.F
"To help her father, Siite made the decision (of getting married)."

Next, only argument-selecting event nominals may be modified with event-modifying frequency adjectives such as *constant*, *frequent*, *daily*, *yearly* etc. It can be shown that Kannada participial LVCs can occur with these modifiers, indicating once again the nominal within the participial LVC is in fact an event nominal selecting for the participial complement:

(122) The yearly appointment *(of unqualified workers) damaged the company.

(123) Raaja-nu *(tanna prajegaL-ige kaaNikegaL-annu neeDu-a) vaarshika
king-NOM his subjects-DAT gifts-ACC give-RP yearly
ghoshaNe-annu yaavaagaluu samaya-kke sariyaagi maaDuttiddanu.
announcement-ACC always time-DAT correctly did-3.SG.M
"The king always made the yearly announcement (of distributing gifts to his subjects) right on time."

Finally, Grimshaw notes that nominal modifiers like the indefinite determiner, the numeral "one" and demonstratives like "that" occur only with object nominals but not event nominals. This is shown in the English example in (124). Once again, in accordance with the conclusion that the nominals within Kannada participial LVCs are event nominals, we find that a modifying demonstrative is ungrammatical within these constructions.

(124) They supervised that examination (*of the students' skills).

(125) Raama-nu (*RaavaNa-nannu kolluva) aa/ondu nirdhaara-(v)annu maaDidanu.
Raama-NOM RaavaNa-ACC kill-RP that/one decision-ACC did-3.SG.M
"Raama made that decision/a decision (of killing RaavaNa)."

The results of these diagnostic tests with Kannada participial LVCs along with the clarification of English deverbal content noun data noted above leads us to conclude that deverbal content nouns are not restricted to forming object nominals only. They may well be argument-selecting event nominals in certain contexts. Participial LVCs in Kannada are one such context. The predicate nominals within these LVCs are always understood to be event nominals that select the participial complements as arguments.

6.3.3 A further defense of the argumenthood of the participial complement in LVCs

In this subsection, we present one further observation in support of the argument status of the participial complement to the noun in participial LVCs. We discuss how the existence of the two different types of LVCs in Kannada (infinitival & participial) lends itself to a natural explanation under Grimshaw & Mester's (1988) theory of *Argument Transfer* in complex predicates. But crucially, for this explanation to hold, the participial complement must be an argument to the LVC and not an adjunct—giving us a further reason to surmise that this is in fact the case.

In Grimshaw & Mester (1988), the authors investigate sentence pairs consisting of the Japanese light verb *suru*, as shown in (126)-(127). On the basis of this data, they argue for a particular theory of complex predicate formation in which it is possible for one or more arguments of the predicate nominal to be transferred to the light verb *suru*, so that what used to be part of the argument structure of the nominal is now part of the argument structure of the light verb. Prior to the formation of the complex predicate, the light verb *suru* is thematically incomplete, consisting only of a skeletal argument structure. Thus, any argument selection or theta-marking that *suru* ultimately performs is said to be because of combining with the theta-assigning predicate nominal and the ensuing process of argument transfer.

(126) John-wa$_{\text{Agent}}$ [murobito-ni$_{\text{Goal}}$ [ookami-ga kuru-to]$_{\text{Theme}}$ [keikoku]$_{\text{NP}}$-o shita]$_{\text{VP}}$.
John-Top villager-to wolf-NOM come-Comp warn-ACC *suru*
"John warned the villagers that the wolf was coming." (pg. 213, ex. 18)

(127) John-wa$_{\text{Agent}}$ [murobito-ni$_{\text{Goal}}$ [[ookami-ga kuru-to]$_{\text{Theme}}$-no keikoku]$_{\text{NP}}$-o
John-Top villager-to wolf-NOM come-Comp-GEN warn-ACC
shita]$_{\text{VP}}$.
suru
"John warned the villagers that the wolf was coming." (pg. 212, ex. 15)

There are two possibilities for how argument transfer may occur during complex predicate formation. The first is that all arguments originally selected by the predicate nominal are transferred to the light verb. (126) instantiates such a case, where Agent, Goal and Theme are all transferred onto *suru*, making them complements to the verb in the final structure. In the second case, instantiated by (127), the nominal retains some argument-selecting capacity. Here, Agent and Goal are transferred onto *suru*, but the genitive case bearing Theme argument is retained by the noun, and consequently it is a complement to the head of the predicate nominal in the final structure.

The Japanese examples are highly reminiscent of the two types of Kannada LVCs. Like (126), infinitival LVCs can be construed as instances of argument transfer in which all of the argu-

ments selected by the nominal are borrowed onto the light verb. In (16) for instance, reproduced below in (128), the restructured infinitival complement denoting the *Theme* as well as the *Agent* DP are borrowed from the predicate nominal (*nirdhaara*, "decision") onto the light verb *maaDu* ("do"), as represented in (129).

(128) Raama-nu$_{\text{Agent}}$ [[mane-ge hoog(u)-**alu**]$_{\text{Theme}}$ [nirdhaara]$_{\text{NP}}$ maaDidanu]$_{\text{VP}}$.
Raama-NOM house-DAT go-INF decision did-3.SG.M
"Raama decided to go home."

(129) decision (Agent, Theme)
do ( )<acc>
decision ( ) + do **(Agent, Theme)** <acc>

On the other hand, participial LVCs in Kannada—like in (19) reproduced in (130)—can be said to instantiate a case of argument transfer represented in (131), in which only the Agent argument is borrowed onto the light verb. The participial *Theme* argument is a complement to the nominal predicate, as discussed extensively in §6.2.

(130) Raama-nu$_{\text{Agent}}$ [[[mane-ge hoogu-**a**]$_{\text{Theme}}$ nirdhaara]$_{\text{NP}}$ maaDidanu]$_{\text{VP}}$.
Raama-NOM house-DAT go-RP decision did-3.SG.M
"Raama decided to go home."

(131) decision (Agent, Theme)
do ( )<acc>
decision **(Theme)** + do **(Agent)** <acc>

Most importantly for us, the natural applicability of the argument transfer hypothesis to the Kannada LVC data lends strong support to the argument status of the participial argument to the noun in participial LVCs. In particular, the possibility of transferring the Theme-denoting complement from the nominal to the light verb (in infinitival LVCs) indicates that this complement must have been an argument selected by the nominal in the first place, since only arguments are capable of being transferred and not adjuncts[28].

[28]We would like to emphasize that the scope of our arguments re. the argumenthood of the participial complement extends only to those complements occurring with deverbal nominals in Kannada light verb constructions. That is, it is only the LVC nominal in Kannada that has been shown in this section to be capable of forming event nominals along with object nominals, and it is certainly only the LVC nominal that the reasoning based on the *Argument Transfer* hypothesis applies to.

Since the focus of this paper is limited to LVCs, we remain agnostic about whether the deverbal nouns behave similarly in a non-LVC context, like in complex noun constructions like (76). In such examples, it may well be the case that they only form object nominals, as suggested by Moulton (2009). For instance, we noted in section 6.1 that extraction from the participial complement of an LVC is allowed as seen in (73), but extraction from the participial complement within a complex noun construction is not—as in (71). While we took this contrast to be one of several arguments supporting the restructured status of the complement in participial LVCs, it is possible that it additionally reflects the argument status of the complement to the LVC and its adjunct status in the complex noun construction, since argument islands are weaker than adjunct islands. Such an explanation may also extend to light verb constructions in English *versus* complex noun constructions, as given in footnote (22). We leave further investigation of this point for future work. Note that Moulton himself does not make a distinction between deverbal content nominals in LVCs *vs.* other constructions, presumably because English lacks productive LVCs.

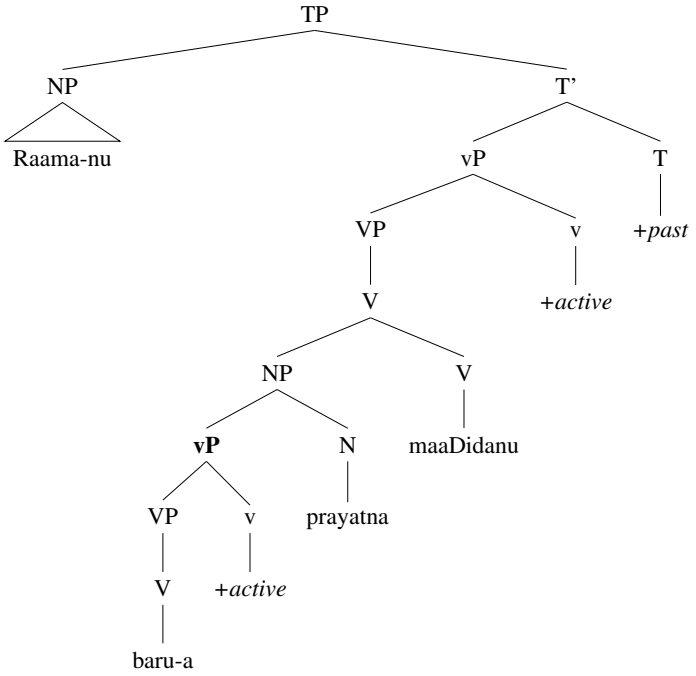
6.4 Non-uniform structures of participial complements

In the above discussion, we established three things pertaining to participial complements to Kannada LVCs. First, these complements are restructured when they combine with *Tenseless*/ *Irrealis* predicates, but not when they combine with *Propositional* predicates (§6.1). Second, they are nominal complements (§6.2). They attach to the nominal head within the participial LVC. Third, these complements are selected by the nominal, making them true arguments (similar to the infinitival complement), and not adjuncts (§6.3). The goal of this section is to provide syntactic trees for participial LVCs that instantiate these results.

Analogous to the *Tenseless* infinitival LVCs, the proposed structure for *Tenseless* participial LVCs like (132) is shown in (133). Here too, as in (60), the highest projection on the restructured complement is a structural Case checking vP projection (in bold). Notice however that in this case, unlike in (60), the participial complement is sister to the N head, indicating that it is an argument to the predicate nominal.

(132) Raama-nu [baru-a] prayatna maaDidanu.
Raama-NOM come-RP attempt did-3.SG.M
"Raama tried to come."

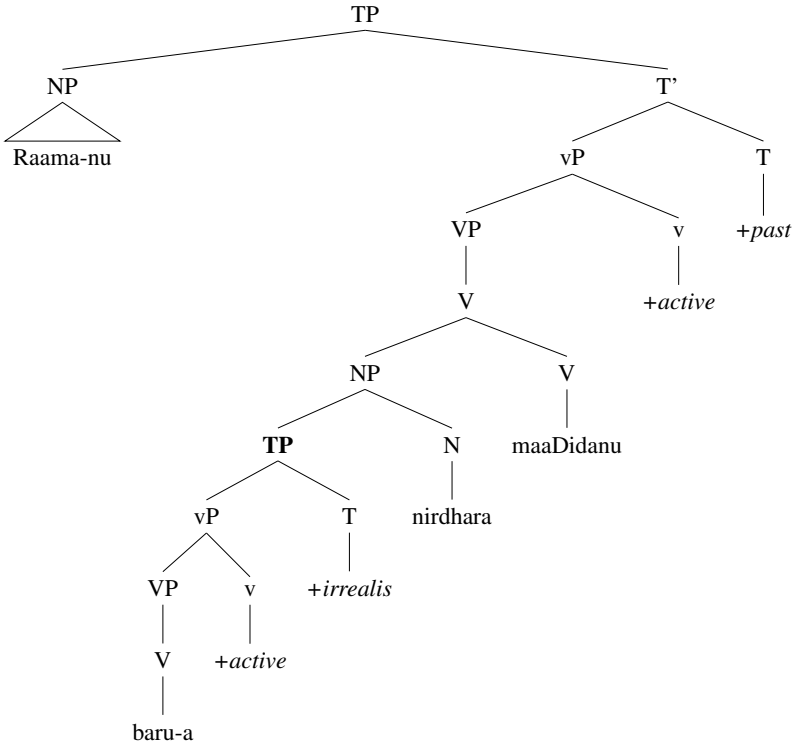
(133)



In the participial LVCs involving *Irrealis* predicates, the highest projection on the restructured participial complement is a defective TP carrying the [+*irrealis*] feature, as shown in (135).

(134) Raama-nu [baru-a] nirdhara maaDidanu.
Raama-NOM come-RP decision did-3.SG.M
"Raama made the decision to come."

(135)

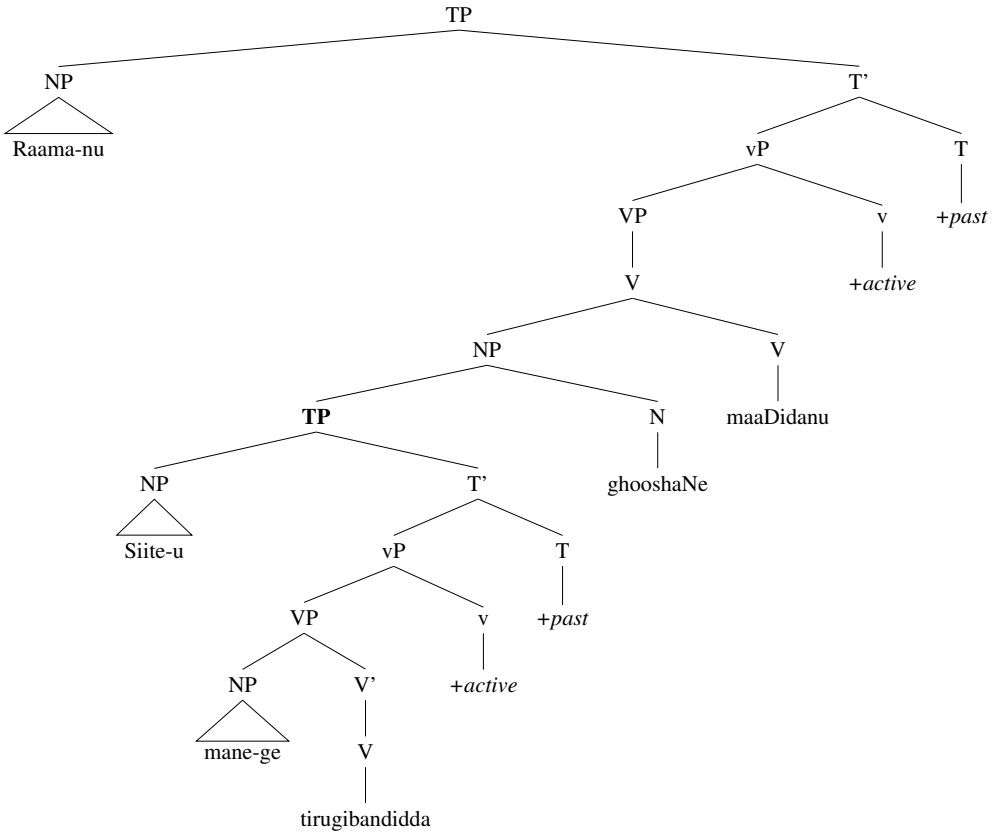


Finally, when participial complements are selected by *Propositional* predicates, they are instantiated as unrestructured clauses headed by a finite TP projection[29], which allow both for embedded subjects as well as independent tense inflections on the embedded predicate. An example of such a structure is shown in (137).

(136) Raama-nu [Siite-u mane-ge tirugibandidda] ghooshaNe maaDidanu.
Raama-NOM Siite-NOM home-DAT had.returned-RP announcement did-3.SG.M
"Raama announced that Siite had returned home."

[29]We do not posit that participial complements to *Propositional* predicates are headed by a CP projection because they never co-occur with complementizer *-anta*.

(137)



7 Conclusion

Complex (or clause-embedding) light verb constructions in Kannada form an interesting system of complementation that bears upon several theoretical questions in syntax. The following main insights emerged from our study of clausal complementation in such Kannada LVCs. First, predicates participating in LVCs select complements based on their semantic properties only, regardless of their morpho-syntactic realizations. In particular, we established that the predicate-complement pairs participating in complex LVCs in Kannada conform to a 3-way semantic typology that has been proposed as a cross-linguistic universal by previous researchers (Wurmbrand and Lohninger, 2019; Rochette, 1988). While only one of these types of LVC predicates selects for finite clauses that are characterized by their admissibility of embedded subjects and independent tense (and usually realized as a CP), the other two select for reduced clausal structures that do not permit either embedded subjects or independent tense.

The reduced clause, *restructured* complements of LVCs take the form of infinitival complements (obligatorily restructured) or participial complements (optionally restructured). We demonstrated that while the infinitival constituent is a verbal complement attaching to the V-head formed upon merging the light verb with the predicate nominal, the participial constituent attaches to the nominal head within the LVC. Several properties of the participial LVC, including its compatibility with Grimshaw and Mester (1988)'s *Argument Transfer* hypothesis, led us to conclude that the participial complements in these constructions are an argument of the predicate nominal and not just an adjunct. Finally, we have provided syntactic structures for the restructured infinitival and participial complements, which demonstrate that though restructured, these constructions are not completely devoid of all functional structure.

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