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## Editorial Statement

We are happy to bring to you the new issue the *Journal of South Asian Linguistics*. From our perspective, the journal has been shaping up quite nicely. We are encouraged by the healthy number of submissions and have decided to move to two issues a year. This will therefore be the first issue this year followed by a second issue in December.

The issue consists of three papers. The first paper is by Tafseer Ahmed and takes on the thorny and much-discussed topic of the unaccusative/unergative distinction and challenges a commonly assumed view according to which the unaccusative/unergative distinction corresponds to a single structural distinction. The author provides an impressive set of arguments against this received view arguing instead that the distinction should be thought of in terms of a number of independent semantic features. A detailed system is presented couched within Lexical-Functional Grammar that demonstrates how these features interact to derive the putative unaccusative/unergative asymmetries. We believe that in addition to providing a novel perspective on unaccusativity, the paper also makes an important contribution in highlighting the importance of animacy for the syntax of Urdu/Hindi.

The second paper is one by Elena Bashir on change in the negative conjugation of Brahui. We are very excited to have another contribution to our projected series of theoretically oriented descriptions of underdocumented languages. Brahui, of course, is itself very exciting being a Dravidian language spoken in Western Pakistan separated from the closest Dravidian language by considerable distance and time. The author explores how Brahui's Dravidian-style negative conjugation is changing as a result of intense language contact. The resulting article is an amazing snapshot of a linguistic system in the middle of morphosyntactic change.

An examination of the phenomenon of circumstantial control in Telugu by Youssef Haddad completes this issue. The paper takes further an exciting line of work by the author examining the until recently poorly understood phenomenon of Backward Control and looking at in the context of control into conjunctive participle clauses. These clauses are found in most South Asian languages and the author uses a particular manifestation of theirs in Telugu to argue for an extension of the set of motivations that allow for syntactic movement within the Minimalist Program. In doing so, the author gives a detailed account of the behaviour of conjunctive participles, closely related infinitival clauses in Telugu, and a similar construction in Sinhalese. Detailed analyses of shared constructions in a number of South Asian languages is likely to bring us towards a deeper explanation of these constructions and of the range of variation. We see this paper as a major first step in that direction.

The collections of papers illustrates nicely the depth of serious empirical work on South Asian languages and the diversity of theoretical approaches being explored. We have a paper within the Minimalist Framework, a paper within Lexical-Functional Grammar, and a paper that comes from the intersection of synchronic change and language contact. We feel inspired by the range of topics and languages covered and the fact that the journal is a venue for communication across parochial divides that often impede sharing of core insights and the development of adequate descriptions. We hope that you, our reader, will also be inspired and will use that inspiration to contribute to a future issue of the journal.

Finally, we would like to thank Jaouad Mousser, who helped significantly with the necessary L<sup>A</sup>T<sub>E</sub>X type-setting, to Anette Hautli and Melanise Seiß for further help with type-setting and editing the volume and to Sebastian Sulger for maintaining the journal website. Their labor was partly funded by the University of Konstanz as part of an on-going CSLI-Konstanz cooperation and we would like to thank the University of Konstanz for supporting our publication effort. As ever we also thank Dikran Karaguezian of CSLI Publications for his role as a continually outstanding and supportive publisher.

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# The Unaccusativity/Unergativity Distinction in Urdu

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## ABSTRACT

The paper discusses the problems regarding classification of intransitive verbs into two distinct classes, i.e. unaccusative and unergative, and presents underspecified semantic features as the solution of these problems. The unergative/unaccusative distinction has been shown to exist crosslinguistically and language specific tests have been proposed as diagnostics. With respect to Urdu/Hindi, we find that there are many intransitives that act both like unaccusatives as well as unergatives in different semantic contexts. This paper therefore proposes to abandon a strict two-way distinction between unaccusatives and unergatives, as has already been suggested for some Germanic and Romance languages. We present an alternative model which uses (lexical) semantic features to model different constructions involving Urdu/Hindi intransitive verbs.

## 1 Introduction

The article discusses the classification of intransitive verbs into two distinct classes: unaccusative and unergative (Burzio 1981, 1986). Verbs such as *burn*, *fall*, *drop*, and *sink* etc. that have a patient/theme subject are supposed to be unaccusative. Verbs such as *work*, *play*, *speak*, and *smile* etc. that have an agentive subject are supposed to be unergative. The unergative/unaccusative distinction has been shown to exist crosslinguistically and language specific tests have been proposed as diagnostics. This is true for Urdu/Hindi as well (Bhatt 2003).

On the other hand, we find that there are many Urdu/Hindi intransitives that can act both like unaccusatives as well as unergatives depending upon the semantic context. Different authors have pointed out this fact for other languages, especially for the Romance and Germanic families (Sorace 2000, Kaufmann 1995, Keller and Sorace 2003). This article therefore proposes to abandon a strict two-way distinction between unaccusatives and unergatives and instead proposes semantic features to model the grammaticality of different syntactic constructions involving intransitive verbs.

The paper is organized as follows. Section 2 introduces the original Unaccusativity Hypothesis and proposed tests for the unaccusative/unergative distinction. Section 3 provides Urdu/Hindi examples to show that the unaccusativity/unergativity tests do not work for all usages of Urdu/Hindi verbs. It also shows that the absence of a clear-cut unergative/unaccusative distinction is a crosslinguistic phenomenon. Section 4 lists different proposals to solve the problem and discusses their advantages and disadvantages. Section 5 elaborates on the conclusion of the debate, i.e. different syntactic constructions can be modeled by semantic features. We follow Butt and King (2005)'s implementation of semantic features within Lexical Functional Grammar (LFG; Bresnan 2001, Dalrymple 2001). The analysis presented here provides detailed lexical entries with semantic features and works through several example sentences to show how the proposed model works for Urdu/Hindi.

## 2 The Unaccusativity Hypothesis and Tests

Intransitive verbs are traditionally classified as unergative and unaccusative. This distinction is based on the Unaccusative Hypothesis that states that the single argument/subject of some intransitive clauses acts like an underlying theme/patient (Perlmutter 1978).

- (1) The boat sank. (unaccusative clause)
- (2) The man ran. (unergative clause)

It is important to note that Perlmutter introduced the concept of unergative and unaccusative **clauses** and not of unergative and unaccusative **verbs**. In his paper, introducing the unaccusative hypothesis, he presents examples of verbs with hybrid behavior. One of his examples is the verb *fall* in English.

- (3) a. Marcia fell from the second-story window. (unaccusative clause)
- b. Marcia fell right on cue in the second act. (unergative clause)

Perlmutter classified (3a) as an unaccusative clause and (3b) as an unergative clause as the former is (seemingly) a non-volitional act while the latter is a volitional act.

Later on, Burzio (1981, 1986) popularized the idea of unaccusative and unergative verbs (in place of clauses). Burzio, working in the Government Binding framework, stated that the sole argument of an unaccusative verb is an internal argument, while that of an unergative is an external argument. The verbs *burn*, *fall*, *drop*, *sink* etc. are examples of unaccusatives, while the verbs *work*, *play*, *speak*, *smile* etc. are examples of unergatives.

### 2.1 Unaccusativity tests crosslinguistically

The unaccusative/unergative distinction is found in many languages. Different languages have different tests for this distinction. Some famous tests are agent nominalization (only for unergatives), participle formation (only for unaccusatives), auxiliary selection (*have* for unergatives vs. *be* for unaccusatives in Romance and Germanic languages), *ne* cliticization (only with Italian unaccusatives), resultative formation (only for unaccusatives) (cf. Perlmutter 1978, Burzio 1986, Hoekstra 1998 and others). These tests are exemplified below. The first four examples, (4)–(7), contrast the German unergative verb *lachen* ‘laugh’ with the unaccusative verb *fallen* ‘fall’. The examples are from Kaufmann (1995).

#### Agent nominalization <German>

- (4) a. der Lach-er  
      the laugher  
      ‘the person who laughs’ (unergative)
- b. \*der Fall-er  
          the faller  
          ‘the person who falls’ (unaccusative)

(4a) has the unergative verb *lachen* ‘laugh’ that allows the derived nominalized form, i.e. *Lacher* ‘the person who laughs’. However, unaccusative verbs do not allow a similar derived form. Therefore, the unaccusative verb *fallen* ‘fall’ does not have a nominalized form *Faller*.

#### Past participle <German>

- (5) a. der gefallene Mann  
      the fallen man  
      ‘the person who fell’ (unaccusative)
- b. \*der gelachte Mann  
          the laughed man  
          ‘the person who laughed’ (unergative)

(5a) shows that the unaccusative verb *fallen* ‘fall’ can be used to form a past participial nominal modifier. On the other hand, past participial nominal modifier cannot be formed on unergative verbs. For this reason, (5b), which involves the unergative verb *lachen* ‘laugh’, is not grammatical.

#### Impersonal passive <German>

- (6) a. Es wurde gelacht  
it was laughed  
‘(People) laughed’ (unergative)  
b. \*Es wurde gefallen  
it was fallen  
‘(People) fell.’ (unaccusative)

(6b) shows that unaccusative verbs cannot occur in an impersonal passive construction. The unergative verb *lachen* ‘laugh’ can be used in an impersonal passive construction as in (6a).

#### Auxiliary selection <German>

- (7) a. Der Mann hat/\*ist gelacht  
the man has/is laughed  
‘The man laughed.’ (unergative)  
b. Der Mann ist/\*hat gefallen  
the man is/has fallen  
‘The man fell.’ (unaccusative)

The above example shows another test for the unergative/unaccusative distinction. (7a) has an unergative verb *lachen* ‘laugh’, hence the sentence has the auxiliary *hat* that is a form of *haben* ‘have’. This auxiliary is associated with unergative verbs. The unaccusative verbs, on the other hand, are associated with the auxiliary *sein* ‘be’. Therefore, (7b), which has an unaccusative verb, has the auxiliary *ist* that is a form of *sein* ‘be’.

#### Ne cliticization <Italian>

- (8) a. *Giovani ne inviterà molti*  
Giovani of them invited many  
‘Giovani invited many of them.’ (object of transitive verb)  
b. *Ne arrivano molti.*  
of them arrive many  
‘Many of them arrived.’ (subject of unaccusative verb)  
c. \**Ne telefonano molti.*  
of them telephone many  
‘Many of them telephoned.’ (subject of unergative verb) (Burzio 1986, 22–23)

(8) demonstrates the *ne* cliticization test for Italian. The Italian clitic *ne* can be used to replace the direct object of a transitive verb (see (8a)) or the subject of an unaccusative verb (see (8b)). However, it cannot be used to replace the subject of an unergative verb (see (8c)).

English also has a test for the unergative/unaccusative distinction. An unergative verb cannot be part of the resultative construction. The example (9a) has an unaccusative verb *freeze* that is used in the resultative construction. However, the unergative verb *talk* in (9b) cannot be directly used as a part of a resultative construction.

#### Resultative <English>

- (9) a. The river froze solid. (unaccusative)  
b. \*He talked hoarse. (unergative) (Van Valin 1990)

The purpose of these tests is to show that syntactic behaviors of unergative and unaccusative verbs are different. Intransitive verbs in many languages can be classified as either unaccusative or unergative on the basis of these and similar tests.

## 2.2 Unaccusativity tests for Urdu/Hindi

Bhatt (2003) proposed the following tests for unaccusativity/unergativity in Urdu/Hindi:

### Tests for the unaccusative/unergative distinction

- (10) i. Unlike the unaccusative, the past participle of unergative cannot be used in a reduced relative.  
 ii. Impersonal passives can be formed with unergatives, but not with unaccusatives.  
 iii. Unergatives pattern with transitives and not unaccusatives with respect to how they enter into the inabilitative construction: both transitives and unergatives can only appear in the inabilitative construction with passive syntax. Unaccusatives appear in the inabilitative with active syntax.

Let us apply these tests with respect to the unergative verb *daur* ‘run’ and the unaccusative verb *kaṭ* ‘(get) cut’.<sup>1</sup> The following example illustrates the reduced relative test. This test is similar to the perfective participle test shown in (5).

### Reduced Relative

- (11) a. \**daur*-aa (huu-aa) laṛkaa  
 run-Perf.M.Sg be-Perf.M.Sg boy.M.Sg  
 ‘the run boy’ (Unergative)  
 b. *kaṭ*-e (huu-e) p<sup>h</sup>al  
 cut-Perf.M.Pl be-Perf.M.Pl fruit.M.Pl  
 ‘the cut fruit’ (Unaccusative)

The past participle of the unaccusative verb *kaṭ* ‘(get) cut’ can be used with the reduced relative in (11b). However, the unergative verb *daur* ‘run’ in (11a) cannot be used with the reduced relative. Now consider the examples for the impersonal passive test mentioned in (10ii).

### Impersonal Passive

- (12) a. *cal*-o *daur*-aa *jaa*-e  
 come-Subjv.2.Sg run-Perf.M.Sg go-Subjv.M.Sg  
 ‘Come on, let it be run (let us run)’ (Unergative)  
 b. \**cal*-o *kaṭ*-aa *jaa*-e  
 come-Subjv.M.Sg cut-Perf.M.Sg go-Subjv.M.Sg  
 ‘Come on, let it be cut (let us cut)’ (Unaccusative)

(12a) is an impersonal passive construction containing the unergative verb *daur* ‘run’. An impersonal passive can, however, not be formed on the unaccusative verb *kaṭ* ‘(get) cut’. The facts fit Bhatt’s test (10ii), which says that impersonal passives cannot be formed with unaccusatives. Bhatt’s third test (10iii) is related to the “inability construction with passive syntax” in Urdu/Hindi (Davison 1990). The syntax of the inability construction is like that of a negative passive sentence. An example of an inability construction for a transitive verb is given in (13).

<sup>1</sup>For transcription of Urdu, ‘a’, ‘i’ and ‘u’ are used for short vowels and ‘aa’, ‘ii’ and ‘uu’ are used for the long ones. ‘ai’ is used for an open mid front unrounded vowel, ‘au’ for an open mid back rounded vowel. Small ‘c’ is used for voiceless alveolar affricate. Glosses used in this paper are: Caus=Causative, Erg=Ergative, F=Feminine, Impf=Imperfective, Inst=Instrument, M=Masculine, Obl=Oblique, Perf=Perfective, Pl=Plural, Pres=Present, Prog = Progressive, Sg=Singular, Subjv = Subjunctive.



- (13) niinaa=se            p<sup>h</sup>al kaat-aa            nahī ga-yaa  
 Nina.F.Sg=Inst fruit cut.Caus-Perf.M.Sg not go-Perf.M.Sg  
 ‘Nina was not able to cut the fruit.’

Comparing the above sentence with (12) shows that both the constructions need perfective form of the verb followed by the verb *jaa* ‘go’. However, the above sentence (inability construction) is not a passive sentence because the *se* marked argument acts as subject in the inability construction. It passes subjecthood tests for Urdu/Hindi (Mohanani 1994). On the other hand, the *se* marked demoted agent in the passive construction is an oblique in Urdu. In Hindi, the demoted agent in the passive construction is marked by *dvaaraa*. Bhatt notes that the inability construction with active syntax also has a *se* marked subject.

- (14) niinaa=se            p<sup>h</sup>al nahī kat-aa  
 Nina.F.Sg=Inst fruit not cut-Perf.M.Sg go-Perf.M.Sg  
 ‘Nina was not able to cut the fruit.’

The following examples illustrate test (10iii) related to inability constructions. (15a) is grammatical because it contains the unergative verb *daur* ‘run’. (15b) is ungrammatical as it contains the unaccusative verb *kat* ‘(get) cut’.

#### Inability Construction (with passive syntax)

- (15) a. niinaa=se            daur-aa            nahī ga-yaa  
 Nina.F.Sg=Inst run-Perf.M.Sg not go-Perf.M.Sg  
 ‘Nina was not able to run.’ (Unergative)  
 b. \*p<sup>h</sup>al=se            kat-aa            nahī jaa-taa  
 fruit.M.Sg=Inst cut-Perf.M.Sg not go-Imperf.M.Sg  
 ‘That fruit was not able to be cut.’ (Unaccusative)

Hence these three tests show that the verb *daur* ‘run’ is unergative and the verb *kat* ‘(get) cut’ is unaccusative. Bhatt (2003) thus classified *cal* ‘move, walk’, *daur* ‘run’, *g<sup>h</sup>uum* ‘wander’, *hans* ‘laugh’, *hat* ‘move’, *j<sup>h</sup>uul* ‘swing’, *kuud* ‘jump’, *naach* ‘dance’ and *ur* ‘fly’ as unergative verbs.

Bhatt also mentioned that in most (if not all) of the causatives of unergatives, the interpretation of the causative does not involve an agentive reading for the causee, suggesting that they are like simple transitives. He gives the following examples in (16) in support of his claim.

- (16) a. patang/ciryaa            ur rah-ii            hai  
 kite.F.Sg/bird.F.Sg fly Prog-F.Sg be.Pres.3.Sg  
 ‘A kite/bird is flying.’ (Unergative)  
 b. anjali            patang/\*?ciryaa            ur-aa            rah-ii            hai  
 Anjali.F.Sg kite.F.Sg/bird.F.Sg fly-Caus Prog-F.Sg be.Pres.3.Sg  
 ‘Anjali is flying a kite/\*bird.’ (Causative of unergative)

The verb *ur* ‘fly’ is an unergative verb. The example (16b) is grammatical only when an inanimate non-agentive theme *patang* ‘kite’ is used. When an agentive theme like *ciryaa* ‘bird’ is used, the example is odd or ungrammatical.

Another proposal for testing unergativity/unaccusativity distinction in Urdu/Hindi comes from the differential acceptability of light verbs with unergatives and unaccusatives. Miriam Butt (p.c.) suggested acceptance of *jaa* ‘go’ in its use as a light verb<sup>2</sup> after the root form of the main verb as a test for unaccusativity. The light verb *jaa* ‘go’ (and its irregular perfective form *ga-*) follows unaccusative verbs, but it cannot follow unergative verbs. In the following example (17a), *ban* ‘(get) make’ is an unaccusative verb, hence it can be followed by the auxiliary *jaa* ‘go’. However, the verb *hans* ‘laugh’ used in (17b) is an unergative verb, hence it cannot be followed by *jaa* ‘go’.

<sup>2</sup>The auxiliary verb *jaa* ‘go’ behaves differently in different syntactic contexts. The light verb usage needs to be distinguished from its use in passive and ability constructions where it combines with a perfective form of the main verb.

- (17) a. g<sup>h</sup>ar            ban    ga-yaa  
           house.M.Sg make go-Perf.M.Sg  
           ‘The house (got) built.’  
       b. \*lar<sup>h</sup>kaa        hans    ga-yaa  
           boy.M.Sg laugh go-Perf.M.Sg  
           ‘The boy laughed.’

There is another two-way distinction among intransitive verbs based on the use of the ergative marker *ne*. The ergative marker *ne* is primarily used in Urdu to mark the subject of the sentences containing transitive verbs in the perfective form (as in a typical split-aspect language). However, the ergative is also used in some other constructions to show volition (cf. Butt and King (1991, 2005)). One of the volitional usages of *ne* occurs with a few bodily function verbs like *k<sup>h</sup> āās* ‘cough’, etc. (Davison 1999). These verbs allow an optional *ne* after the subject to mark volitional action.

- (18) a. raam            k<sup>h</sup>āās-aa  
           Ram.M.Sg cough-Perf.M.Sg  
           ‘Ram coughed.’  
       b. raam=*ne*            k<sup>h</sup>āās-aa  
           Ram.M.Sg=Erg cough-Perf.M.Sg  
           ‘Ram coughed (intentionally).’

The use of the ergative marker *ne* in example (18b) implies that the subject coughed intentionally. Example (18a) can be used for the act of intentional or unintentional coughing. In the next sections, we discuss whether the presence/absence of the ergative *ne* can be used as a test for the unergativity/unaccusativity distinction.

### 3 “Irregular” behavior of intransitive verbs

In the previous section, we presented the concept of the unergative/unaccusative distinction and the tests for this distinction in Urdu/Hindi and other languages. However, further inquiry reveals that the situation is not as simple. We find examples in which the verbs do not behave in the expected manner. In many sentences of Urdu/Hindi and other languages, unergative verbs show unaccusative behavior and unaccusative verbs show unergative behavior. In the following discussion, such examples are presented.

#### 3.1 Revisiting Bhatt’s tests for Urdu/Hindi

Bhatt’s tests for the unergative/unaccusative distinction work for many verbs. However, we find irregular behavior with respect to some verbs. Consider the example of the verb *ur* ‘fly’ that is considered to be an unergative verb. The verb can have either an animate subject, e.g., *ciṛyaa* ‘bird’ or an inanimate subject, e.g., *patang* ‘kite’. Similarly, *cal* ‘move’ is also considered to be an unergative verb. It also allows for animate subjects, e.g., *lar<sup>h</sup>kiī* ‘girl’ as well as inanimate subjects, e.g., *golii* ‘bullet’. In the following examples, Bhatt’s first test (10i) is applied to these verbs with both animate and inanimate subjects.

- (19) a. ciṛyaa        ur-ii  
           bird.F.Sg fly-Perf.F.Sg  
           ‘The bird flew.’ (animate subject)  
       b. patang        ur-ii  
           kite.F.Sg fly-Perf.F.Sg  
           ‘The kite flew.’ (inanimate subject)  
       c. \*ur-ii            (hūu-ii)        ciṛyaa  
           fly-Perf.F.Sg be-Perf.F.Sg bird.F.Sg  
           ‘the flown bird’ (animate subject, reduced relative test)

- d. ur-ii (huu-ii) patang  
 fly-Perf.F.Sg be-Perf.F.Sg kite.F.Sg  
 ‘the flown kite’ (inanimate subject, reduced relative test)

In the example (19c), the reduced relative construction with an animate subject acts according to Bhatt’s test, but it fails to do so with an inanimate subject in (19d). When the putative unergative verb takes an inanimate subject, then a reduced relative is in fact possible.

Bhatt’s second test involves impersonal passives. The example construction given in Bhatt (2003) only works with human subjects. A non-human subject with an unergative verb makes the sentence ungrammatical. This is illustrated in (20) with the “unergative” verb *ur* ‘fly’.<sup>3</sup>

- (20) a. ciryaa/patang ur-ii  
 bird.F.Pl/kite.F.Pl fly-Perf.F.Sg  
 ‘The bird/kite flew.’  
 b. ???cal-o ur-aa jaa-e  
 come-Subjv fly-Perf go-Subjv  
 ‘Come on, let it be flown (let us fly)’ (for birds)  
 c. \*cal-o ur-aa jaa-e  
 come-Subjv fly-Perf go-Subjv  
 ‘Come on, let it be flown (let us fly)’ (for kites)

A reason for the ungrammaticality or weirdness of the examples (20b)–(20c) is that the word *cal-o* (subjunctive ‘come/move’) is only compatible with human arguments. Hence, this construction cannot be used with non-human subjects. As Bhatt’s second test says “impersonal passive can be formed on unergatives”, we cannot claim (20) as a proper counterexample; but it is evident that the acceptability of impersonal passive constructions does not depend only on the unergative/unaccusative distinction and that a verb can have both acceptable/unacceptable impersonal passive sentences depending on the animacy of the subject.

Bhatt’s third test (10iii) is related to the inability construction. This construction also shows hybrid results with different kinds of subjects with the same verb. This is shown in (21) with the “unergative” verb *ur* ‘fly’.

- (21) a. ciryaa=se ur-aa nahī ga-yaa  
 bird.F.Sg=Inst fly-Perf.M.Sg not go-Perf.M.Sg  
 ‘The bird was not able to fly.’  
 b. \*patang=se ur-aa nahī ga-yaa  
 kite.F.Sg=Inst fly-Perf.M.Sg not go-Perf.M.Sg  
 ‘The kite was not able to fly.’

The above examples show that the verb *ur* ‘fly’ can pattern both with transitives (compare (13) and (21a)) and unaccusatives (compare (14) and (21b) with respect to how they enter into the inability construction). The real difference in these examples is the animacy of the subject.

So far, we applied tests on so-called “unergative” verbs and found that their behavior changes with respect to the animacy of the subject. We find similar results with “unaccusative” verbs as well. For example, *utar* ‘descend’ accepts both inanimate and animate subjects.

- (22) a. laṛkii paanii=mē utr-ii  
 girl.F.Sg water=in descend-Perf.F.Sg  
 ‘The girl descended in the water.’  
 b. kaṣṭii paanii=mē utr-ii  
 boat.F.Sg water=in descend-Perf.F.Sg  
 ‘The boat descended in the water.’

<sup>3</sup>As we present the case that many supposedly unergative or unaccusative verbs show hybrid behavior, we do not use the terms unergative or unaccusative for these verbs. Instead, we use the terms in quotation marks, i.e. “unergative” or “unaccusative” for these verbs which are traditionally considered as unergative or unaccusative respectively.

The following sentences are an example of the application of Bhatt's first test (reduced relative formation). The verb *utar* 'descend' in these sentences shows that both animate and inanimate subjects allow a reduced relative, and hence are not unergative.

- (23) a. paanii=mē     utr-ii                    (huu-ii)     larḱii  
           water.M.Sg=in descend-Perf.F.Sg be-Perf.F.Sg girl.F.Sg  
           'the girl descended in water'
- b. paanii=mē     utr-ii                    (huu-ii)     kaḱtii  
           water.M.Sg=in descend-Perf.F.Sg be-Perf.F.Sg boat.F.Sg  
           'the boat descended in water'

However, Bhatt's third test shows that clauses having the verb *utar* 'descend' with animate subjects behave as unergative and that the corresponding clauses with inanimate subjects behave as unaccusative. Consider example (24) for the inability construction.

- (24) a. larḱii=se     paanii=mē     utr-aa                    nahī ga-yaa  
           girl.F.Sg=Inst water.M.Sg=in descend-Perf.M.Sg not go-Perf.M.Sg  
           'The girl could not descend in the water.'
- b. \*kaḱtii=se     paanii=mē     utr-aa                    nahī ga-yaa  
           boat.F.Sg=Inst water.M.Sg=in descend-Perf.M.Sg not go-Perf.M.Sg  
           'That boat could not descend in the water.'
- c. larḱii=se     kaḱtii     paanii=mē     nahī utr-ii  
           girl.F.Sg=Inst boat.F.Sg water.M.Sg=in not descend-Perf.F.Sg  
           'The girl wasn't able to lower the boat into the water.'

(24a–b) have inability constructions with passive syntax. (24a) with the putatively unaccusative verb *utar* 'descend' is grammatical because it has an animate subject *larḱii* 'girl'. Hence it behaves like an unergative in accordance with Bhatt's third test (10iii). However, (24b) which has the same verb but with an inanimate subject *kaḱtii* 'boat' is not a grammatical sentence. Moreover the verb with the same inanimate subject has an inability construction with active syntax. Verbs with this property are considered unaccusative. Hence, the verb *utar* 'descend' acts both as unergative and unaccusative based on the animacy of the subject. The Urdu/Hindi verbs *barḱh* 'increase', *uṭḱh* 'rise', *nikal* 'come out', *gir* 'fall', *carḱh* 'climb', *pouhāc* 'reach' etc. behave similarly.

Bhatt has another observation about unergative and unaccusative verbs. He says that most (if not all) causatives of unergatives act as transitive with a non-agentive reading of the causee. However, many examples of causatives of unergatives with an agentive causee exist. For example, consider (25), which contains a causative of the unergative verb *hans* 'laugh' and which has an agentive causee.

- (25) masxare=ne     baadjaah=ko     hans-aa-yaa  
           Joker.M.Sg=Erg king.M.Sg=Dat laugh-Caus-Perf.M.Sg  
           'The joker made/had the king laugh.'

Hence, it is another example that shows that there is no clear-cut distinction between the syntactic behavior of unergatives and unaccusatives. Even example (16b) given by Bhatt, presented here as (26), has an agentive reading for the causee *ciṛyaa* 'bird'. If the bird is sitting on the tree and Anjali shakes its branches, then the bird will fly. In this scenario, we can use the following sentence.

- (26) anjalii     ciṛyaa     uṛ-aa     rah-ii     hai  
           Anjali.F.Sg bird.F.Sg fly-Perf Prog-F.Sg be.Pres.3.Sg  
           'Anjali is flying a bird.' (Causative of unergative)

Hence we have shown that there are many verbs in Urdu/Hindi that show the behavior of both unergative as well as unaccusative verbs when Bhatt's tests are applied on them. We need an explanation for the behavior of these verbs.

### 3.2 Other Urdu/Hindi tests and issues

In addition to Bhatt's tests, the *jaa* 'go' light verb test can be used. The test gives consistent results without distinguishing between animate/human and inanimate subject. The unaccusative verb *utar* allows *gayii* (perfective form of *jaa*) with both types of the subject, as shown in the following examples.

- (27) a. *kaftii paanii=mē utar ga-yii*  
 boat.F.Sg water.M.Sg=in descend go-Perf.F.Sg  
 'The boat had descended in the water.'  
 b. *laṛkii paani=mē utar ga-yii*  
 girl.F.Sg water.M.Sg=in descend go-Perf.F.Sg  
 'The girl had descended in the water.'

However, this test does not work properly with verbs like *ur* 'fly' and *b<sup>h</sup>aag* 'run' that are commonly considered as unergative. This test classifies these verbs as unaccusative verbs, as shown in (28) and (29). Hence the *jaa* 'go' test cannot be used to successfully distinguish between unergative and unaccusative verbs.

- (28) *ciṛyaa ur ga-yii*  
 bird.F.Sg fly go-Perf.F.Sg  
 'The bird had flown.'  
 (29) *laṛkaa b<sup>h</sup>aag gay-aa*  
 boy.M.Sg run go-Perf.M.Sg  
 'The boy had run.'

Another candidate for distinguishing unergative and unaccusative verbs is the ergative case marker *ne*. As already discussed, it is used optionally with a few intransitive subjects and is associated with volition (Butt and King 1991).

- (30) a. *raam k<sup>h</sup>āās-aa*  
 Ram.M.Sg cough-Perf.M.Sg  
 'Ram coughed.'  
 b. *raam=ne k<sup>h</sup>āās-aa*  
 Ram.M.Sg=Erg cough-Perf.M.Sg  
 'Ram coughed (intentionally).'

Like Butt's *jaa* 'go' test, it also divides intransitive verbs into two classes. However, this division does not correspond to the traditional sets of unergative and unaccusative verbs. The division also does not correspond to the division effected by the *jaa* 'go' test.

There are verbs with agentive subjects that are traditionally considered to be unergatives, but these verbs do not allow an ergative marker with the subject. An example is the verb *tair* 'swim'.

- (31) *\*raam=ne tair-aa*  
 Ram.M.Sg=Erg swim-Perf.M.Sg  
 'Ram swam.'

Hence both the *jaa* 'go' test and the optional ergative marker test successfully divide the intransitive verbs into two classes. However, these classes cannot be considered as unergative and unaccusative because the verbs with agentive subjects (a supposed property of unergatives) are present at both sides of the divide. In section 5, we discuss other semantic properties related to these phenomena. In the next section, we examine variability with respect to unergativity/unaccusativity tests in other languages.

### 3.3 Crosslinguistic scenario

We have seen that Urdu/Hindi has no clear-cut distinction between unaccusatives and unergatives. This failure of unaccusativity/unergativity tests has also been reported for other languages such as

German, Dutch and Italian.

In (7a–b) and the related discussion, we saw that unergatives and unaccusatives select different auxiliaries. In Italian, unergative verbs take *avere* ‘have’ and unaccusatives take *essere* ‘be’. But there is a class of verbs that allow both *avere* and *essere*. These verbs include *correre* ‘run’, *saltare* ‘jump’ and *volare* ‘fly’ (Van Valin 1990). The same verbs, traditionally classified as unergative, allow *ne*-cliticization in certain contexts. However, we know that *ne*-cliticization is considered as not possible with unergative verbs, as discussed with regard to (8).

Sorace (2000), Keller and Sorace (2003) have shown that there is no two-way distinction in Germanic and Romance language for auxiliary selection. German motion verbs actually allow both the auxiliaries *haben* ‘have’ and *sein* ‘be’ depending on the presence or absence of a bounding PP.

- (32) a. Die Frau hat/?ist im Fluss geschwommen.  
 the woman has/is in river swum  
 ‘The woman swam in the river.’ German
- b. Die Frau ist/\*hat ans Ufer geschwommen.  
 the woman is/has to shore swum  
 ‘The woman swam to the shore.’ German

In (32a), manner of motion is described and hence *hat* ‘has’ is preferred. In (32b), the motion towards the shore is described that makes the event bounded and the verb selects *ist* ‘be’ that is related to the change of state/telic verbs.

Keller and Sorace (2003) show that there is a gradient of auxiliary selections with seven classes of intransitive verbs in German. They propose an Auxiliary Selection Hierarchy of verb classes, given in (33). The leftmost class of the hierarchy has the greatest potential to allow *sein* ‘be’, and the rightmost class has the greatest potential to allow *haben* ‘have’.

- (33) change of location > change of state > continuation of state > existence of state > uncontrolled process > controlled process (motional) > controlled process (non-motional)

A similar hybrid behavior has been noted for impersonal passives as well. Kaufmann (1995) gives examples of the German verb *tanzen* ‘dance’ in an animate and inanimate context, as shown in (34) and (35), respectively.

- (34) a. Auf der Party tanzten viele Gäste.  
 at the party danced many guests  
 ‘At the party many guests danced.’ German
- b. Auf der Party wurde (von vielen Gästen) getanzt.  
 at the party was by many guests danced  
 ‘It was danced at the party (by many guests).’ German
- (35) a. Vor dem Fenster tanzten Schneeflocken.  
 in front of the window danced snow-flakes  
 ‘In front of the window snow-flakes danced.’ German
- b. \*Vor dem Fenster wurde (von Schneeflocken) getanzt.  
 in front of the window was by snow-flakes danced  
 ‘In front of the windows, it was danced (by the snow-flakes).’ German

The impersonal passive for human agents in (34b) is acceptable. However, the impersonal passive for an inanimate, in (35b), is not acceptable for the same verb. Hence, the same verb behaves in two different ways based on the animacy of the subject of the active construction counterpart.

Similarly, in the following Dutch sentences, the unbounded event allows the impersonal passive, which is a putatively diagnostic property of unergative verbs; but the bounded event does not allow the impersonal passive for the same verb (Zaenen 1993).

- (36) a. Er werd gelopen.  
 There was run  
 ‘It was run.’ Dutch
- b. \*Er werd naar huis gelopen.  
 There was to home run  
 ‘It was run to home.’ Dutch

We see therefore that the unaccusative/unergative distinction is problematic in languages other than Urdu/Hindi as well.

#### 4 Proposals and Debate

The previous section has established the fact that a clear-cut unaccusative/unergative distinction for intransitive verbs is possible neither for Urdu/Hindi nor for many other languages. Two different types of approaches have already tried to deal with this fact.

One group of researchers wants to save the idea of two distinct classes with internal vs. external arguments as subject. They maintain that most of the verbs either behave like unaccusatives or like unergatives. Rosen (1984) classified the verbs that show both unaccusative and unergative characteristics as an idiosyncratic class. Burzio (1981, 1986) proposed two verb entries for each of the Italian verbs *correre* ‘run’, *saltare* ‘jump’, *valore* ‘fly’ etc. Similarly, Zaenen (1993) proposed two different lexical entries for Dutch *lopen* ‘run’, selecting *hebben* ‘have’ (related to unergativity), and *naar X lopen* ‘run to X’, selecting *zijn* ‘be’ (related to unaccusativity) as they have semantic differences and a different number of grammatical roles.

In contrast to these proposals, another approach has argued that tests like the impersonal passive, perfect participle and auxiliary selection depend on specific semantic factors and not on a two-way unergative/unaccusative distinction. As mentioned earlier, Perlmutter (1978), in his pioneering paper on the Unaccusative Hypothesis, discussed unaccusative and unergative clauses (not verbs). The syntactic behavior of the clause does not depend solely on the lexical properties of the verb, but it includes other factors like agentivity, presence of a bounding PP, etc.

Van Valin (1990) proposed that different semantic parameters govern the acceptability of auxiliary selection, impersonal passive etc. in different languages. According to him, Italian and Georgian make a distinction among intransitive verbs on the basis of inherent lexical aspectual properties of the verb, whereas Acehnese and Tsova-Tush display split-intransitivity based on agentivity. Different semantic parameters could govern acceptability of different intransitive syntactic constructions in the same language. Kaufmann (1995) shows that the impersonal passive in German requires a human (unexpressed) subject, whereas participle formation requires a Dynamic D-predicate (see section 5.2 for a discussion of this term).

Van Valin (1990) rejects two lexical entries for verbs like *run*. He points out that there are two different logical structures (LS) corresponding to *run* (an activity) and *run home* (an accomplishment, i.e. activity + achievement). Zaenen (1998) also revised her idea of two lexical entries for verbs like *run*. As mentioned earlier, auxiliary selection for a clause with the verb *run* depends on the boundedness of the event. (37) is the reproduction of the Dutch example given in (36).

- (37) a. Er werd gelopen  
 There was run  
 ‘It was run.’ Dutch
- b. \*Er werd naar huis gelopen  
 There was to home run  
 ‘It was run to home.’ Dutch

If the event describes only the manner of motion, *hebben* ‘have’ is selected. In case of movement to a point, e.g., *naar huis* ‘to the house’, the event is bounded and *zijn* ‘be’ is selected. Zaenen proposed that the lexical entry of the verb *lopen* ‘run’ will have neither the +*telic* nor the –*telic* feature. (The

bounding of the event introduces the *+telic* feature.) The lexical entries of other relevant words will be as in (38).<sup>4</sup>

(38)	hebben	=	-telic
	zijn	= <sub>c</sub>	+telic
	naar huis	=	+telic

When the clause has *lopen* ‘run’ without a bounding adjunct then only *hebben* ‘have’ can be selected, because *zijn* ‘be’ requires the introduction of a *+telic* feature by some part of the clause. A clause with *naar huis* ‘to home’ receives a *+telic* feature from the PP and satisfies the constraint of *zijn*. Moreover, *hebben* ‘have’ with *-telic* and *naar huis* ‘to home’ with *+telic* cannot be unified. This results in the selection of *zijn* ‘be’ for this clause.

After referring to and analyzing the arguments of two solutions to solve the problem, we agree with the proposals that the simple idea of unaccusativity/unergativity does not work. The verb by itself cannot decide the syntactic properties of a clause. We disagree with the proposals which introduce two lexical entries for “irregular” verbs. It is not only not an elegant solution, but it will also not be limited to only two entries based on boundedness, as boundedness is not the sole factor determining the acceptability of the syntactic constructions. For example, the German verb *tanzen* ‘dance’ depends on boundedness for auxiliary selection. This would introduce lexical entries *dance*<*agent*> and *dance*<*agent, to X*>. But, for impersonal passives, the animacy of the (unexpressed) subject is also relevant. So we would need four lexical entries: *dance*<*animate*>, *dance*<*inanimate*>, *dance*<*animate, to X*> and *dance*<*inanimate, to X*>.

Worst of all, animacy and movement to the goal or boundedness are not the only semantic factors governing the phenomenon of hybrid behavior of intransitive verbs regarding the unaccusative/unergative distinction. Kaufmann (1995) discusses the case of dynamic D-predicates for German. As already mentioned in section 2, and as is elaborated in section 5, Urdu/Hindi has a similarly complex scenario. Thus, the multiple lexical entry approach will not only result in a drastic increase in the size of the lexicon, but will also make it difficult to comprehend the unified meaning of a particular verb.

## 5 Semantic Features for Urdu/Hindi

This section presents a model for solving the problems elaborated in the previous discussion. So far, we have found that there are Urdu/Hindi verbs that show hybrid behavior in relation to Bhatt’s unergativity/unaccusativity tests. These verbs behave as unergative or unaccusative on the basis of animacy of the subject and some other factors.

Hence we conclude that we need some other method to model the irregular or hybrid behavior of Urdu/Hindi verbs with respect to the unaccusative/unergative distinction (examples given in section 2). Similarly, we need to explain the verb classes demarcated by the light verb *jaa* ‘go’ and the optional ergative *ne* tests. We propose that these data can be explained by the introduction of semantic features. As there are several semantic factors which are responsible for the grammaticality of different grammatical constructions, we need to introduce more than one semantic feature to model all the relevant phenomena. In the following discussion, we identify the semantic features governing the acceptability of different intransitive constructions in Urdu/Hindi. We present sample lexical entries to show how the proposed model/explanation works.

We propose that the lexical entries of Urdu/Hindi intransitive verbs have two main semantic features ANIMacy and POST-STATE. The features can be underspecified. They allow or restrict different types of subjects for a particular verb. The feature ANIM is related to the animacy of the subject. The discussion in section 3.1 showed that the acceptability/unacceptability of many clauses depends upon the animacy of the subject used with a particular verb. Hence, the underspecified feature ANIM plays a role for the acceptability of some sentences involving impersonal passive and inability

<sup>4</sup>Zaenen assumes LFG for her analyses. In (38), the ‘=<sub>c</sub>’ is a *constraining equation*, which has the effect of requiring a certain feature to be supplied by another part of the clause. See also section 5.



constructions.

Another important semantic feature related to this discussion is the boundedness/telicity of the event. As discussed above, Zaenen (1998) used the feature *telic* for this purpose. We instead use the feature POST-STATE. This idea is based on Kaufmann (1995), who introduced D- and O-predicates. A D-predicate is an *object Defining predicate* like its color, state (solid, liquid, gas) etc. Static D-predicates are related to adjectives like *green, blue, solid, liquid* etc. Dynamic D-predicates are expressed as change of state verbs, i.e. *freeze, melt, break, dry*, etc. Dynamic D-predicates involve replacement of one state with another state. The changed state persists after the event. *The ice melted* implies that the post-state of the ice is liquid, which is different from its pre-state.

On the other hand, O(ptional)-predicates are related to the verbs which, roughly speaking, do not involve a change of state. Examples are *speak, shout, whisper*, etc. After speaking or whispering, the post-state of the subject remains the same as its pre-state before speaking or whispering. So, we use POST-STATE = + for the verbs that are like Dynamic D-predicates and POST-STATE = – for the rest.

Using these semantic features and sample lexical entries, we can explain the behavior of different intransitive constructions discussed in sections 3.1 and 3.2. Before modeling these phenomena, it is necessary to mention the nature of these features. Are these syntactic features or semantic ones? If these are semantic features, then how do these interact with the syntactic parsing of sentences? How are these features represented in the lexical entry of the verb (and associated nouns etc.)?

As these semantic features are directly related to syntactic parsing and the acceptability of a sentence, we represent these along with syntactic features. We follow the scheme presented by Butt and King (2005), who present a lexical semantic analysis of case markers in Urdu/Hindi. In particular, they propose entries for the dative and ergative case markers which involve the notion of what has come to be known as *Constructive Case* (cf. Nordlinger 1998), whereby case markers directly contribute semantic and syntactic information to the clause.

Butt and King (2005) introduce the feature structure SEM-PROP (semantic property) to place semantic features along with the syntactic features in a primarily syntactic analysis: the f(unctional)-structure representation in LFG. We adopt this strategy and add the features ANIM and POST-STATE to the feature structure SEM-PROP of the subject and the main verb, respectively. As these semantic features are required to decide whether a given sentence can be parsed successfully or not, these can reasonably be represented alongside the syntactic features.

In (39) we present concrete lexical entries for some Urdu verbs in order to illustrate our proposal in some detail.<sup>5</sup> One can see that there are two types of equations in the lexical entries. The defining equations containing ‘=’ instantiates or unifies the value of a feature at f-structure. The constraining equations containing ‘=<sub>c</sub>’ check whether a value is instantiated by a defining equation. The arrow ‘↑’ encodes the mapping between nodes of c(onstituent)-structure and functional structure (see, e.g., Dalrymple 2001 for details). In our verbal lexical entries, the ‘↑’ refers to the functional structure of the clause, as the verb is the head of the clause.

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<sup>5</sup>Note that LFG actually assumes that the PRED values of verbs are determined via Lexical Mapping Theory (LMT), which describes a mapping relation between an a(rgument)-structure representation and the grammatical relations represented at f-structure (see Butt 2006 for an overview). As argued for by Bresnan and Zaenen (1990), usually an agent or “[–o]” argument is related to unergatives and a patient/theme or “[–r]” argument is related to unaccusatives. However in this paper, we argue for abandoning the unergative and unaccusative distinction, so a different type of mapping relation based on the semantic features identified here would need to be developed. As the primary interest in this paper is to model the Urdu/Hindi phenomena discussed here via semantic features, we model our proposal within f-structure for the sake of simplicity and clarity.

- (39) a. kaṭ V (↑PRED)=‘cut<SUBJ>’  
 (↑SEM-PROP POST-STATE) = +  
 (↑SUBJ SEM-PROP ANIM) =<sub>c</sub> -
- b. k<sup>h</sup>ãās V (↑PRED)=‘cough<SUBJ>’  
 (↑SEM-PROP POST-STATE) = -  
 (↑SUBJ SEM-PROP ANIM) =<sub>c</sub> +
- c. ur V (↑PRED)= ‘fly<SUBJ>’
- d. utar V (↑PRED)= ‘descend<SUBJ>’
- e. gir V (↑PRED)= ‘fall<SUBJ>’  
 (↑SEM-PROP POST-STATE) = +
- f. pak V (↑PRED) = ‘cook<SUBJ>’  
 (↑SUBJ SEM-PROP ANIM) =<sub>c</sub> -  
 (↑POST-STATE) = +

We use and explain these lexical entries in the following sections (sections 5.1–5.4).

### 5.1 Inability construction

The inability construction uses the syntax of a passive clause but with the instrument/ablative marker *se* marking the subject to express the inability of the subject to perform the event. The examples in section 3.1 showed that animacy governs the acceptability of the construction. Hence, we use the feature ANIM to deal with this construction.<sup>6</sup> We propose a partial lexical entry of *se* within the LFG formalism as in (40). Since the form *se* is used for many semantic purposes, e.g., as instrument, ablative and comitative marker (e.g., see Khan 2009 for some discussion), we follow the pattern of case marker lexical entries introduced by Butt and King (2005) in which the lexical entry for the case marker contains both semantic features and syntactic constraints. The ‘|’ in the lexical entry in (40) signals a disjunction. The other usages of instrument/ablative *se* are not relevant for the purposes of this paper, but can be disjoined with the partial entry in (40).

- (40) *se*  
 [ ( SUBJ ↑)  
 (↑CASE) = INST  
 (↑SEM-PROP ANIM) =<sub>c</sub> +  
 |  
 ... ]

The ‘↑’ refers to the f-structure of the parent node (noun phrase in our grammar) containing the case marker. The first line of the entry in (40) is an instance of *inside-out functional uncertainty* (see Dalrymple 2001 for an overview), by which a constraint can be formulated in an f-structure for an f-structure which **encloses** the first f-structure within an arbitrary number of enclosures. In this case, the (SUBJ ↑) is simply pointing to the first enclosing f-structure and has the effect that the noun phrase containing *se* is required to be a subject.<sup>7</sup>

Sentences (41)–(44) illustrate how our proposal works. In all the unacceptable examples, the constraint formulated in the lexical entry for *se* that the subject be animate (↑SEM-PROP ANIM =<sub>c</sub> +) fails.

<sup>6</sup>Mohanan (1994) proposed the semantic feature I-ABILITY (internal ability) for this construction. For simplicity and ease in lexicon coding, we do not use this feature because it needs to list the I-ABILITY of different nouns (or subjects) with respect to different verbs. The noun *n1* has ability for verbs *v1* and *v2*, but not for the verb *v3*. From our perspective, this would unnecessarily enlarge and complicate the lexicon of the language. Hence we use the semantic feature animacy to depict the agentivity and internal ability of the subject.

<sup>7</sup>Standard applications of inside-out functional uncertainty within LFG include *Constructive Case*, mentioned previously, and the determination of anaphoric relations (Dalrymple 1993).

- (41) a. daraxt kaṭ-aa  
tree.M.Sg cut-Perf.M.Sg  
'The tree (got) cut.'
- b. \*daraxt=se kaṭ-aa nahī ga-yaa  
tree.M.Sg=Inst cut-Perf.M.Sg not go-Perf.M.Sg  
'The tree was not able to (got) cut.' (ANIM constraint of *se* fails.)

The above example uses the verb *kaṭ* '(get) cut', which, as shown in (39), is specified to need a subject with a negative value for the ANIM feature. However, the case marker *se* in (40) requires an animate subject. As these two are conflicting constraints, the inability construction is not possible with the verb *kaṭ* '(get) cut'.

- (42) a. cīryaa/patang ur-ii  
bird.F.Sg/kite.F.Sg fly-Perf.F.Sg  
'The bird was not able to fly.'
- b. cīryaa=se ur-aa nahī ga-yaa  
bird.F.Sg=Inst fly-Perf.M.Sg not go-Perf.M.Sg  
'The bird was not able to fly.'
- c. \*patang=se ur-aa nahī ga-yaa  
kite.F.Sg=Inst fly-Perf.M.Sg not go-Perf.M.Sg  
'The kite was not able to fly.' (ANIM constraint of *se* fails.)

(42) contains the verb *ur* 'fly', which is a supposedly unergative verb. It is underspecified for both the ANIM and POST-STATE features, as shown in (39). In (42b–c), the case marker *se* requires the subject to have a positive value for the ANIM feature. However, the subject *patang* 'kite' in (38c) provides a negative value for the feature ANIM and this results in a feature conflict. In contrast, the subject of (38b), *cīryaa* 'bird', provides a positive value of the ANIM feature and this results in the satisfaction of the animacy constraint coming from (40) and the sentence is grammatical.

- (43) a. larḱaa paani=mē utr-aa  
boy.M.Sg water.F.Sg=in descend-Perf.M.Sg  
'The boy descended in the water.'
- b. larḱe=se paani=mē utr-aa nahī ga-yaa  
boy.M.Sg=Inst water.F.Sg=in descend-Perf.M.Sg not go-Perf.M.Sg  
'The boy was not able to descend in the water.'
- (44) a. kaḱtii paanii-mē utr-ii  
boat.F.Sg water.F.Sg=in descend-Perf.F.Sg  
'The boat descended in the water.'
- b. \*kaḱtii=se paanii=mē utr-aa nahī ga-yaa  
boat.F.Sg=Inst water.F.Sg=in descend-Perf.M.Sg not go-Perf.M.Sg  
'The boat was not able to descend in the water.' (ANIM constraint of *se* fails)

The examples in (43)–(44) all contain the verb *utar* 'descend', which is a supposedly unaccusative verb. Just like *ur* 'fly', it is underspecified for both ANIM and POST-STATE features in (39). Example (43b) has an animate subject, hence the animacy constraint of the case marker is not violated and the sentence is acceptable. However, the inanimate subject *kaḱtii* 'boat' of (44b) has a negative value for the feature ANIM. Hence the animacy constraint of *se* fails and the sentence is unacceptable.

## 5.2 Perfective participle

The perfective participle or reduced relative is related to the semantic feature POST-STATE. It is only allowed with the verbs that allow POST-STATE. This is because perfective participles of only those verbs are acceptable as reduced relatives that have a persistent change of state after the completion of the event.

The following examples (45a–b) contain the verb *gir* ‘fall’. Its lexical entry in (39) shows that it has a positive value for the feature POST-STATE and is underspecified for animacy. Hence the perfect participle of the verb *gir* ‘fall’ can modify both animate and inanimate entities as shown in (45a) and (45b), respectively.

- (45) a. *gir-aa*            *huu-aa*            *laṛkaa*  
           fall-Perf.M.Sg be-Perf.M.Sg boy.M.Sg  
           ‘the boy who had fallen’  
       b. *gir-aa*            *huu-aa*            *pattaa*  
           fall-Perf.M.Sg be-Perf.M.Sg leaf.M.Sg  
           ‘the leaf which had fallen’

(46), on the other hand, contains the verb *k<sup>h</sup>ããs* ‘cough’, which is negatively specified for the feature POST-STATE. As the perfective participle has a constraint asking for a positive value of POST-STATE, there is a unification failure and the sentence is unacceptable.

- (46) \**k<sup>h</sup>ããs-ii*            *huu-ii*            *laṛkii*  
           cough-Perf.F.Sg be-Perf.F.Sg girl.F.Sg  
           ‘the coughed girl’

However, the semantics related to perfect participle formation are not so simple. There is another additional issue related to it that is discussed in section 5.5.

### 5.3 Light verb *jaa* ‘go’

The *jaa* ‘go’ light verb test also depends on the semantic feature POST-STATE. The lexical entry for *gayaa* (irregular perfective form of *jaa* ‘go’) contains the following information:

- (47) *ga-yaa* LV (↑SEM-PROP POST-STATE) = +

Example (48a) is unacceptable because *k<sup>h</sup>ããs* ‘cough’ has a negative value for POST-STATE and the light verb *jaa* ‘go’ (irregular form *gayaa*) specifies a positive value for POST-STATE. As both of these feature values cannot be unified, there is a conflict in this example. There is no such conflict in (48b), which has the verb *kaṭ* ‘(get) cut’ with a positive value of POST-STATE, as shown in (39).

- (48) a. \**laṛkaa*    *k<sup>h</sup>ããs* *ga-yaa*  
           boy.M.Sg cough go-Perf.M.Sg  
           ‘The boy got coughed.’ (POST-STATE features of *k<sup>h</sup>ããs* and *ga-yaa* conflict.)  
       b. *daraxt*    *kaṭ* *ga-yaa*  
           tree.M.Sg cut go-Perf.M.Sg  
           ‘The tree got cut.’  
       c. *ciṛyaa*    *ur* *ga-yii*  
           bird.F.Sg fly go-Perf.M.Sg  
           ‘The bird flew away.’

In (48c), the verb *ur* ‘fly’ is underspecified for the POST-STATE feature. It does not, fundamentally, represent a bounded event but it cannot be claimed as always having a negative value of POST-STATE like the verb *k<sup>h</sup>ããs* ‘cough’. Hence the underspecified value of POST-STATE allows a unification with the positive value of POST-STATE coming from the light verb *jaa* ‘go’ and hence the sentence is acceptable.

In Urdu, examples like (48c) convey a sense of change of state, i.e. of having moved or escaped. It is not used to show that the bird has completed the action of flying. Rather, it is used in a situation when the bird has moved away or escaped from some place. The examples (49a–b) further elaborate this point.

- (49) a. *vo*    *laṛkaa*    *bauhaut tez*    *b<sup>h</sup>aag-taa*    *hai*  
           that boy.M.Sg very    fast run-Impf.M.Sg be.Pres.3.Sg  
           ‘That boy runs fast.’

- b. vo larḱaa b<sup>h</sup>aag ga-yaa  
 that boy.M.Sg run go-Perf.M.Sg  
 ‘That boy ran (away).’

In (49a), the verb *b<sup>h</sup>aag* refers to the manner of motion. But in (49b) together with *jaa* ‘go’, it refers to running away or escape that shows a change of state.

#### 5.4 Optional ergative marker *ne*

The optional use of the ergative marker *ne* with some intransitives is not directly related to the unergativity/unaccusativity distinction (section 2.2). But it is responsible for a split behavior of intransitives because only a few verbs like *k<sup>h</sup>ããs* ‘cough’ allow for this optionality.

The optional ergative marker appears only with human subjects. This is due to the fact that the marker shows that the action is performed on purpose. However, a human subject acting on purpose does not always allow the ergative. As was shown in (31), the verb *tair* ‘swim’ and many other verbs like *gir* ‘fall’ do not allow an ergative marker to show the “on purpose” usage. Hence, introduction of a feature HUMAN does not solve the problem.

The phenomenon is related to a particular class of verbs that can be termed bodily function verbs. The lexical entry of these verbs should have the information that they belong to this particular verb class. The lexical entry of ergative *ne* should be formulated in such a way that it agrees with the verb class bodily function. Given this, a revised lexical entry of the verb *k<sup>h</sup>ããs* ‘cough’ and a partial lexical entry of the ergative case marker *ne* are:

- (50) *ne*  
 [ (SUBJ ↑)  
 (↑CASE) = erg  
 ((SUBJ ↑) SEM-PROP VERB-CLASS) =<sub>C</sub> bodily-function  
 (↑SEM-PROP CONTROL) = INT  
 | ... ]

- (51) *k<sup>h</sup>ããs* V (↑SEM-PROP POST-STATE) = –  
 (↑SEM-PROP VERB-CLASS) = bodily-function

The lexical entry of *ne* in (50) does not deal with its other syntactic and semantic usages. Those usages can be disjuncted with this entry, as discussed for the lexical entry of *se*. See Butt and King’s (2005) lexical entry for *ne* for further uses. Our proposal is that their lexical entry should be extended by the disjunct in (50).

The lexical entries of *ne* and *k<sup>h</sup>ããs* use a semantic feature VERB-CLASS. The optional ergative *ne* is allowed with the bodily function verbs only, and hence those verbs have the value *bodily-function* for the feature VERB-CLASS. The lexical entry of *ne* contains a constraining equation that requires this value and hence *ne* is allowed with bodily function verbs.<sup>8</sup> The lexical entry of *ne* has another SEM-PROP (semantic property) feature, i.e. CONTROL. The value INT marks that the subject has internal control over the action (this has also been referred to as *volitionality* in the literature). The sentences in (52) show examples of our proposal.

- (52) a. larḱe=*ne* k<sup>h</sup>ããs-aa  
 boy.M.Sg=Erg cough-Perf.M.Sg  
 ‘The boy coughed (intentionally).’  
 b. \*larḱe=*ne* gir-aa  
 boy.M.Sg=Erg fall-Perf.M.Sg  
 ‘The boy fell (intentionally).’

<sup>8</sup>In addition to being required on transitive verbs in the perfect and the other usages detailed in Butt and King (2005).

The example (52a) is acceptable because the ergative marker *ne* at the subject expects (has a constraint) the value BODILY-FUNCTION of the feature VERB-CLASS. This value is provided by the lexical entry of the verb *k<sup>h</sup> ããs* ‘cough’. On the other hand, the lexical entry of the verb *gir* ‘fall’ in (52b) does not have this value of the feature VERB-CLASS. Hence the value is not provided for the subject and the constraint in *ne* fails. This results in unacceptability.

### 5.5 Beyond semantic factors

Until now, we have modeled different syntactic constructions by using semantic features of the verb, light verb and subject noun. This approach works for a large number of sentences, but it does not work for all sentences. There are sentences in which the relevant semantic feature is not obtainable from the lexical entries of the words. The features are provided by discourse or pragmatics. Impersonal passives and perfective participles provide examples of this problem.

#### 5.5.1 Impersonal passive

The discussion about impersonal passives in section 3.1 suggested that this construction allows only humans as (unexpressed) subject. Kaufmann (1995) also suggests for German that an important feature for impersonal passives is human-ness. However, we cannot model this phenomenon by adding a feature HUMAN to our feature set. This is because in the impersonal passive construction the subject is not expressed overtly, but is understood. That is, the discourse context allows us to reconstruct the nominal referred to. Hence we can only find the semantic features of this unexpressed entity by discourse analysis — the features cannot be obtained by syntactic analysis of a single sentence. Consider the examples in (53).

- (53) a. aa-o daur-aa            jaa-e  
       come run-Perf.M.Sg go-Perf.M.Pl  
       ‘Come, let it be run (let us run).’ (for humans)
- b. \*aa-o daur-aa            jaa-e  
       come run-Perf.M.Sg go-Perf.M.Pl  
       ‘Come, let it be run (let us run).’ (for horses)
- c. \*aa-o pak-aa            jaa-e  
       come ripe-Perf.M.Sg go-Perf.M.Pl  
       ‘Come, let it be ripened (let us ripe).’ (for fruits)

The decision about the unacceptability of (53c) is easy. The verb *pak* ‘ripe’ has a constraint that only allows for an inanimate subject, as shown in (39). As an inanimate entity cannot be human, we can easily deduce the unacceptability of this sentence.

This simple model cannot be extended to judging the acceptability of (53a–b). We claim that (53a) has a human (unexpressed) subject, whereas (53b) has a non-human (unexpressed) subject. However, we cannot find any lexical entry introducing HUMAN = + or HUMAN = – in these sentences because that information can only be reconstructed through the discourse context. This shows that, in many cases, we need discourse analysis for being able to judge the acceptability of impersonal passive sentences.

#### 5.5.2 Perfective participles revisited

We have already discussed the model related to perfective participles in section 5.2. However, the acceptability of many perfective participles does not depend solely on the feature POST-STATE of the verb. Kaufmann (1995) pointed out the following sentences for German. She notes that what can be predicated of an argument in the post-state does not necessarily have to be semantically encoded, but can also be pragmatically inferred. The *read book* in (54a) has a post-state (by becoming second-hand in appearance or in the sense that its information got known to the reader), but there is no such pragmatic concept attached with the sign in (54b).

- (54) a. das gelesene Buch  
 the read book  
 ‘the book that had been read’ German
- b. \*das gelesene Schild  
 the read sign  
 ‘the sign that had been read.’ German

For Urdu/Hindi, the same concept works as illustrated in (55a–b).

- (55) a. cal-ii (huu-ii) gaṛii  
 move-Perf.F.Sg be-Perf.F.Sg car.F.Sg  
 ‘the moved car’
- b. \*cal-ii (huu-ii) havaa  
 move-Perf.F.Sg be-Perf.F.Sg wind.F.Sg  
 ‘the moved wind’

In (55a) the car has a persistent post-state in that it has been driven from one position to another. This is not the case for the wind in (55b). Similarly, Tikaram Poudel (p.c.) pointed out that *urii huuii cirṛyaa* ‘the flown bird’ is acceptable in Urdu/Hindi in the sense that the bird has escaped from the cage.

The verbs *ur* ‘fly’ and *cal* ‘move/walk’ thus allow pragmatic factors to determine the presence or absence of the post-state only because their lexical entries are underspecified for the feature POST-STATE. Another verb with an underspecified post-state feature is *utar* ‘descend’. This verb can form a perfective participle only when a post-state is provided by an adjunct PP or by pragmatics, as shown in (56).

- (56) a. \*utr-ii (huu-ii) kaṭtii  
 descend-Perf.F.Sg be-Perf.F.Sg boat.F.Sg  
 ‘the descended boat’
- b. paanii=mē utr-ii (huu-ii) kaṭtii  
 water.F=in descend-Perf.F.Sg be-Perf.F.Sg boat.F.Sg  
 ‘the boat descended in water’

Example (56a) is not acceptable because there is no clue of a post-state in it. In (56b), a post-state is introduced by the locative prepositional phrase. These examples show that the proper analysis of some sentences needs more than feature and constraint matching, and involves other factors that cannot be encoded, or at least easily encoded, in the lexicon.

## 6 Conclusion

In this paper, we conclude that the traditional distinction, especially the distinction popularized by Burzio (1981, 1986), of unergative and unaccusative verbs does not hold in Urdu. We give examples in which a supposed unaccusative verb has an agentive subject and supposed unergative verbs have a patient subject. We show that we cannot define a two-way unaccusativity/unergativity distinction to explain all the syntactic constructions involving Urdu/Hindi intransitive verbs.

We note that Perlmutter (1978)’s original idea about the unaccusativity/unergativity distinction was similar, i.e. he discussed unaccusative and unergative clauses in which other parts of the clause apart from the verb are also responsible for the unaccusative/unergative behavior of the clause. We find that other languages have the same issue, i.e. some intransitive verbs show hybrid behavior and display syntactic properties related to both unaccusative and unergative verbs according to context.

We propose that underspecified semantic features can help model the acceptability of different syntactic constructions like the impersonal passive, reduced relatives based on the perfective participle, compatibility with the *jaa* ‘go’ light verb, active syntax in inability constructions and the possibility of optional *ne* with certain intransitives. We used LFG to construct an implementation

of our model. As these semantic features affect the syntactic acceptability of different clauses, following Butt and King (2005), we introduce these semantic features along with the syntactic features in the functional description. We provide a single lexical entry with underspecified features for the verbs that show hybrid behavior. The primary features proposed for modeling the above mentioned constructions in Urdu/Hindi are animacy (and human-ness) and post-state.

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# Innovations in the Negative Conjugation of the Brahui Verb System

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## ABSTRACT

Since Bray (1907), there has been virtually no fresh fieldwork or analysis on Brahui. This paper, based on fieldwork done in 1990–91, discusses a series of innovations in the Brahui verbal system: first, a shift from generalized past and non-past imperfective forms to specifically past and present progressives; then, interaction between recent changes in these increasingly used progressive forms and innovated negative infinitives. The paper concludes that as a result of these changes both the affirmative infinitive and these new negative infinitives have acquired more verbal properties than the original infinitive (verbal noun) had. Progressive forms have become increasingly grammaticized and structural parallelism between affirmative and negative conjugations has emerged.

## 1 Introduction

A brief introduction to the Brahui language and its speakers is given in section 2. Essential features of the original verb system are summarized, focusing on the forms discussed in this paper. Section 3 discusses the forms, functions and status of the affirmative and negative infinitives. Section 4 discusses the structure of imperfective forms preceding the introduction of progressive forms, which are a fairly recent innovation constructed with the infinitive. It then explores the origin and discusses historical attestations and the increasing use of affirmative and negative progressive forms. Finally, section 5 describes innovated negative infinitives and changes in the progressive forms — both affirmative and negative. In the new negative progressive forms, the negative morpheme, previously located in the auxiliary, moves into an innovated negative infinitive form. Section 6 concludes that in addition to the increased grammaticization of specifically progressive forms, the infinitive has acquired a more verbal character. These changes have resulted in the emergence of structural parallelism between the affirmative and negative progressive forms.

## 2 The Brahui language

### 2.1 Location and speakers

The North Dravidian language Brahui is spoken as a first language by approximately 2,000,000 people in Balochistan Province of Pakistan. There are another approximately 200,000 Brahui speakers in Afghanistan, perhaps 20,000 in Iran (Ethnologue 2009), and a few in the former Soviet Union. Within the Pakistani Brahui area there are three main dialectal divisions: (a) Sarawani (spoken in Mastung, Kalat, Kanak, Mungachar, Kirdigāp, Bolan, and Quetta); (b) Jhalawāni (spoken in Khuzdār, Zehri, Vadh, Mula, and Jahu [up to Bela]); and (c) Chaghi (spoken in Noshki [up to Iran], Khāran, Besema

[up to Panjgur]).<sup>1</sup> Important dialectal differences in phonology involve the realization of initial /h/, alternations of dental and retroflex consonants, and aspiration (Bashir 1991a, 4).

## 2.2 Typological characteristics and case marking

Brahui word order is SOV, ADJ-N, N-POSTPOSITION. The case-marking system is Nominative-Accusative in all tenses: all subjects are in the nominative case, and all verbs agree with their subjects in person and number. There is no grammatical gender, and the Dravidian distinction between nouns referring to rational and non-rational entities has not been maintained.<sup>2</sup> Andronov (2006, 31–37) lists eleven cases, with singular endings as follows: nominative  $\emptyset$ , genitive  $-nā$ , objective  $-e$ , dative  $-kē$ , instrumental  $-at$ , comitative  $-tō$ ,<sup>3</sup> ablative  $-ān/-an$ ,<sup>4</sup> locative  $-(a)tā$ , lative  $-ā$ , adessive  $-isk/-is/-k$ , terminative = adessive +  $-ā$ . All these case endings are affixed directly to the nominative, which is identical to the noun stem in the singular, and in the plural to an oblique base in which the nominative plural  $-k$  changes to  $-t$  (Bray 1907, 42). Referential status is morphologically indicated on the noun and on the adjective.

## 2.3 Overview of the verb system

The core of the Brahui verb system consists of those tenses based on affirmative and negative non-past and past stems. The non-past stem is identical to the verb base;<sup>5</sup> several past stem classes are formed from the base plus  $ā$ ,  $ē$ , or a consonant. A few verbs have suppletive or multiple stems; for example, *hinning* ‘to go away’ has the suppletive stems *hin-* and *kā*, while *kanning* ‘to do’ has four stems: *kann-*, *kar-*, *ka-*, *kē* (Andronov 2006, 65). Intransitive stems corresponding to transitives are derived by affixing an intransitivizing element  $-ing-$  between the verb base and the infinitive ending  $-ing$ , e.g., *uś-ing* ‘to burn (transitive)’, *uś-ing-ing* ‘to burn (intransitive)’. Causative stems are regularly derived by inserting  $-(i)f-$  between the base and the infinitive suffix, e.g., *uś-if-ing* ‘to cause to be burned’. Passives can be formed from causative stems, by inserting the intransitivizing  $-ing-$  after the causative morpheme  $-(i)f$ , e.g., *tūl-ing* ‘to sit’, *tūl-if-ing* ‘to seat’, *tūl-if-ing-ing* ‘to be seated’. Middle or reflexive verbs insert  $-ēng-$  between the verb base and the infinitive ending  $-ing$ , e.g., *hars-ing* ‘to turn (intransitive)’, *hars-ēng-ing* ‘to turn (self)’ (Bray 1907, 175). Non-finite forms include the infinitive or verbal noun (base +  $-ing$ ), an obligative participle (base +  $-ōv$ ), an adjectival participle (base +  $-ōk$ ), and a present adverbial participle (base + *isa*). Brahui has no conjunctive participle like that of Indo-Aryan languages. Functions performed by the conjunctive participle and by compound verbs in those languages are performed by serial verb constructions.

Brahui retains one of the distinctive characteristics of Dravidian languages, the existence of separate affirmative and negative past and non-past stems. On these stems are built separate affirmative and negative conjugations for each tense.<sup>6</sup> Table 1 presents templates and an illustration of Brahui

<sup>1</sup>This information is due to Abdul Razzak Sabir.

<sup>2</sup>The transcription system used here for my own data is based on the analysis of the Brahui consonant and vowel systems in Bashir (1991a); it is intended to be phonemic, with the exception of the salient subphonemic realization of /a/ as [æ]. The point of articulation opposition usually called dental vs. retroflex in discussions of South Asian languages, is closer to a dental vs post-alveolar contrast for /t/ and /t̪/ and /d/ and /d̪/. The phoneme /t̪/, unique in the region to Brahui, is a voiceless lateral fricative, pronounced with considerable force and friction. The status of /ŋ/, retroflex *n*, is marginal in Brahui, and according to Emeneau (1937, 982), it is found only in the environment of /t̪/ and /d̪/. It occurs in borrowings from Sindhi, Siraiki, or Pashto (Elfenbein 1982). Stress is indicated by an acute accent <ˈ> over the stressed vowel. Contrastive long vowels are indicated by a macron above the vowel symbol. Brahui /ō/ is inherently long. Some writers record it as <ō> and others as <o>; in my examples, as in Bray (1907), it appears as <o>, while Andronov (e.g., Andronov 2006) writes it as <ō>. The status of /e/ is different, with long /ē/ and short /e/ contrasting (Andronov 2006, 10–11). Vowel nasalization is indicated by a tilde <~> above the vowel symbol. Examples from other sources are given in the orthography of the original authors, without attempt to normalize, except that Rai’s <sh> and <ch> are replaced by <š> and <č>, respectively.

Abbreviations used in this paper follow the Leipzig Glossing Rules, except for the following: AFFIRM — affirmative, LAT — lative, OBLIG — obligational, PROB — probable, TERM — terminative.

<sup>3</sup>There is also a variant  $-ton$  (Sabir p.c., March 2009).

<sup>4</sup>Also, in the Chaghi dialect,  $-γan$  and  $-γān$  are found.

<sup>5</sup>Bray (1907) uses the term “base” consistently in the sense of “root”. I shall also use “base” in that sense.

<sup>6</sup>The negative morpheme is  $-a-$  (Bray 1907, 139). In tenses formed from the non-past stem,  $-p-$  precedes the

stems and tense/aspect forms of the first person singular of *kanning* ‘to do’ for those forms discussed in this paper, as they have existed up until the time of the innovations discussed in this paper. These are the affirmative and negative past and non-past stem and infinitive; and affirmative and negative non-past imperfective, and present and past progressive. The forms in Table 1 are based on Bray (1907).<sup>7</sup>

Form	Affirmative	Negative
<b>Stems</b>		
NON-PAST	<i>ka-,kē-,kar-,kann-</i> ‘do’	<i>ka-p-a-(r)-</i> ‘not do’
PAST	<i>kar-ē-</i> ‘do’	<i>ka-ta-</i> ‘not do’
<b>Based on the non-past stem</b>		
NON-PAST IMPERFECTIVE (PRESENT/FUTURE)	AFFIRM STEM + person-number endings + <i>-a</i> <sup>8</sup> <i>ī kēva</i> ‘I will do, am doing.’	NEG STEM + person-number endings + <i>-a</i> <i>ī kappara</i> ‘I will not do, am not doing.’
INFINITIVE	AFFIRM STEM + <i>-ing</i> <i>kanning</i> ‘to do’	NEG STEM + <i>-ing</i> <i>kapparing</i> ‘not to do’
<b>Based on the past stem</b>		
PAST IMPERFECTIVE	AFFIRM STEM + person-number endings + <i>-a</i> <i>ī karēṭa</i> ‘I used to do, was doing.’	NEG STEM + person-number endings + <i>-a</i> <i>ī kattavaṭa</i> ‘I did not do, was not doing.’
<b>Constructed with the infinitive</b>		
PRESENT PROGRESSIVE	INF + <i>-(a)tī</i> + ‘be’ (AFFIRM PRS) <i>ī kanningaṭī uṭ</i> ‘I am doing.’	INF + <i>-(a)tī</i> + ‘be’ (NEG PRS) <i>ī kanningaṭī affaṭ</i> ‘I am not doing.’
PAST PROGRESSIVE	INF + <i>-(a)tī</i> + ‘be’ (AFFIRM PST) <i>ī kanningaṭī assuṭ</i> ‘I was doing.’	INF + <i>-(a)tī</i> + ‘be’ (NEG PST) <i>ī kanningaṭī allavaṭ</i> ‘I was not doing.’

TABLE 1 Verb forms discussed in this paper

Note that these original negative progressive forms are constructed with the affirmative infinitive and the finite negative auxiliary verb. Such forms, which are regularly constructed and freely produced by Abdul Razzak Sabir, are attested, but very rarely. Hypothetical progressive forms consisting of a negative infinitive and the affirmative auxiliary, e.g., *\*ī kumparingaṭī uṭ* ‘I am not doing’, are not attested and not accepted by Sabir.

### 3 The Brahui infinitive (verbal noun)

The original Brahui infinitive is a verbal noun consisting of the verb base + *-ing*; but in this paper I will refer to it as the “infinitive” for the sake of continuity with earlier discussions, particularly Bray (1907). Earlier authors stress the nominal character of this form; Andronov (2006, 64) does not use the term “infinitive” at all. As a verbal noun, it can be regularly inflected with all the case suffixes; it can function as the subject (1) or direct object (2) of the sentence. Further evidence of its nominal nature is the fact that the subject (2) or object (1) of the action or event referred to by the infinitive is marked with the genitive case.

negative marker; with some verbs, *r* is inserted and the negative marker appears as *p-a-r*. In tenses formed from the past stem, *-t-* precedes the negative marker. DeArmond (DeArmond 1975, 252) considers the negative morpheme to be underlyingly *-par-*, which has the following allomorphs: *-pa-*, *-far-*, *-fa-*, *-p-*, and *-w-*.

<sup>7</sup>Since *kanning* ‘to do’ has multiple stems, its conjugation is complex. I use it here because it is one of the most frequently occurring verbs in the language.

<sup>8</sup>The person-number endings are abraded forms of ‘be’.

- (1) dušman-nā **xall-ing** jwān e  
 enemy-GEN **strike**-INF.NOM good be(PRS.3.SG)  
 ‘It is good to strike the enemy.’ lit. ‘Striking of the enemy is good.’  
 (Bray 1907, 184) Nominative (Subject)
- (2) ī dāre nā **bann-ing-ē** jwān sarpānd mar-ēv-æ  
 I here you.GEN **come**-INF-OBJ good understanding become(NON-PST)-1.SG-PRS/FUT  
 ‘I consider your coming here good.’ (Bashir, notes 1991) Objective (Direct Object)
- Examples (3), (4), (5), (6), (7), (8), (9), and (10) show the infinitive appearing with the genitive, comitative, ablative, locative, lative,<sup>9</sup> terminative, dative, and instrumental cases, respectively.
- (3) na-nā **tūl-ing-nā** jāga dād e  
 we-GEN **sit**-INF-GEN place this be(PRS.3.SG)  
 ‘This is our sitting place.’ (Bray 1907, 184) Genitive
- (4) lāl bādšā **bin-ing-tō** xwaš mass...  
 Lal Badshah **hear**-INF-COM happy become(PST.3.SG)  
 ‘When he heard it, Lal Badshah was glad...’ (Bray 1938–1939, 79) Comitative
- (5) iray **kun-ing-ān** must dū-t-e sill-os-us  
 bread **eat**-INF-ABL before hand-PL-OBJ wash-PST.COND-2.SG  
 ‘You ought to have washed your hands before eating.’ (Bray 1907, 189) Ablative
- (6) da tuγ-e **xan-ing-aṭī** haul kare  
 this dream-OBJ **see**-INF-LOC fright do(PST.3.SG)  
 ‘On seeing this dream he got terrified.’ (Mayer 1907, 42) Locative
- (7) ī od-e **dudēng-āi** xanā-ṭ  
 I(NOM) he-OBJ **run**(INF)-LAT see(PST)-1.SG  
 ‘I saw him on the point of running.’ (Bray 1907, 184) Lative
- (8) ka-nā **bann-ing-iskān** aḍ ka  
 I-GEN **come**-INF-TERM shelter do(IMP)  
 ‘Take shelter until I come.’ (Bray 1907, 47) Terminative
- (9) dir **kunn-ing-ke** tuss  
 water **drink**-INF-DAT sit(PST.3.SG)  
 ‘He sat down to drink water.’ (Mayer 1907, 22) Dative
- (10) duzzī **kann-ing-aṭ** o tēn-e xarāb karē  
 theft **do**-INF-INS he self-OBJ spoiled do(PST.3.SG)  
 ‘He ruined himself by thieving.’ (Bray 1907, 184) Instrumental

However, the infinitive also displays some verbal behaviors. Its verbal nature is demonstrated by the fact that it can take its own, objective case-marked, direct object. Compare (11) and (6), in which the direct objects ‘enemy’ and ‘dream’, respectively, take the objective case, with (1), in which the direct object takes the genitive.

- (11) dušman-e **xall-ing** jwān e  
 enemy-OBJ **strike**-INF.NOM good be(PRS.3.SG)  
 ‘It is good to strike the enemy.’ (lit. ‘Striking the enemy is good.’) Nominative (Subject)  
 (Bray 1907, 184)

The infinitive can also sometimes function like a finite verb. Bray (1907, 184) characterizes one such usage as follows: “In past narration the nominative form of the infinitive is sometimes used for

<sup>9</sup>“Lative”, given as *-āi*, is Andronov’s term (2006, 36). This case is called “locative in *-āi*” by Bray (1907, 56) and “Locative-2” in Elfenbein (1998, 395), who comments that it has a broader semantic range than *-(a)ṭī*, and gives it as *-ā(ṭī)*. In my materials it appears to behave almost like a general oblique.

vividness in the place of a finite verb.” His illustration of this point is shown as (12).<sup>10</sup>

- (12) oft-tā      tavār **kann-ing**, na-nā      urā-nā      **pēh-ing**  
 they-GEN shout **do-INF**      we-GEN house-GEN **enter-INF**  
 ‘The moment they cried out, we entered the house.’ (Bray 1907, 184)

The sentence shown as (12) can also be expressed with the infinitive functioning in a more verbal mode, as in (13), where the locative case is used for the goal of motion *urā-tī* ‘into the house’, rather than the genitive *urā-nā* ‘of the house’ in (12).

- (13) oft-ā      tavār kann-ing, na-nā      **urā-tī**      pēh-ing  
 they-GEN shout do-INF      we-GEN **house-LOC** enter-INF  
 ‘The moment they cried out, we entered the house.’ (Bray 1907, 184)

Additionally, Grierson (1906, 624) notes that the verbal noun can be used as an imperative, e.g., *rasing* ‘come!’.

### 3.1 The original negative infinitive (verbal noun)

The received position has been that Brahui does not have a negative infinitive. Bray (1907, 139) says that, although there is a full negative finite conjugation, Brahui has no negative infinitive or participle.<sup>11</sup> In the absence of fresh data since Bray, this statement has been repeated by scholars since his time, e.g., DeArmond (1975, 268): “There is no negative infinitive, participle, or present of actuality,” and Andronov (1977, 2001, 2003, 2006), who says, “Only affirmative verbal nouns are available in the Brahui language” (Andronov 2001, 90; Andronov 2006, 89). Abdul Razzak Sabir, however, disagrees with this, and is of the opinion that there is a negative infinitive corresponding to each affirmative infinitive. These negative infinitives are easily and regularly formed. They generally have two variants, one with *-r-* and one with *-n-*, e.g., *danning* ‘to take away’, *daparing/dapaning* ‘not to take away’; *bissing* ‘to bake, cook’, *bisparing/bispaning* ‘not to bake, cook’; *ušing* ‘to burn’ *ušparing/ušpaning* ‘not to burn’; *manning* ‘to become’ *mafaring/mafaning* ‘not to become’; *tamming* ‘to fall’ *tamparing/tampaning* ‘not to fall’; *xalling* ‘to beat’, *xalparing/xalpaning* ‘not to beat’; *tinning* ‘to give’, *tifaring/tapaning* ‘not to give’.<sup>12</sup> However, these negative infinitives are not used in constructing finite verbal forms like the progressive (Sabir 1991, p.c.). Rather, they appear as nominals, i.e. in their original verbal noun function. Sabir offers the following as examples of sentences where negative infinitives appear naturally (14)–(15). In (14) the negative verbal noun is used in a nominal function, as the subject of the sentence, and in (15) it appears with the genitive case marker.

- (14) inn-ing **im-par-ing** kan-kē      barābar e  
 go-INF **go-NEG-INF** me-DAT equal      be(PRS.3.SG)  
 ‘It’s all the same to me whether I go or not.’ (Lit. ‘To go (or) not to go is the same to me.’)  
 (Bashir, 1991 notes)
- (15) iray **kum-par-ing-nā** sawab-ān      lāyar mass  
 bread **eat-NEG-INF-GEN** reason-ABL weak become(PST.3.SG)  
 ‘He became weak from not eating food.’ (Bashir, 1991 notes)

A negative adjectival participle appears in (16).

- (16) ka-nā **ka-ppar-oka**      karēm-t-ē      nī      am ka-pp-a  
 I-GEN **do-NEG-ADJ.PTCP** deed-PL-OBJ you also do-NEG-IMP.SG  
 ‘Those things that I have not done, you also don’t do!’ (Bashir, 1991 notes)

<sup>10</sup>This use of the infinitive appears parallel to Brahui’s finite serial verbs, in which two or more verb forms with the same tense/aspect and person number marking (none in the case of the infinitive) are used in succession.

<sup>11</sup>In general, negative verbal nouns in Dravidian are rarer than affirmative ones (Andronov 1977, 118; Andronov 2003, 288). Andronov (1977, 118) mentions the existence of forms for negative verbal nouns in Tamil, Malayalam, Kota, Kuvi, and Classical Telugu. David (1999) mentions negative verbal nouns in Old Tamil (p. 12), Kuvi (p. 16), Parji (pp. 19, 173, 226), and Brahui (p. 151); however, no Brahui example is given, and no further reference made to this parenthetical comment.

<sup>12</sup>Sabir notes that the variants with *n* or *nn* are mostly used in the Jhalawani dialect.

Negative obligative participles occur fairly frequently: sentence (17) appears in Elfenbein (1998, 405) and Bray (1907, 145) also has several examples.

- (17) n-ē      na-nā    urāγ-āī    **bar-ōī**                      ē                      hum pā;  
 you-OBJ we-GEN house-LAT **come-OBLIG.PTCP** be(PRS.3.SG) so    say(IMP)  
**ba-far-ōī**                      ē                      hum pā  
**come-NEG-OBLIG.PTCP** be(PRS.3.SG) so    say(IMP)  
 ‘If it is for thee to come to our house, say so; if it is not for thee to come, say so.’  
 (i.e. ‘Say whether you have to come to our house or not.’)

### 3.2 Infinitival constructions

Several modal and complement constructions are based on the affirmative infinitive. The nominative infinitive, in construction with a finite form of *kanning* ‘to do’ forms part of a transitive/active “potential” construction ‘be able to’ (18a). An intransitive/passive counterpart of this consists of the nominative infinitive with a finite form of *mannig* ‘to become’ (18b).

- (18) a. nī    pyæde    **inn-ing**      kē-s-æ  
 you on foot **go-INF.NOM** do-2.SG-PRS/FUT  
 ‘Can you go on foot?’ (Bashir, notes 1991)  
 b. **kann-ing**    ma-t-a-v  
**do-INF.NOM** become-PST-NEG-3.SG  
 ‘It could not be/was not done.’ (Barjasteh Delforooz 2008, 9)

The nominative (19) or the dative (20) infinitive functions as a complement of *illing* ‘to leave, allow’.

- (19) ī ne              ille-pa-r-a                      **putring-ing**<sup>13</sup>  
 I you(OBJ) allow-NEG-1.SG-PRS/FUT **enter-INF(NOM)**  
 ‘I will not suffer thee to enter.’ (Mayer 1907, 27)  
 (20) ī nē              duno kārem **kann-ing-kē** ille-pa-r-a  
 I you(OBJ) such work **do-INF-DAT** allow-NEG-1.SG-PRS/FUT  
 ‘I will not let you do such a thing.’ (Bashir 1991a, 191)

Followed by the dative *-kē*, the infinitive forms purpose clauses ((22), (9) above).

- (21) ī o-nā    **xal-if-ing-kē**      čār    bandaγ    rā-ī      karē-ṭ  
 I he-GEN **kill-CAUS-INF-DAT** four man    road-LAT do(PST)-1.SG  
 ‘I sent four men to kill him.’ (Bashir, notes 1991)

Phrasal constructions also employ the infinitive. The lative case of the infinitive yields the meaning ‘on the point of V-ing’, ‘about to V’. Example (7) is reproduced here as (22) for convenience.

- (22) ī od-e    **dudēng-āī**    xanā-ṭ  
 I he-OBJ **un-INF-LAT** see(PST)-1.SG  
 ‘I saw him on the point of running.’ (Bray 1907, 184)

An inceptive construction, ‘begin to V’, consists of the locative of the infinitive in construction with *tammig* ‘to fall’ (23).<sup>14</sup>

<sup>13</sup>Bray (1934, 246) gives this verb as *putrēnging* ‘to enter’, a middle or reflexive verb, as described in section 2.3 above.

<sup>14</sup>A second construction for ‘begin to V’ uses the transitive Persian/Balochi/Urdu *šurū kar-* ‘beginning do’=‘begin’ with the objective case-marked infinitive.

i. iray    **kunn-ing-e**    šurū      karē  
 bread **eat-INF-OBJ** beginning do.(PST.3.SG)  
 ‘He **began to eat** (bread)’ (Mayer 1906, 10)

- (23) pir **kann-ing-aṭī tammā**  
 rain do-INF-LOC **fall**(PST.3.SG)  
 ‘It **began to** rain.’ (Bashir 1991a, 190)

The locative infinitive plus *anning* ‘to be’, or in some tenses *manning* ‘to become’, yields forms meaning ‘in the process of V-ing’, as in (24a). These are the progressive forms which are one of the main foci of this paper. Notice that the original inceptive construction ‘begin to V’ and the progressive construction/form ‘be in the process of V-ing’ are parallel, both consisting of the locative case of the infinitive, with the verbs *tamning* ‘to fall’ and *anning* ‘to be’, respectively. Notice also that a parallel construction with a locative-marked simple noun conveys a similar tense/aspect meaning, as in (24b).

- (24) a. ka-nā ṭhap **uṣ-ing-ing-aṭī e**  
 I-GEN wound **burn**-INTR-INF-LOC be(PRS.3.SG)  
 ‘My wound **is burning**.’ (Bashir, notes 1991)
- b. num tavār ka-ppa-bō sardar **tuṣ-aṭī e**  
 you(PL) shout do-NEG-IMP.PL chief **sleep**-LOC be(PRS.3.SG)  
 ‘Don’t make noise; the chief’s **asleep**.’ (Bray 1934, 293)

The objective-marked infinitive as the complement of *illing* ‘to leave, abandon’ yields a construction meaning ‘stop V-ing’, as in (25).

- (25) o daftar-ā **bann-ing-e illā**  
 he office-LAT **come**-INF-OBJ **leave**(PST.3.SG)  
 ‘He has stopped coming to the office.’ (Bashir 1991a, 190)

#### 4 Imperfective forms in Brahui

The contemporary progressive forms, which explicitly present actions as ongoing at a specific, bounded, present or past time, are not part of the original Brahui verb system, which consists of those tenses based on the non-past and past stems.

##### 4.1 Original imperfective system

Before the spread of the new progressive forms, the non-past present/future (indefinite present + *-a*) and the past imperfect (past + *a*) forms were regularly used in a variety of senses, including that of the progressive. The following recent, published examples (26) and (27) indicate that the original system is still intact with some speakers and writers.

- (26) masīt-ān sīdā urāṣ-ā bas-aka valdā  
 mosque-ABL straight house-LAT **come**(PST)-3.SG.IPFV again  
 hič pēšān **ma-ta-k-a**  
 something outside become-NEG.PST-3.SG.IPFV  
 ‘He was coming straight from the mosque to (his) house but nothing **was happening** outside.’  
 (Godi (1985, 15) in Ross (1999, 138))

Example (27), from a 1984 publication, employs the negative past imperfect form *damdaring-tav-as-a* ‘were not getting out of breath’, a vowel-shortened form of the base of the middle verb *damdarēnging* ‘to get out of breath’, followed by negative, tense and person-number markers (see Bray (1907, 175) and Bray (1934, 93)).

- (27) urā-ṭī urā-nā gōdī-k mehmān-tā xidmat-ē kan-iṣ-aṭ  
 house-LOC house-GEN housewife-PL guest-GEN.PL service-OBJ do-INF-INS  
**damdariṣ-tav-as-a** tō vatāx-aṭ urā-nā xūāja-ak  
**tire**-NEG.PST-3.PL-IPFV and guest room-LOC house-GEN master-PL

narīna-tā xidmat-aṭ axtajān as-ur-a  
 male-GEN.PL service-INS busy be(PST)-3.PL-IPFV  
 ‘In the house the ladies of the house were not becoming tired as they served the guests, and  
 in the guest room the men of the house were busy serving the men guests.’  
 (From *Nikah* ‘Wedding’ in Zia (1984) transliterated and translated in Ross (1999, 175). Ross’  
 translation; morph-by-morph gloss mine.)

In addition to the use of the present/future and the past imperfective in a variety of imperfective meanings, another imperfectivizing particle, enclitic =*a*, is used in Brahui, particularly with N + V conjunct verbs. Bray (1907, 195–196) discusses this =*a*, considering it attached to the word preceding the verb and giving examples like (28) and (29).

(28) ī tēn-aṭ=a bass-uṭ-a, nī antei kan-e baṭingā-s  
 I self-INS=IPFV come(PST)-1.SG-IPFV you(SG) why I-OBJ call(PST)-2.SG  
 ‘I was coming of my own accord, (so) why did you summon me?’ (Bray 1907, 195)

(29) ī ḍaḡār-e namb=a kē-v-a  
 I ground-OBJ wet-IPFV do(PRS.INDF)-1.SG-IPFV  
 ‘I moisten the ground.’ (Bray 1907, 195)

Example (30) shows that this element was in use in 1991 in Pakistani Brahui; however, according to Sabir, its occurrence is limited.

(30) o dā mana de-an-āi bāz iraḡ=a kunē-k  
 he this some day-ABL-LAT much bread=IPFV eat(PRS.INDF)-3.SG  
 ‘He has been eating a lot for a long time.’ (Bashir, notes 1991)

Note that the imperfectivizing =*a* being discussed in this paragraph, which is enclitic to the word immediately preceding the finite verb, is *distinct* from the *-a* which is suffixed to the finite verb and distinguishes the present indefinite from the present/future, and the past from the past imperfect. In both cases the imperfectivizing suffix makes the action more specific in some sense.<sup>15</sup> This element is also found in the Brahui spoken in Iran, as shown in the following example (31), kindly provided by Behrooz Barjasteh Delforooz from his unpublished materials.

(31) a. annā čirāḡ-aṭ=a hinā  
 still lamp-INS-IPFV go(PST.3.SG)  
 ta<sup>16</sup> bandaḡ-nā lāša bāz tammā-n-e  
 when.suddenly man-GEN corpse many fall(PST)-PRF-3.SG  
 ‘He kept going by the light of the lamp, when lo and behold, a lot of corpses of men were lying (there).’  
 b. bas annā čirāḡ-aṭ=a hinā  
 then still lamp-INS-IPFV go(PST.3.SG)  
 ta adham-nā lāša-e xanā  
 when.suddenly adham-GEN body-OBJ see(PST.3.SG)  
 ‘So he just kept going by the light of the lamp when suddenly he saw the corpse of Adham.’

According to Emeneau (1962, 344) this imperfective =*a* in Brahui can only have originated in Balochi, since it is Iranian in pattern and phonologically identical to the parallel morpheme in Makrani Balochi. The Balochi imperfectivizing =*a* is discussed extensively by Emeneau (1962, 342–344), Buddruss (1976, 13), Nawata (1981), Elfenbein (1982), and Axenov (2006, 166–170), who, describing the Balochi of Turkmenistan, also considers this aspectual particle enclitic to the word

<sup>15</sup>Tantalizing questions arise as to whether either of these *a* forms might be a “copy” of the other in some sense, and about the chronology of their appearance in the language. Bray’s (1907, 195) remark, “The omission of *-a* in such cases would be a mark of *suruṭ* or broken Brahui,” seems to suggest a perception of desirable symmetry produced by the simultaneous appearance of both the enclitic =*a* and suffixal *-a*.

<sup>16</sup>The gloss ‘lo and behold’ for *tā* is given by Bray (1934, 281). The sense appears to be similar to that of the Persian conjunction *ki* ‘when (suddenly)’ used when an ongoing action is intersected by a punctual event.



immediately preceding the verb.<sup>17</sup> In the Balochi dialect of Afghanistan described in Nawata (1981), tense forms with present and past imperfective meanings are given, (32) and (33), which consist of the ‘present’ and ‘past’ tenses respectively, with =*a* enclitic to the word preceding the verb form.

- (32) man=*a* guš-īn  
 I(DIR)=**a** speak(PRS)-1.SG  
 ‘I am saying.’ (Nawata 1981, 20)
- (33) har rōč āp=**a** dāt  
 every day water=**a** give(PST.3.SG)  
 ‘He gave water every day.’ (Nawata 1981, 21)

#### 4.2 Origins of the progressive forms

The progressives of the form INFINITIVE-LOC + AUXILIARY appear to be quite recent, perhaps originating some time in the nineteenth century. Since Brahui and Balochi have mutually influenced each other over a long period of time, when looking for the sources for the innovation and extension of specifically progressive tense forms in Brahui, one must also consider the situation in Balochi. Present-day Raxshani Balochi has a fully developed set of progressive forms. Barker and Mengal (1969 Vol I: 233, 294, 393) give a full series of “continuative” forms, which consist of the infinitive + the singular oblique -*ā*,<sup>18</sup> + various tense/aspect forms of *a*- ‘be’ or *bū*- ‘be, become’.

Imperative continuative	= INF- <i>ā</i> + <i>bū</i> -	(IMP)
Present continuative	= INF- <i>ā</i> + <i>a</i> -	(PRS)
Future continuative	= INF- <i>ā</i> + <i>bū</i> -	(FUT)
Subjunctive continuative	= INF- <i>ā</i> + <i>bū</i> -	(SBJV)
Past continuative	= INF- <i>ā</i> + <i>a</i> -	(PST)
Present perfect continuative	= INF- <i>ā</i> + <i>bū</i> -	(PRS.PRF)
Past perfect continuative	= INF- <i>ā</i> + <i>bū</i> -	(PST.PRF)
Past completive continuative	= INF- <i>ā</i> + <i>bū</i> -	(PST.COMPL)
Past perfect completive continuative	= INF- <i>ā</i> + <i>bū</i> -	(PST.PRF.COMPL)

TABLE 2 “Continuative” Forms in Balochi (Barker and Mengal 1969 Vol I: 233, 294, 393)

Discussions in 1991 with Abdullah Jan Jamaldini, a preeminent scholar of Balochi, confirming and reinforcing other sources, indicate that the forms built directly on the present and past stems constitute the core of the Balochi verb system. The degree of acceptability, and status of the continuative/progressive forms as either highly marked forms or calques on Urdu varies with dialect and speaker-related variables like age, rural or urban origin, and educational level. According to Jamaldini, the progressive series of forms are used by (a) educated people who know Urdu, (b) school-going children, and (c) people in Karachi; and are not characteristic of rural Western Balochi (Bashir 1991b, 94).<sup>19</sup> Nowadays, their use is being reinforced by the influence of Urdu and English. Each of these forms seems to be establishing itself in the language more or less rapidly, and with greater or less degree of acceptance. For example, Jamaldini, who says that he does not himself use forms of the progressive series, feels that the present perfect progressive is less unnatural sounding than other forms of this series.

<sup>17</sup>Barker and Mengal (1969, Vol 1:149), describing Raxshani Balochi, mention this =*a*, but only in the context of conjunct verbs consisting of a nominal element and a light verb. They consider it optional with no discernible meaning. Elfenbein (1990, ix–xviii), treats *a*- as prefixal to the finite verb, and considers that in Raxshani it retains its durative-imperfective function, while in other dialects it remains only as a *svarabakhti* vowel.

<sup>18</sup>Barker and Mengal (1969, 233) call this the “singular-definite” suffix. By this they intend the singular oblique case ending -*ā* as used to mark singular, definite, direct objects.

<sup>19</sup>Farrell (1988) also gives these forms for Karachi Balochi. Mockler (1877), a sketch of the Coastal dialects of Balochi, gives forms which he calls the “present tense” and the “imperfect tense”, which are formed in the same way as Barker and Mengal’s “present continuative” and “past continuative”, and which have the same meanings.

These new periphrastic progressive forms seem likely to have developed in both Balochi and Brahui more or less simultaneously, perhaps in the early or mid-nineteenth century. The transparent morphology is consistent with recent innovation, and the pattern in both languages is identical, given the differing number of available case forms in the two languages.<sup>20</sup> Since there are only three distinct case forms in (Western) Balochi-direct, oblique, and genitive-as compared to the eleven of Brahui, the Balochi oblique in *-ā* has the functions of several of the Brahui cases, including the locatives.<sup>21</sup>

Table 3 summarizes and compares the earlier and innovated systems in Balochi and Brahui.<sup>22,23</sup>

Since there is continuous mutual interaction between Balochi and Brahui, and of both of these languages with Urdu and increasingly also with English, the use of the progressives in both languages has been reinforced.

### 4.3 References to and attestations of Brahui progressive forms

In the early literature, references to progressive forms and textual attestations of these forms are sparse. Leech (1838) contains no mention of such forms; nor do they occur in his two folk story texts, which are the first available published Brahui texts to which I have had access.<sup>24</sup> Bellew (1874) also makes no mention of these forms. Bux (1877) gives a paradigm for the present progressive, but not for the past progressive. His collection of 787 utilitarian sentences includes three instances of the present progressive, and the nineteen short prose texts, all of which are given in Perso-Arabic script, contain four instances of the present progressive and one of the past progressive. Duka (1886, 97), which is a translation and analysis of Trumpp (1880), gives a paradigm for the “present continuous” but not for a “past continuous”. Duka mentions that a negative form of the infinitive is absent, “since it is considered as a noun”. Bray (1907, 118–119) says that the “sense of actuality” is expressed by the forms constructed with the INF + the locative element *-aṭī* ‘in’, and considers that these are periphrastic constructions, equivalent to ‘in the act of V-ing’, and hardly belong in the verbal paradigm. No sentences involving the INF-*aṭī* progressive forms occur in his “Brahui Tales” (1938–1939), a collection of five short folk stories, although four sentences involving the inceptive construction INF-*aṭī* + ‘fall’ are found. The *Linguistic Survey of India* (LSI) has one occurrence of the present progressive in context (34).

<sup>20</sup>Elfenbein (1998, 403) says that the Balochi “progressives” are an innovation originating in the Eastern Balochi area. He feels that the Brahui progressives cannot be a calque on the Balochi, and that Brahui could just as equally be the source of the Balochi forms. The Eastern Balochi “imperfect” (Gilbertson 1923, 115), however, consists of the *uninflected* [emphasis mine] infinitive plus present or past tense person-number desinences. Given the parallel structures of the inceptive and progressive constructions in Brahui, it is possible that the progressive is an independent innovation, filling a gap in the set of phasal constructions with a form parallel in structure to the inceptive. It is worth noting that Balochi inceptives are formed not with ‘fall’ but with *laggag* ‘to attach’ or *šurū būag* ‘to become’ (intransitive) or *kanag* ‘to do’ (transitive) (Bashir 1991b, 209).

<sup>21</sup>For this reason, the unmarked case in Balochi is labeled Direct, while in Brahui it is called Nominative.

<sup>22</sup>Note that Gilbertson’s texts contain examples of present and past imperfectives in the habitual sense. For example:

- i. drang-ānī chacka go ramiḡ ravaḡ-ū̄  
cliff-GEN.PL on with goats go(INF)-1.PL  
‘We go on the cliffs with our goats.’ (Gilbertson 1923, 306)
- ii. pheša mā māl.mawēšī duzī khaṇaḡ-eṭū̄  
before we cattle theft do(INF)-be(PST).1.PL  
‘Before, we stole cattle. . .’ (Gilbertson 1923, 306)

<sup>23</sup>From the Eastern Balochi data I have available, it seems that around 1990, although an innovated periphrastic progressive form (INF-OBL + personal endings) did exist and was in use (sometimes) for the present progressive sense, the original system (INF[DIR] + personal endings) was still in use, perhaps especially in the past tense.

<sup>24</sup>According to Dr. Noman-ul-Haq, during the course of documenting private library holdings in Pakistan in a project sponsored by the American Institute of Pakistan Studies, he has learned that more than twenty private collections contain Brahui materials. The dates and titles of these materials are not yet available. These could turn out to be a valuable source of information on earlier stages of the language.

**Earlier Systems**

E. Balochi (ca. 1923):	INF(DIR)-PERSON/NUMBER ENDINGS (Gilbertson 1923, 113)
Present imperfect:	<i>ma k̄han̄aγ-ā̄</i> ‘I do/I am doing’
Past imperfect:	<i>ma k̄han̄aγ-eθ-ā̄</i> ‘I used to do/did/was doing’
W. Balochi:	(=a) PRESENT/FUTURE or PAST IMPERFECT
Present:	<i>man(=a) kan̄in</i> ‘I do/I am doing’
Imperfect:	<i>man(=a) kurt</i> ‘I used to do/was doing’
Brahui:	(=a) PRESENT/FUTURE or PAST IMPERFECT
Present:	<i>ī (=a) kēv-a</i> ‘I do/am doing.’
Imperfect:	<i>ī (=a) karēṭ-a</i> ‘I used to do/was doing.’

**Innovated Periphrastic Progressives**

E. Balochi (ca. 1990)	
Present progressive:	INFINITIVE-OBLIQUE + ‘be’ (PRESENT) <i>marošī ā kotā-ā rawaγγ-ā-(y)ā̄</i> today they Quetta-OBL go(INF)-OBL-3.PL ‘Today they are going to Quetta.’ (Bashir 1991b, 107)
Past progressive:	INFINITIVE(DIRECT) + ‘be’ (PAST) <i>ta če kan̄aγγ-aiθai</i> you what do(INF)-be(PST).2.SG ‘What were you doing/did you (habitually) do?’ (Bashir 1991b, 108)
W. Balochi (ca. 1990):	INFINITIVE-OBLIQUE + ‘be’ (PRESENT or PAST)
Present:	<i>man kanag-ā un</i> ‘I am doing’
Perfect:	<i>man kanag-ā atun</i> ‘I was doing.’
Brahui (ca. 1990):	INFINITIVE-LOCATIVE + ‘be’ (PRESENT or PAST)
Present:	<i>ī kann̄ing-atī uṭ</i> ‘I am doing.’
Past:	<i>ī kann̄ing-atī assuṭ</i> ‘I was doing.’

TABLE 3 Earlier and Innovated Systems in Balochi and Brahui

- (34) **pāre** ki ō ī bhīn-ān **kah-ing-ṭi** u-ṭ  
 say(PST.3.SG) that and I hunger-ABL die-INF-LOC be(PRS)-1.SG  
 ‘He said, ... and I am dying from hunger.’ (Grierson 1906, 630)

Rai (1907), in his list of proverbs, gives (35).

- (35) soranga dīr-aṭi bē **šāγ-ing-aṭi** ē  
 brackish water-LOC salt throw-INF-LOC be(PRS.3.SG)  
 ‘He is throwing salt in brackish water.’ (Rai 1907, 132)<sup>25</sup>

Another use of a progressive form occurs in his section on “colloquial sentences”, as shown in (36).

- (36) čāri-k bass-ur, ahwāl tiss-ur  
 spy-PL come(PST)-3.PL **information give(PST)-3.PL**  
 ki jām bhallo laškar-as harfé-n-é **ban-ing-aṭi-é**  
 that Jam big force-INDF raise(PST)-PRF-be(PRS.3.SG) come-INF-LOC-be(PRS)-3.SG  
 ‘The spies came and **reported** that the Jām has raised a large army and is coming.’  
 (Rai 1907, 156)

Otherwise, Rai gives regular paradigms for the forms we are calling present and past progressive in both affirmative and negative (affirmative infinitive plus NEG auxiliary, e.g., *í hiningaṭi allawésuṭ* ‘I was not going.’). He labels these tenses “present” and “imperfect”. His specimen sentences collected under “miscellaneous sentences” contain several instances of these forms, but these may be elicited examples. Since Rai was an officer in the British service, not a Brahui native speaker, and was writing a handbook designed for use by British officers, it is likely that he elicited sentences presented in Urdu from his Brahui informants. Thus his paradigms could reflect influence of both Urdu and English.

Mayer (1907) includes thirteen short prose texts and five poems; it contains eleven instances of the present progressive and two of the past progressive. Interestingly, eight of the ten examples of the present progressive in Mayer (1907) occur in complements of verbs of speech or perception (e.g., ‘see’), as in (37) and (38). Mayer (1906) is a novelette of about sixteen pages, and contains at least eight occurrences of the present progressive and one of the past progressive.

- (37) **xana** ki... kuttix-át-e **duzi kan-ing-aṭi o**  
 see(PST.3.SG) that melon-PL-OBJ **theft do-INF-LOC be(PRS.3.PL)**  
 ‘... **saw** that .... they **are stealing** the melons.’ (Mayer 1907, 35)
- (38) **xana** ki musī bandaγ kasur-án **ban-ing-aṭi o**  
 see(PST.3.SG) that three man road-ABL **come-INF-LOC be(PRS.3.PL)**  
 ‘She saw that three men **were** coming along the road.’  
 (lit. ‘**are coming** by the road’) (Mayer 1907, 1)<sup>26</sup>

Rai’s apparently natural examples (35) and (37) above and the LSI example (34) above occur in the complements of ‘report’ and ‘say’ respectively; in (38) and (39) the progressive forms occur in the complement of ‘see’. The following five examples, (40)–(44), come from two of the texts in Elfenbein (1983). In all five of these, the present progressive form occurs in the complement to a verb of perception, mental activity or speech. This raises the question of whether the progressive forms, which Bray (1907) descriptively calls “tenses of actuality” and glosses with phrases like ‘I am in the act of placing; I was actually placing,’ may be associated with the Brahui system of expressing a range of epistemic senses ranging from direct evidential to non-evidential.

<sup>25</sup>Usually, Rai’s stressed vowels correspond to the long vowels of other authors. His section on riddles and proverbs, though, uses macrons to mark long vowels.

<sup>26</sup>The Brahui sentence reflects the direct reported perception, as opposed to the corresponding indirect English usage with tense shift, as appears in the gloss.

- (39) ofk **pārer** ki nan tenā mulkatetī islāmī nizām-e aḍ tining-nā košišṭ-aṭī<sup>27</sup> **kanningaṭī-un**  
 ‘They **said** that we in our countries are working in our effort to establish Islamic rule.’  
 (From *A Joke* by Nadir Qambarani, originally published in *γwārix*, a collection of folk poetry edited by Abdul-Rahman Brahui. Quetta: Idara Adab Baluchistan. Translated in Elfenbein (1983, 115))
- (40) zyā **harrife** ki ī bāz trundiaṭ kārem **kanningaṭī-uṭ**  
 ‘Zia **asked**, “I **am working** very fiercely; ...?”  
 (From *A Joke* by Nadir Qambarani, originally published in *γwārix*, a collection of folk poetry edited by Abdul-Rahmaan Brahui. Quetta: Idara Adab Baluchistan. Translated in Elfenbein (1983, 108, 115))
- (41) mullā luṭūr **fīr kare** ki dā ambale ant saxtīas halkone, ki kanā penaṭ paleze **luṭṭifingaṭī-e**  
 ‘Mullah Lutur **thought**, “That fellow is certainly in difficulty; he **is getting** his melon garden plundered in my name.”’  
 (From *Mullā Luṭur*, told by Nadir Qambarani in 1981. In Elfenbein (1983, 113, 122))
- (42) šāhzādī kāṛokīān<sup>28</sup> **hurā hayrān mass** ki, dā ganokāk ant **kanningaṭī-o**  
 The princess **looked** from her window and **was surprised**: “What are those fools **doing**?”  
 (From *Mullā Luṭur*, told by Nadir Qambarani in 1981. In Elfenbein (1983, 114, 122))
- (43) šāhzādī waldā **xurā xanātā**, ki daḡare **kuṭṭingaṭī-o**  
 ‘The princess again **looked out and saw** that they **were slaughtering** the kid.’  
 (lit. ‘are slaughter-ing’)  
 (From *Mullā Luṭur*, told by Nadir Qambarani in 1981. In Elfenbein (1983, 114, 122))

In 1991, Abdul Razzak Sabir thought that even for the specifically progressive meaning, the present/future tense is more common, especially in rural speech, and that the progressive forms are mostly used by people who know Urdu. As recently as 2006, Andronov described the progressive forms as complex verbal constructions, rather than tense forms (Andronov 2006, 89). However, the progressive forms were already recognized by Bray’s time, and have steadily gained currency, first in urban locations and increasingly in the rural areas, and have a real place in the contemporary language. Examples (44) and (45) are from literature published in the 1980s.<sup>29</sup>

- (44) ... urā-ī nāsar-tō ant **man-iṭ-ṭī** ē  
 house-LAT Nasser-COM what become-INF-LOC be(PRS.3.SG)  
 ‘... what is happening to Nasser in the house.’  
 (From Asani (1985), translated in Ross (1999, 159))
- (45) asiṭ-tā<sup>30</sup> iraḡ **dan-iṭ-ṭī** ē  
 one-TOP bread take-INF-LOC be(PRS.3.SG)  
 ‘One of them is taking bread (to eat).’  
 (From *Nikah* ‘Wedding’ in Zia (1984) translated in Ross (1999, 175))

#### 4.4 Past progressive forms

Examples of past progressive forms do occur in the earlier literature, though they are far fewer than those of present-tense forms. Two senses are represented in the examples available. In (46) the

<sup>27</sup>Sabir (p.c. March 2009) comments that *košišṭ kanningaṭī-un* would be correct.

<sup>28</sup>Sabir (p.c. March 2009) offers *kirikī* here.

<sup>29</sup>Notice that in both (45) and (46) the locative ending appears as *-ṭī*, without the initial vowel, *-a*. These examples are from a written source, and it is likely that the roman transcription without the short a is an artifact of transliteration from the Brahui-script representation, in which a short vowel would not be indicated. This consideration also applies to the folk texts in Bux (1877), which are presented in Perso-Arabic script, and to examples (47) and (50). Thus from texts originally recorded in Brahui script and transliterated, we cannot determine whether the pronunciation of the locative suffix included a short vowel or not. The early examples (e.g., Bux, Duka) write *-ṭī* separate from the infinitive, while Sabir writes it joined to the infinitive.

<sup>30</sup>I have tentatively glossed *-tā* here as a kind of topic marker (Bray 1907, 219).

past progressive conveys the sense of a “future in the past”, parallel to the sense of the Urdu past progressive in, for example, *mā̃ ā rahā thā ki koī mehmān ā gae* ‘I was about to come, when some guests (unexpectedly) came.’

- (46) hamo de ki miḥzmán-k **ban-ing-ṭi** **as-ur**  
 that day when guest-PL come-INF-LOC be(PST)-3.PL  
 ‘That day when the guests were about to arrive.’ (Mayer 1907, 11)

The past progressive also appears in direct narrative (47), (48) and (49).

- (47) nan tēn-aṭ numā pāraḡ-āi **bann-ing-aṭi** **ass-un**  
 We self-INS your side-LAT come-INF-LOC be(PST)-1.PL  
 ‘We were ourselves coming to your place.’ (Bray 1907, 185)
- (48) haṇḍuti<sup>31</sup> šam tama šer-ák hamo waxt-ai **ban-ing-aṭi** **as-ur**  
 as.soon.as night fall(PST.3.SG) lion-PL that time-LAT come-INF-LOC be(PST)-3.PL  
 ‘As soon as night fell, the lions were coming along...’ (Mayer 1907, 43)

- (49) asa pāraḡ-ā masink dīra-ā maš-ōk **xal-iṭ-ṭi** **as-ur-a**  
 one side-LAT daughters drum-LAT get.up-ADJ.PTCP pull-INF-LOC be(PST)-3.PL-IPFV  
 ‘On one side the girls **were** getting up and **pulling the drum.**’  
 (From *Nikah* ‘Wedding’ in Zia (1984) translated in Ross (1999, 173)).

Bray (1907, 85) has the following example of a probable-future progressive (50).

- (50) nēmroc-āi ki sardār bar-ē ī lāb **kann-ing-aṭi** **mar-o-ṭ**  
 noon-LAT if chief come-PRS.INDF.3.SG I harvest **do-INF-LOC** **become-PROB.FUT-1.SG**  
 ‘Should the chief come at noon, I **shall be in the middle of** harvesting.’

The following example of a perfect progressive (51) occurs in Bray (1907, 189).

- (51) bāz vaxt ī gōbaṭ **kann-ing-aṭi** **mass-un-uṭ** ki od bass-un-e  
 many time I threshing **do-INF-LOC** **become(PST)-PRF-1.SG** when he come-PRF-3.SG  
 ‘Many a time has he found me busy threshing on his arrival.’ (Bray’s translation)<sup>32</sup>

#### 4.5 Negative progressive forms

According to Sabir, although the affirmative progressive forms, both in the present and the past, are now (ca. 1990) commonly used, negative forms, though regularly and easily formed, are rarely used. He also observed that hypothetical negative progressive forms consisting of the negative infinitive with an affirmative auxiliary, although they could be regularly and easily formed, do not occur. The only early example of a negative progressive form that I have found in the published literature is (52), in which the negative element is in the auxiliary, not in the infinitive. Bray (1907, 139) says this clearly: “As there is no negative infinitive, negation in the so-called tenses of actuality has to be expressed in the auxiliary.”

- (52) ī dudēng-aṭi aff-aṭ  
 I run-LOC be(NEG.PRS)-1.SG  
 ‘I am not running (away).’ (Bray 1907, 175)<sup>33</sup>

Importantly for the analysis and discussion of the recent Brahui developments discussed in section 5.2.1 below, Barker (1969, I:234) gives two negative forms for the Balochi “present continuative”.

<sup>31</sup>According to Sabir (p.c. March 2009), the correct form is *handāṭi*.

<sup>32</sup>The possibility that the perfect progressive expresses a mirative meaning needs to be explored. Bray’s gloss ‘has he **found** [emphasis mine] me’ is suggestive of this. Recall also Abdullah Jan Jamaldini’s comment that the perfect continuative forms seem more natural to him than others of this series. Perhaps a mirative meaning emerges naturally from the conjunction of perfect tense, the verb ‘become’, and the sense of ‘actuality’ conveyed by the continuative/progressive form.

<sup>33</sup>With this middle verb, in the progressive form the infinitive ending is often dropped, and the locative ending attached directly to the base of the verb (Bray 1907, 175).

The first consists of the stressed negative prefix *ná* + infinitive-OBL+ present tense of *ā*- ‘be’, as in (53). Because of the close juncture between the negative prefix and the infinitive, this structure is similar to the negative infinitive of Brahui, and would be parallel to the type not attested in Brahui. In the second variant, the negative element is a separate particle, which precedes the finite verb, as in (54).

- (53) man kār ná-kan-ag-ā un  
 I(DIR) work NEG-do-INF-OBL be(PRS.1.SG)  
 ‘I am not working.’
- (54) man kār kan-ag-ā na un  
 I(DIR) work do-INF-OBL NEG be(PRS.1.SG)  
 ‘I am not working.’

## 5 Recent innovations

The affirmative progressive forms, the negative infinitive, and thus the negative conjugations of the progressive tenses are the elements of the verbal system affected by the innovations discussed below. The changes in the negative progressive tenses incorporate both the innovation in the affirmative progressives and new negative infinitives.

### 5.1 Changes in the affirmative progressive forms

To recapitulate, consider (55), (56) and (57) below. The type in (55), with the imperfect, shows the original usage, and in rural areas is still more common than the progressive form (57). Sabir reports (p.c. 1991) that in urban areas the progressive forms (56) are used more frequently, and are the current urban standard way of expressing this meaning. In (57), which shows the first of the innovations discussed here, the locative ending *-aṭī* has been dropped from the infinitive, leaving a progressive form consisting of the uninflected infinitive plus a form of ‘be’ as auxiliary with a closer junction than at the stage of (56). This represents a more recent stage, noted within the ten years prior to 1991. According to Sabir, in 1991 it was used only by speakers up to about 20–30 years of age, and was considered by some people to be substandard. However, the writer of this paper heard a spontaneous instance of this form during a conference in Quetta in 1991. When the audience was asked whether a certain person was present, someone replied *bánniṅ e* ‘He is coming’, rather than the earlier form *bánniṅaṭī e*.<sup>34</sup>

- (55) ī inā-ṭ o xwāna-k-á  
 I go(PST)-1.SG he read(PST)-3.SG-IPFV  
 ‘When I went he was reading.’
- (56) ī inā-ṭ o xwān-ing-aṭī ass  
 I go(PST)-1.SG he read-INF-LOC be(PST.3.SG)  
 ‘When I went he was reading.’
- (57) ī inā-ṭ o xwān-ing-ass  
 I go(PST)-1.SG he read-INF-be(PST.3.SG)  
 ‘When I went he was reading.’

In 2004, thirteen years after my original data and observations were noted, Sabir reported that forms like that in (57) were not only being used by urban youth but that the younger rural generation were also employing them. Furthermore, in 2004 they were also being written in modern poetry and prose, especially dramas and short stories. According to Sabir, about forty percent of the new generation of young writers use only forms like *bánniṅ-e* or *bánniṅ-aff* instead of *bánniṅaṭī e* or *bánniṅaṭī aff* (Sabir, p.c. October 2004). He has provided the following two examples, (58) and (59), from published Brahui poetry.

<sup>34</sup>Note that the form resulting from this innovation is structurally parallel to the Eastern Balochi form illustrated above in section 4.2.

- (58) situm ant-ān ant pā **mann-ing-e** jahān-aṭ  
 cruelty what-ABL what say(IMP) **become-INF-be**(PRS.3.SG) world-LOC?<sup>35</sup>  
 ke ādam-nā xūn ham **wah-ing-e** jahān-aṭ  
 that human-GEN blood so **flow-INF-be**(PRS.3.SG) world-LOC?  
 ‘What kind of cruelty is being in the world? Everywhere the blood of humans is being shed.’  
 (Source: Weekly *Elum Brahui, Mastung*, 3–16 August, 2004, p. 15. Transliteration and translation by Sabir.)
- (59) tufān-aṭī sali-ta-n-e kas kas-nā kāṭum-ā  
 storm-LOC stand-NEG.PST-PRF-3.SG someone someone-GEN head-LAT  
**bann-ing-e** saxt-o waxt ki wāpas nā kāṭum-ā  
**come-INF-be**(PRS.3.SG) hard-INDF time that back your head-LAT  
 ‘In a storm no one can stand with you. A very tough time is coming again for you.’  
 (Lit. ‘In the storm no one has stood by anyone’s head. A hard time is coming back on you.’)  
 (Source: Weekly *Elum Brahui, Mastung* 17–26 September, 2004, p. 12. Transliteration and translation by Sabir.)

In summary, progressive forms have become increasingly grammaticized, evolving from being constructions parallel to other phasal constructions, to tense/aspect forms.

## 5.2 Changes in the negative conjugation

A second area in which change is occurring is the negative conjugations. The inherited system, in which the negative element is part of the verb stem, is undergoing shifts of several types. In brief, two new types of non-finite negative forms have emerged. Some of them employ grammatical strategies borrowed from the Balochi or Urdu (Iranian/IA) pattern, resulting in new types of deverbal nominals. Others employ indigenous Brahui (Dravidian) morphological mechanisms and result in innovative negative infinitives, which are then employed in a restructuring of the negative progressive conjugations.

### 5.2.1 Iranian/Indo-Aryan strategies

The first pattern involves the use of a negative prefix. Several variants of this development have been observed. First, a newly-coined form consisting of the negative prefix *na-* plus the infinitive has appeared in some urban areas. For example, instead of *kapparíng* ‘not to do’ from *kánníng* ‘to do’, there is also a new form *na kánníng* ‘not to do’, *na ínníng* instead of *imparíng* ‘not to go’, and *na kunníng* in place of *kumparíng* ‘not to eat’.<sup>36</sup> This results in forms structurally parallel to the Rakhshani Balochi negative constructions shown as (54) and (55) in section 4.5 above. A second variant appears in the deverbal noun *naṭəhngī* ‘not having good relations with’ (<*na + ṭəh-ing + ī*>), which has been observed as the negative of *ṭəhíng* ‘to have good relations with’, instead of the normal form *ṭəparíng* ‘to not have good relations with’.<sup>37</sup> Three morphological processes occur to produce this innovative form: the negative particle *na* is prefixed, the infinitive is contracted, and the abstract nominalizing suffix *-ī* is added. The form *natisī* ‘not giving’, instead of *tifaríng* ‘not to give’ shows a third variant (Bashir, notes 1991). It consists of the negative prefix *na* plus the noun *tiss* ‘gift, act of giving, generosity’<sup>38</sup> and the suffix *-ī* (<*Iranian/Indo-Aryan*>). Sentences (60)–(62) show the development from concrete noun to abstract negative nominal.

<sup>35</sup>Here, *-aṭ* has the shape of the instrumental case marker; however, from Sabir’s translation, it seems that it could also be a shortened form of the locative ending, truncated for metrical purposes.

<sup>36</sup>Whether this *na* should be analyzed as a negative prefix or as a (separate) negative particle is not yet clear. In Balochi, the negative element is a prefix, bearing main word stress, and written together with the verb. The stress and juncture characteristics of these new Brahui forms need to be analyzed to determine the status of *na* in Brahui.

<sup>37</sup>Bray (1907, 296) gives this verb as *ṭahíng*. The salient fronting to [æ] I heard may reflect the same phonetic change seen in Urdu [bəhan] (</*bahan*/), in which short /a/ followed by /h/ is fronted.

<sup>38</sup>This is identical to the past stem *tiss* of *tínig* ‘to give’.



- (60) *dā xudā-nā tīss-as*  
 this God-GEN **gift**-INDF  
 ‘This is a gift of God.’ (Bashir, notes 1991)
- (61) *šām-aṭī bea-nā tīsī jwān aff*  
 evening-LOC salt-GEN **giving** good be(NEG.PRS.3.SG)  
 ‘To give salt in the evening is not good.’ (Bashir, notes 1991)
- (62) *ḡalæ-nā na-tīsī jwān aff*  
 grain-GEN **not-giving** good be(NEG.PRS.3.SG)  
 ‘Not to give grain is not good.’ (Bashir, notes 1991)

Yet another variant of this type involves the use of the negative prefix *ve-* (<*be-* Persian, Balochi, Urdu). For example, instead of the regularly formed negative infinitive *mafarīng* ‘not to be’, forms like *vemānning* ‘not to be’ (<*be+mānning*) are used in Jhalawan and Sindh (Bashir, notes 1991). Sabir observes that this type of new prefixal negative verbal nouns are restricted to nominal uses and are not used in verbal constructions or as part of a tense form.

A new negative adjectival participle is also appearing. In this development, observed with complex predicates consisting of a noun or adjective plus a light verb, the negative morpheme has shifted from the light verb to the nominal/adjectival element, and the original Brahui negative morpheme is replaced by a Persian-origin negative prefix. This development is illustrated and analyzed in (63), where the negative element *vē* attaches to *cāp* ‘printed’ instead of *marok*, the affirmative adjectival participle of *manning* ‘to become’ in the original usage *čāp mafarok* ‘unprinted, unpublished’.

- (63) a. *čāp ma-far-ok*  
 printed become-NEG-ADJ.PPL  
 ‘unprinted, unpublished’
- b. *vē-čāp mar-ok*  
 NEG-printed become-ADJ.PPL  
 ‘unprinted, unpublished’

This development of negative non-finite forms in which the negative element is prefixed to infinitives or nominal/adjectival elements, rather than being internal to the stem, is simultaneous with the second major development to be discussed—the emergence of radically new negative infinitives.

### 5.2.2 Indigenous Brahui strategies

The creation of new negative infinitives employing Brahui-internal strategies is also a recent development. We have seen that negative progressive forms, although regularly and easily formed, are infrequently attested (type in example (64)).

- (64) **“Standard” negative progressive: (rarely used)**  
 o *bānn-ing-aṭī aff*  
 s/he come-INF-LOC be(NEG.PRS.3.SG)  
 ‘S/he is not coming.’ (Bashir, notes 1991)
- (65) **Innovation 1 (loss of locative marker) (more frequently used)**
- a. o *bann-ing aff*  
 s/he come-INF be(NEG.PRS.3.SG)  
 ‘S/he is not coming.’ (Sabir, p.c. 2004)
- b. o *xaling-aff*  
 ‘S/he is not beating.’ (Sabir, p.c. 2004)
- c. o *kunning-aff*  
 S/he is not eating.’ (Sabir, p.c. 2004)

Innovation 1 (65) produces forms parallel to the newly-contracted affirmative progressive forms like *o bānning e* ‘s/he is coming’ ((58) and (59) above). At this stage, because of the dropping of

the locative marker *-at̄i*, the juncture between the negative auxiliary and the infinitive is closer than that of the negative auxiliary and the infinitive in the “standard” negative progressive (as in (65)). It appears that forms showing deletion of the locative case marker are now more frequently used than the original forms of the negative progressive. Sabir’s children, for example, use forms incorporating this innovation (Sabir, p.c. 2004).

The original negative infinitive of *bánning* ‘to come’ is *baffaríng* ‘not to come’, with its alternate form *bafaning*.<sup>39</sup> By 1991, two variants of a new negative infinitive, e.g., *baffing* ‘not coming’ and *bafáng* ‘not coming’, had appeared (66) and (67). These were observed mostly among children living in urban neighborhoods where a mixed population of Brahui, Balochi, and Pashto speakers live (Sabir, p.c. 1991). Sabir (p.c. November 2004) says, “The term ‘*baffing*’ has recently been introduced and only children and youth aged about 20 are using it. In literature it is now being introduced and rarely young writers use it.” Unfortunately, I have no published examples of its occurrence.

(66) **Innovation 2 (creation of new negative infinitive)**

- o   baff-ing           e  
s/he come-NEG-INF be(PRS.3.SG)  
‘S/he is not coming.’ (Bashir, notes 1991)

In Innovation 2, the innovative form, *baffing*, loses the *ar* of the negative morpheme, reducing the trisyllabic negative infinitive to a disyllabic form, and the stress is shifted to the stem. In progressive tense forms involving Innovation 2, the negative element has moved out of the auxiliary into the stem, and, as in the core verbal forms of the Brahui verb system, is integral to the verb stem. Compare (66) to (65) above. The innovated negative progressive construction thus consists of a true negative infinitive plus an affirmative auxiliary. These newly innovated negative infinitives are used freely in finite verbal forms.

(67) **Innovation 3 (a second new negative infinitive)**

- a. o   ba-f-áng           e  
s/he come-NEG-INF be(PRS.3.SG)  
‘S/he is not coming.’ (Bashir, notes 1991)
- b. o   liki-p-áng-ass  
s/he write-NEG-INF-be(PST.3.SG)  
‘S/he was not writing.’ (Sabir, p.c. 2004)
- c. o   kunpáng-e  
‘S/he is **not** eating.’ (Sabir, p.c. 2004)
- d. o   xalpáng-e  
‘S/he is not beating.’ (Sabir, p.c. 2004)

Innovation 3, of the type *bafáng* (67), appears to be a development of the alternate negative infinitive *bafaning*, in which the vocalic element *-ing* of the infinitive ending is dropped and the stress remains on the *á*. Some verbs form this new negative infinitive with *-f-* and some with *-p-* as the negative marker. Both types of new negative infinitives, *báffing* (66) or *bafáng* (67) ‘not to come’ occupy the same structural position as the affirmative infinitive *bánning* ‘to come’ does in the affirmative sentence, e.g., (59) and (60) above.

When one considers the evolution of the negative progressive forms, several possible driving factors present themselves. Perhaps the facts that a verbal form regularly constructible with a negative infinitive and a affirmative auxiliary was not used, and that the form constructed with the affirmative infinitive and the negative auxiliary was only rarely used, coupled with the loss of the locative case marker in the progressive forms and their increasing grammaticization led to the perception of a gap in the paradigm; that is, the absence of a negative progressive form parallel to the affirmative. This may have strengthened the tendency to use a *newly re-shaped negative*

<sup>39</sup>*-f-* is an allomorph of the present negative element *p*.

<sup>40</sup>I do not have an example of Innovation 2 for the past tense.

<b>Present</b>		
	AFFIRMATIVE	NEGATIVE
Present-future tense	<i>ī barév-a</i> 'I will come, am coming.'	<i>ī bafar-a</i> 'I will not come, am not coming.'
Original present progressive	<i>o banning-aṭī-e</i> 'S/he is coming.'	<i>o banning-aṭī-aff</i> 'S/he is not coming'
Innovation 1 — deletion of Locative case marker	<i>o banning-e</i> 'S/he is coming'	<i>o banning-aff</i> 'S/he is not coming.'
Innovation 2 — creation of new negative infinitive	n.a	<i>o baffing-e</i> 'S/he is not coming.'
Innovation 3 — another new negative infinitive	n.a	<i>o bafáng-e</i> 'S/he is not coming.'
<b>Past</b>		
Imperfect tense	<i>o xwānak-á</i> 'S/he was reading.'	<i>o xwāntavak-a</i> 'S/he was not reading.'
Original past progressive	<i>o xwāning-aṭī ass</i> 'S/he was reading.'	<i>ī xwāning-aṭī allavaṭ</i> 'I was not reading' (rare)
Innovation 1: Deletion of locative case marker	<i>o xwāning-ass</i> 'S/he was reading.'	[no example in my data]
Innovation 3: Second type of new negative infinitive <sup>40</sup>	n.a	<i>o likipáng-ass</i> 'S/he was not writing.' (fairly common)

TABLE 4 Summary of changes in the progressive forms

*infinitive* coupled with the affirmative auxiliary. This development results in structural parallelism between the affirmative and negative progressive paradigms: INFINITIVE (AFFIRMATIVE/NEGATIVE) + AFFIRMATIVE AUXILIARY.

### 5.2.3 Other innovations

The negative of the probable future (base + *ō* + person/number endings) is undergoing change. According to Sabir (p.c. March 2009), the Lahri and Qambrani tribes living in Quetta city and Jhalawan speakers use the form *kar-o-fa-ṭ* (do-ō-NEG-1.SG) 'I may not do' instead of the standard *ka-ppar-o-ṭ* (do-NEG-ō-1.SG) for the negative of the probable future. This innovation involves several changes. This innovative form shows what might be analyzed as the *kar-* variant of the affirmative stem of *kanning* 'to do' instead of the *ka-* variant, or as metathesis of *r* and the *f* allomorph of the negative marker which has replaced the *-p-* of the negative non-past stem *ka-p-* 'do-not'. It also involves metathesis of the vowels *o* and *a*. This new form appears to be the product of analogical reshaping perhaps on the model of the paradigm of *manning* 'to become', i.e. *mafarot* 'I probably will not be', and metathesis. Notice, however that the metathesis has the effect of reversing the order of the negative element, now *f*, and the future morpheme *ō*.

Another innovation noted in the negative conjugation involves analogical changes in the present indefinite forms. The regular affirmative form of the third person singular, affirmative present indefinite tense of *manning* 'to become' is *mar-ē* 's/he may be/become', with third person singular ending *-ē*; and the corresponding regular negative form is *maff* 's/he may not be/become', with a zero ending in the third person singular. In Quetta, however, negative forms like *maff-ē*, constructed on analogy with the affirmative form, are now heard. According to Sabir (p.c. 1991), these changes take place with negative forms ending in *-f*; and are being adopted by the Qambarani and Jattak tribes living in Quetta.

## 6 Summary and Conclusions

The non-appearance of negative infinitives in verbal conjugations has been due to the fact that the infinitive was basically a verbal noun, primarily appearing in nominal functions. Thus when the

verbal noun was used in constructions having the prototypical verbal function of predicating an action, the negative morpheme appeared in the auxiliary. The loss of the locative case ending on the infinitive in the progressive forms removed a salient nominal characteristic of the form, and paved the way for its taking on a more verbal nature. The re-creation of a new negative infinitive thus followed the loss of the locative case ending in the progressive forms. This sequence of changes has resulted in the increasing grammaticization of the progressives, moving them further along the way to being regular tense forms rather than constructions or complex verbal expressions. In short, the infinitive is becoming less nominal and more verbal. Compare examples (14) and (15), in which the original negative infinitive **refers** to the absence of an action or event, with the sentences in (66) and (67), in which the new negative infinitive **predicates** the non-occurrence of an action or event.<sup>41</sup> These changes have resulted in eliminating a gap in the progressive paradigms and structural parallelism between the affirmative and negative progressive forms. Simultaneously, innovative verbal nouns formed with various prefixal strategies have appeared. Thus the innovations discussed in this paper have “split” the verbal and the nominal character of the Brahui negative infinitive, resulting in the appearance of a new infinitive with more verbal properties, and new, unambiguously nominal, forms of verbal nouns. The other innovations discussed in section 5.2.3 also suggest that Brahui morphology is in an unstable phase and that more such changes are likely to be taking place.

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<sup>41</sup>According to Croft (2003, 185) reference to an action is a propositional act performed by verb forms lacking some of the attributes of prototypical verbs, e.g., action nominals and infinitives. Predication of an action is the prototypical function of unmarked verbs.

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# Why Things May Move: Evidence from (Circumstantial) Control

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## ABSTRACT

In the Minimalist Program, movement is considered to be driven by feature checking. An element moves in order to check a feature of its own or a feature on the target (Lasnik 1995). This paper presents evidence from Adjunct Control in two South Asian languages, Telugu and Sinhala, to show that movement may also be triggered by the feature requirements of the head of the maximal projection that dominates the moving element. The analysis, if correct, may be a solution to a major problem faced by the Movement Theory of Control: what triggers the movement of the subordinate subject in a control structure?

## 1 Introduction

It is a fact about language that in a linguistic expression an element may be pronounced in one position and interpreted in another. For example, *what* in *What did you eat?* is pronounced sentence-initially but interpreted as the complement of *eat*. This observation has led to the widespread belief that syntactic objects move and that movement is part of natural language. In the Government-and-Binding version of Principles and Parameters, movement was formulated as a free operation; a syntactic object may move at will, leaving a trace behind, as long as movement does not induce any violation.

In Minimalism (Chomsky 1995 and subsequent work), movement is understood as a dual operation of copy plus merge. In other words, when an element moves, it does not evacuate a site; rather, it copies out of the original site and merges in the target site, leaving behind a copy that is available for interpretation at LF but that is usually deleted at PF.

In addition, movement no longer takes place for free. When an element moves, it does so for one purpose: feature checking. According to Chomsky (1995, 201), movement is a self-serving, last resort operation; it takes place “only if the morphological properties of [the moving element] itself are not otherwise satisfied.” This self-serving characteristic of movement came to be understood as follows: an element moves only if it *eventually* checks a feature of its own. Further, “the self-serving property of Last Resort cannot be overridden even to ensure convergence.” Lasnik (1995) disagrees with Chomsky on empirical grounds. He shows that an element may move to check a feature of its own or a feature on the target. He labels this type of movement as Enlightened Self Interest.

Movement is employed in several syntactic derivations, such as raising structures and *wh*-constructions. Over the last decade, it has been argued that movement is also employed in the derivation of control structures.

Control is an interpretational dependency between two arguments in a given structure. Commonly, one argument is pronounced, determining the referential properties of an unpronounced argument. For example, the reference for the unpronounced argument in the subordinate clause in (1) may only coincide with the reference of the pronounced argument Sue in the matrix clause.

- (1) [<sub>Matrix</sub> Sue<sub>i</sub> managed [<sub>Subordinate</sub> \_\_\_\_\_<sub>i/\*k</sub> to impress Tom]]

One theory of control that emerged in the wake of the Minimalist Program (Chomsky 1995) is the Movement Theory of Control (Hornstein 1999, 2003). According to this theory, the two coreferential arguments in a control structure are related through movement, and sentence (1) derivationally looks like (2). *Sue* undergoes first merge in the subordinate clause before it moves to the matrix clause. At LF, both copies are available for interpretation. Decisions concerning the pronunciation of copies are made at PF. In (2), the higher copy is pronounced, while the lower copy is deleted.

- (2) [<sub>Matrix</sub> Sue managed [<sub>Subordinate</sub> ~~Sue~~ to impress Tom]]

The major premises of the movement approach are delineated in (3a–d) (Hornstein 2003, page 22, ex. (40)). Most relevant for the purpose of this paper are the premises in (3c–d) which employ Lasnik’s formulation of movement as Enlightened Self Interest.

- (3) a. Theta roles are features and can thus trigger movement.  
 b. There is no upper bound on the number of theta features that a DP can have.  
 c. Movement is Greedy.  
 d. Greed is understood as Enlightened Self Interest, whereby the movement of  $\alpha$  to  $\beta$  takes place in order to check a feature on  $\alpha$  or on  $\beta$  (Lasnik 1995).

To illustrate, observe (4), which is an expanded version of (2) above. *Sue* starts out in Spec,vP of the subordinate clause where it checks the theta-role feature of the subordinate predicate. Subsequently, it moves to Spec,IP to check the EPP feature. This is followed by movement to Spec,vP of the matrix clause where it satisfies the thematic requirements of the matrix predicate. Finally, *Sue* moves to matrix Spec,IP where it checks its case feature, and the structure converges. At PF, all but the highest copy of Sue are deleted. Note that every instance of movement in (4) is triggered by feature checking.

- (4) [<sub>IP</sub> Sue<sup>Case/EPP</sup> [<sub>vP</sub> ~~Sue~~ <sup>$\theta$ 2</sup> managed [<sub>IP</sub> ~~Sue~~<sup>EPP</sup> to [<sub>vP</sub> ~~Sue~~ <sup>$\theta$ 1</sup> impress Tom]]]]]

This paper presents evidence from Adjunct Control in Telugu, a Dravidian language, to show that movement is not always triggered by the feature characteristics of the moving element or the target. As an alternative, the paper suggests that the subordinate subject moves in order to license the merge of the subordinate clause with the matrix clause. Stated differently, the movement of  $\alpha$  to  $\beta$  may be triggered by the feature requirements of the head of the maximal projection that dominates  $\alpha$ .

The article is organized as follows. Section 2 presents the facts about Adjunct Control in Telugu and offers a possible derivation. Section 3 raises the question of movement and shows that Enlightened Self Interest fails to explain why the subordinate subject in Telugu Adjunct Control undergoes movement. Section 4 delineates some theoretical assumptions that are important for the discussion in the following sections. Section 5 shows that the movement of the subject in Telugu Adjunct Control is driven by the feature characteristics of the head of the adjunct. Section 6 extends the analysis to Sinhala, an Indo-Aryan language. Section 7 concludes the paper.

## 2 Adjunct Control in Telugu

In the following subsections, I present the relevant Telugu Adjunct Control structures (section 2.1) and put forth a possible analysis of these structures as involving movement (section 2.2). The presentation is rather brief; it offers the background necessary for the discussion of the central topic of the paper in the following sections. For more details about the derivation of Adjunct Control in Telugu, see Haddad (2009b; 2010).



## 2.1 The Data

Telugu is a subject (and object) pro-drop, head-final language in which *pro* and overt subjects are interchangeable (Kissock 1995).<sup>1</sup> Two types of subjects are licensed in Telugu: (i) structural case marked subjects and (ii) inherent case marked subjects. The former are nominative, (5). The latter are licensed by psych or experiential predicates and they are mainly dative, (6).<sup>2</sup>

### (5) Structural Case

- a. kumaar niillu kaacin-ḍu  
Kumar.NOM water boiled-3.M.S  
'Kumar boiled the water.'
- b. sarita bhoojanamu tinna-di  
Sarita.NOM dinner ate.3.N.S  
'Sarita ate dinner.'

### (6) Inherent Case

- a. kumaar=ki bhaarya=miida koopam waccin-di  
Kumar=DAT wife=on anger.NOM ame-3.N.S.  
'Kumar got angry with his wife.'
- b. sarita=ki daggu=u jalubu=u waccina-yi  
Sarita=DAT cough.NOM=and cold.NOM=and came-3.N.P  
'Sarita caught a cold and a cough.'
- c. kumaar=ki picci paṭṭin-di  
Kumar=DAT craziness.NOM caught-3.N.S.  
'Kumar became/went crazy.'

Like other South Asian languages, Telugu has a special type of non-finite subordinate clause known as an adverbial or conjunctive participle (CNP) clause. CNP clauses function as adjuncts, expressing an action that is anterior to or simultaneous with that of the matrix clause. They do not take a complementizer, which is why they are normally considered IPs rather than CPs (Jayaseelan 2004). The verb in CNP clauses shows no inflection for tense or agreement.

The language has two types of CNP clauses: perfective and durative. The verb of a perfective CNP clause takes the form in (7), while the verb of a durative CNP clause takes the form in (8) (see Krishnamurti and Gwynn 1985, chap. 18). For the purpose of this paper, I gloss both as CNP verbs.

### (7) Perfective: Verb stem + -i

- a. kumaar<sub>i</sub> [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> jwaram wacc-i] haaspaṭal wellaa-ḍu  
Kumar.NOM [\_\_\_\_[DAT] fever.NOM come-CNP] hospital went-3.M.S.  
'Having had a fever, Kumar went to hospital.'
- b. naa baas<sub>i</sub> [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> manciga anipinc-i] implayis=ki banus iccaa-ḍu  
my boss.NOM [\_\_\_\_[DAT] good feel-CNP] employees=DAT bonus gave-3.M.S.  
'Having felt good, my boss gave the employees a bonus.'
- c. sarita=ki<sub>i</sub> [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> aa maaṭa win-i] koopam waccin-di  
Sarita=DAT [\_\_\_\_[NOM] that matter hear-CNP] anger.NOM came-3.N.S.  
'Having heard the news, Sarita got angry.'

<sup>1</sup>Abbreviations: 3 '3<sup>rd</sup> person', ACC 'accusative', CNP 'conjunctive participle', DAT 'dative', INF 'infinitive', F 'feminine', G 'genitive', M 'masculine', N 'neuter', NOM 'nominative', S 'singular', P 'plural'. Transliteration: dotted consonants (ṭ, ḍ, ḷ, ṇ) are retroflex, /c/ is a voiceless palatal plosive, double consonants indicate gemination, and double vowels are long vowels.

<sup>2</sup>The unmarked DPs of dative subject constructions are marked NOM in order to emphasize that they, rather than the dative subjects, trigger agreement on the verb. Some DPs, mainly inanimate ones, that occupy the object position of a transitive verb are also unmarked but these do not trigger agreement on the verb.

(8) **Durative: Verb stem + -tuu**

- a. kumaar<sub>i</sub> [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> bhoojanamu cees-tuu] aarun=ki fon ceesaa-ḍu  
 Kumar.NOM [\_\_\_\_[NOM] dinner take-CNP] Arun=DAT phone did-3.M.S.  
 ‘While Kumar was having dinner, he called Arun.’
- b. kumaar<sub>i</sub> [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> sarita=too naatyam cees-tuu] aame=ki katha ceppaa-ḍu  
 Kumar.NOM [\_\_\_\_[NOM] Sarita=with dance do-CNP] her=DAT story told-3.M.S.  
 ‘While dancing with Sarita, Kumar told her a story.’

As the indices show, structures with CNP clauses do not allow disjoint subjects and are, thus, Adjunct Control structures. In other words, Adjunct Control in Telugu qualifies as obligatory subject control in the sense that the CNP subject has to take the matrix subject as an antecedent. Even with enough context, the CNP subject cannot be coreferential with any other NP in the sentence (e.g., the possessor of the matrix subject), and it cannot be coreferential with an NP selected from surrounding discourse (see Williams 1980, Hornstein 1999, Jackendoff and Culicover 2003, Polinsky and Potsdam 2004, among others). To illustrate, in (9) the CNP subject takes as an antecedent the matrix subject’s possessor *atani* ‘his’ or the dative NP *atani=ki* ‘him=DAT’. In (10), the antecedent is selected from surrounding discourse (speaker or hearer). Both sentences are ungrammatical under the designated readings.

- (9) \*[atani<sub>i</sub> amma]<sub>k</sub> [\_\_\_\_<sub>i</sub> aakali wees-i] atani=ki annam peṭṭin-di  
 [his mother.NOM] [\_\_\_\_[DAT] hunger.NOM fall-CNP] him=DAT food put-3.N.S.  
 ‘Intended meaning: ‘He got hungry, and his mother gave him food.’
- (10) \*sarita [\_\_\_\_<sub>i</sub>/k/<sub>j</sub> jwaram wacc-i] naa-ku<sub>i</sub>/mii-ku<sub>k</sub> mandulu iccin-di  
 Sarita.NOM [\_\_\_\_[DAT] fever.NOM come-CNP] me=DAT/you=DAT medicines gave-3.N.S.  
 Intended meaning: ‘I/You had a fever, and Sarita gave me/you medication.’

The grammatical structures in (7)–(8) above are instances of Forward Control. These are structures in which the matrix subject is pronounced determining the identity of the unpronounced subordinate subject. In addition to Forward Control, Telugu licenses Backward Control. In this case, the subordinate subject is pronounced, determining the identity of the unpronounced matrix subject. The sentences in (11) are examples.<sup>3</sup>

- (11) a. \_\_\_\_<sub>i</sub>/\*<sub>k</sub> [kumaar=ki<sub>i</sub> jwaram wacc-i] haaspaṭal wellaa-ḍu  
 \_\_\_\_[NOM] [Kumar=DAT fever.NOM come-CNP] hospital went-3.M.S.  
 ‘Having had a fever, Kumar went to hospital.’
- b. \_\_\_\_<sub>i</sub>/\*<sub>k</sub> [naa baas=ki<sub>i</sub> manciga anipinc-i] implayis=ki bonus iccaa-ḍu  
 \_\_\_\_[NOM] [my boss=DAT good feel-CNP] employees=DAT bonus gave-3.M.S.  
 ‘Having felt good, my boss gave his employees a bonus.’
- c. \_\_\_\_<sub>i</sub>/\*<sub>k</sub> [sarita<sub>i</sub> aa maata win-i] koopam waccin-di  
 \_\_\_\_[DAT] [Sarita.NOM that matter hear-CNP] anger.NOM came-3.N.S.  
 ‘Having heard the news, Sarita got angry.’

Like their Forward Control counterparts, Backward Control structures are instances of Obligatory Control. As the indices in (11) show, if the CNP subject fails to determine the identity of the matrix subject, the result is ungrammaticality.

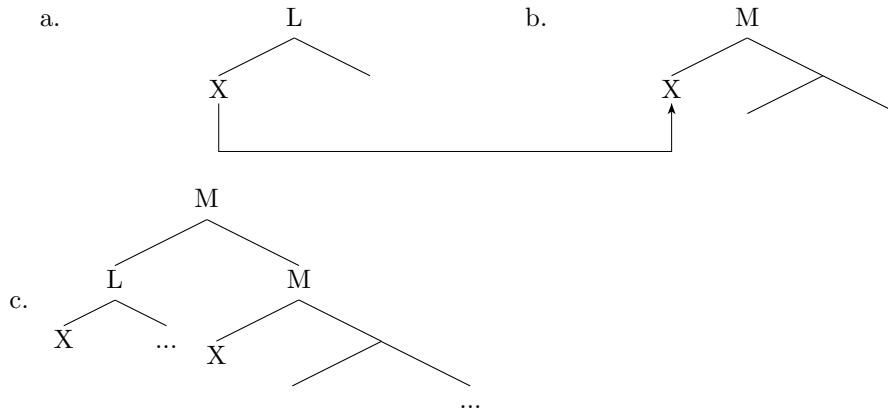
<sup>3</sup>The sentences in (11) are the Backward Control counterparts of the Forward Control structures in (7). The Forward Control sentences in (8) may also be realized as instances of Backward Control that look like (ia–b). However, given that the matrix and subordinate subjects bear the same case (nominative), it is not obvious that (ia–b) are different from (8a–b). For evidence that the Backward Control structures (ia–b) are grammatical, see Haddad (2009b).

- (i) a. \_\_\_\_<sub>i</sub>/\*<sub>k</sub> [kumaar<sub>i</sub> bhoojanamu cees-tuu] aarun=ki fon ceesaa-ḍu  
 \_\_\_\_[NOM] [Kumar.NOM dinner take-CNP] Arun=DAT phone did-3.M.S.  
 ‘While Kumar was having dinner, he called Arun.’
- b. \_\_\_\_<sub>i</sub>/\*<sub>k</sub> [kumaar<sub>i</sub> sarita=too naatyam cees-tuu] aame=ki katha ceppaa-ḍu  
 \_\_\_\_[NOM] [Kumar.NOM Sarita=with dance do-CNP] her=DAT story told-3.M.S.  
 ‘While dancing with Sarita, Kumar told her a story.’

2.2 The analysis

Building on work by Hornstein (2003) and Nunes (1995, 2004), I analyze Telugu Adjunct Control as sideward movement. This type of movement is inter-arboreal instead of intra-arboreal; that is, it allows an object to undergo movement between two unconnected structures. For example, L and M in (12a) and (12b) are two independent structures. X undergoes inter-arboreal or sideward movement between L and M before the two phrasal structures merge in (12c).

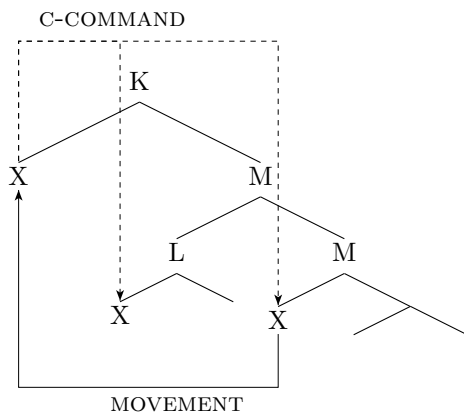
(12)



According to Nunes, (12) is possible because movement is a quadripartite process made up of the independent operations: copy, merge, form chain, and chain reduction. The first two operations already take place in (12a–b); X copies out of L and merges in M.

The third operation, form chain, targets copies and takes place under two conditions: (i) the copies are non-distinct (i.e., copies of the same token) and (ii) they are in a c-command relationship. In (12c) above, the two copies of X are non-distinct; thus, they satisfy the first condition. However, they are not in a c-command relation yet. Let us assume that the structure in (12c) expands as K, (13), and that X moves to a higher position as a daughter of K. From this position, the higher copy of X c-commands the lower copies, forming a chain with each of them.

(13)



The final operation, chain reduction, takes place at PF. According to Nunes, if two non-distinct elements are in a precedence relation, one of them has to be deleted for the purpose of linearization. Stated differently, chain reduction satisfies the Linear Correspondence Axiom in (14) which dictates that an element cannot follow and precede itself, as this induces a violation of irreflexivity. This PF operation is contingent on c-command, as (15) shows. When applied to (13), chain reduction dictates that all but one instance of X be deleted. Normally, the copy that has the least unchecked features survives deletion.

(14) **Linear Correspondence Axiom**

Let X, Y be nonterminals and x, y terminals such that X dominates x and Y dominates y.  
Then if X asymmetrically c-commands Y, x precedes y. (Kayne 1994, 33)

(15) **Chain Reduction**

Delete the minimal number of constituents of a nontrivial chain CH that suffices for CH to be mapped into a linear order in accordance with the LCA. (Nunes 2004, 27, (44))

Following Hornstein and Nunes, I suggest that sentence (16) has the derivation in (17). In (17a), the CNP clause and the matrix clause form independently, and ‘Kumar’ copies out of the CNP clause. In (17b), ‘Kumar’ merges in the matrix clause. Subsequently, the CNP clause adjoins to matrix vP, as shown in (17c). In (17d), the matrix subject ‘Kumar’ moves from Spec,vP to Spec, IP to check the EPP feature. As the dotted arrows show, the copy of ‘Kumar’ in Spec,IP c-commands both the copy in the CNP clause and the copy in Spec,vP, forming a chain with each. The pronunciation of all the non-distinct copies of ‘Kumar’ at PF induces a violation of irreflexivity and the Linear Correspondence Axiom in (14). The reason is that ‘Kumar’ ends up preceding and following itself. This is why chain reduction applies in Step (17e). This is when the lower copy in each chain is deleted in order for the structure to be linearized.<sup>4</sup>

- (16) kumaar     [~~kumaar=ki~~ jwaram wacc-i]     haaspaṭal wellaa-ḍu  
Kumar.NOM [~~Kumar=DAT~~] fever.NOM come-CNP] hospital    went-3.M.S.  
‘Having had a fever, Kumar went to the hospital.’

- (17) a. i. [CNPP [NP kumaar=ki] jwaram wacc-i] =COPY⇒ [NP kumaar]  
          [CNPP [NP Kumar=DAT] fever.NOM come-CNP]

- ii. [Matrix vP haaspaṭal wellaa-ḍu]  
      [Matrix vP hospital went-3.M.S.]

- b. [Matrix vP [NP kumaar] haaspaṭal wellaa-ḍu]

- c. [Matrix IP [vP [CNP [NP kumaar=ki] jwaram wacc-i] [vP [NP kumaar] haaspaṭal wellaa-ḍu]]]

- d. [CP [Matrix IP [NP **kumaar**] [vP [CNPP [NP **kumaar=ki**] jwaram wacc-i] [vP [NP **kumaar**] haaspaṭal wellaa-ḍu]]]]]

- e. [CP [Matrix IP [NP **kumaar**] [vP [CNPP [NP **kumaar=ki**] jwaram wacc-i] [vP [NP **kumaar**] haaspaṭal wellaa-ḍu]]]]]

The outcome of (17e) above can be slightly different. As (18) illustrates, the higher copy in the chain {[NP kumaar]<sup>Matrix IP</sup>, [NP kumaar=ki]<sup>CNPP</sup>} may be deleted, the outcome of which is Backward Control. This suggests that the derivations of Forward and Backward Control are identical. The difference between the two is a matter of externalization contingent on the selection made by the PF operation chain reduction.

- (18) [CP [Matrix IP [NP ~~kumaar~~] [vP [CNPP [NP **kumaar=ki**] jwaram wacc-i] [vP [NP ~~kumaar~~] haaspaṭal wellaa-ḍu]]]]]

<sup>4</sup>An anonymous *JSAL* reviewer commented that the two copies in (16)–(18) are not exactly identical since they are realized with different Case values. Following Bejar and Massam (1999), I assume that multiple case checking is possible and that case feature checking occurs sequentially. When an element moves into a new case position, the old case is stranded and the new case is realized.

For more details about the derivation in (17) and (18) and related issues, see Haddad (2009b). For similar derivations in other languages, see Potsdam (2009) and Haddad and Potsdam (2010).

The following section now moves to address the central question of the paper: Why does the subject in Telugu Adjunct Control move?

### 3 Enlightened Self Interest as Trigger for Movement

The fact that Telugu licenses Backward Control structures like (18) above goes contrary to the common expectation that the higher/matrix copy should be pronounced and the lower/subordinate copy should be deleted. Why is it possible to delete the matrix copy and pronounce the CNP copy in Telugu? In Nunes's system, the lower copy is usually deleted because in most cases it has fewer checked features than the higher copy. This puts the higher copy at an advantage. When chain reduction applies, it targets the copy with more unchecked features (i.e., the lower copy) and the higher copy escapes deletion.

Let us have a closer look at (17d) above. As the dotted arrows indicate, at least two chains of the subject *Kumaar* are formed. The first chain is  $\{[\text{NP kumaar}]^{\text{MatrixIP}}, [\text{NP kumaar}]^{\text{Matrix vP}}\}$ . Out of these two copies, the higher copy in Spec,IP has an advantage of checking more features (mainly case), which is why the lower copy is deleted. The second chain is  $\{[\text{NP kumaar}]^{\text{Matrix IP}}, [\text{NP kumaar}]^{\text{CNPP}}\}$ . These two copies are on equal footing as far as feature checking is concerned. Both copies have checked case, and neither copy has an uninterpretable feature that needs to be checked. When chain reduction applies, the operation is free to select either copy for deletion. If chain reduction chooses the lower copy, Forward Control obtains. If chain reduction chooses the higher copy, Backward Control obtains.

If this analysis is correct, an important question follows: If the CNP subject does not have a feature to check, why does it move? This question is important because, as I mentioned in the introduction, movement in the Minimalist Program is not free. It normally takes place for the purpose of feature checking. Given that in Telugu the CNP subject checks case prior to movement, it is hard to imagine why movement takes place at all. The following subsections examine the two possible solutions offered by Lasnik's Enlightened Self Interest and show that the solutions do not work for the Telugu control structures under examination.

#### 3.1 $\alpha$ Moves to $\beta$ for the Satisfaction of Formal Requirements of $\alpha$

One way around the problem at hand is to adopt the standard assumption that the structural licensing of a subject NP (i.e., checking structural case) takes place only if a tensed T that is saturated by C is available. Otherwise, the subject remains active, which is why it moves to the matrix clause where it checks its structural case feature (Chomsky 2001). In this sense, the movement of  $\alpha$  to  $\beta$  is for the satisfaction of formal requirements of  $\alpha$ .

This approach is not without problems, however. If the CNP subject in Telugu Adjunct Control does not check its structural case feature (in this case, nominative case would be default case), it should be the easier target for deletion when chain reduction applies. This means that Forward Control should at least be considered superior to Backward Control, which is not true.

#### 3.2 $\alpha$ Moves to $\beta$ for the Satisfaction of Formal Requirements of $\beta$

The first landing site of a sideward moving CNP subject is Spec,vP of the matrix clause. If the idea that  $\alpha$  moves to  $\beta$  for the satisfaction of  $\beta$  is correct, this means that the CNP subject moves in order to check a feature on  $v^0$ . Hornstein (1999, 2003), as well as Bošković (1994), and Bošković and Takahashi (1998), among others, argues that theta-roles are features, just like case and phi-features. If this is correct, then the movement of the CNP subject to Spec,vP results in the satisfaction of the thematic requirement of  $v^0$ . This seems like the end of the story. Nonetheless, there is a reason to believe that the theta-role feature of the matrix predicate does not necessarily trigger movement all the time. Here is why.

Altruistic sideward movement of the type depicted in this subsection takes place when an instance

of merge is needed for the derivation to converge, yet there are no tokens left in the numeration to satisfy this need (Nunes 2004). What this amounts to is the following. The CNP subject moves to Spec,vP in order to check the theta-role feature on  $v^0$  only if there is no token left in the numeration that can undergo merge in order to salvage the derivation. To elaborate, matrix vP can satisfy its theta-role requirement either via External Merge, whereby an item selected from the numeration merges as an argument, or via Internal Merge, whereby an item that is already in the structure copy-plus-merges in Spec,vP. The latter option applies in order to save the derivation only if the former option is not possible because the numeration is already exhausted.

If this is correct, we should expect structures with CNP clauses to allow disjoint subjects. These would be structures in which the matrix predicate has its thematic requirements satisfied by an element from the numeration rather than by the CNP subject. This does not happen, however. Consider (19) for example. The derivation starts with the numeration in (19a) which consists of the two potential arguments, *Kumaar* and *Sarita*. The indices in the numeration indicate the number of copies of each token. The CNP clause and matrix vP form independently in (19b), reducing the indices of most of the items in the numeration to zero, as (19c) shows. Note, however, that the copy *Sarita* has not been used up yet. This means that it can check (it actually has to check) the theta-role feature of matrix vP, as (19d) shows. This makes the sideward movement of *Kumaar* unnecessary. Accordingly, a structure like (19e) should be possible, contrary to fact. The bottom line is that the CNP subject has to move and that sideward movement does not only happen when the numeration is exhausted. (For a detailed discussion of more approaches that do not work, see Haddad 2007, 204–215).

- (19) a. {kumaar<sub>1</sub>, sarita<sub>1</sub>, koopam<sub>1</sub>, wacc<sub>1</sub>, -i<sub>1</sub>, akkadi<sub>1</sub>, nunci<sub>1</sub>, wellipoy<sub>1</sub>, Tense<sub>1</sub>, Agr<sub>1</sub>}
- b. i. [CNP [NP kumaar=ki] koopam wacc-i]  
       [CNP [NP Kumar=DAT] anger.NOM come-CNP]
- ii. [Matrix vP akkadi=nunci wellipoyinaa-di]  
           [Matrix vP there=from left-3.N.S.]
- c. {kumaar<sub>0</sub>, sarita<sub>1</sub>, koopam<sub>0</sub>, wacc<sub>0</sub>, -i<sub>0</sub>, akkadi<sub>0</sub>, nunci<sub>0</sub>, wellipoy<sub>0</sub>, Tense<sub>1</sub>, Agr<sub>1</sub>}
- d. [Matrix vP [NP sarita] akkadi=nunci wellipoyinaa-di]
- e. \*[kumaar=ki koopam wacc-i] sarita akkadi=nunci wellipoyinaa-di  
       [Kumar=DAT anger.NOM come-CNP] Sarita.NOM there=from left-3.N.S.  
       ‘Kumar got angry, and Sarita left.’

It is important to note that a scenario like the one delineated in (19), although not viable for structures involving a CNP clause, is possible if the structure involves a different type of adjunct. Telugu has another type of non-finite adjuncts. Let us call them INF clauses. These are similar to Telugu CNP clauses with regard to case and agreement. In other words, both CNP and INF clauses license Inherent and Structural Case-marked subjects, and the verb in both types of clauses shows no overt agreement. INF clauses stand out as different in two ways, however. First, they may take an overt complementizer. Second, they allow disjoint subjects. These differences are illustrated in the Telugu examples in (20); compare to sentence (19e) above.

- (20) a. [kumaar sinimaa cuus-tunna=appuDu] sarita paapkaarn tinna-di  
       [Kumar.NOM movie watch-INF=while] Sarita.NOM popcorn ate-3.N.S.  
       ‘While Kumar was watching a movie, Sarita ate popcorn.’
- b. [kumaar=ki koopam wacc-ina=anduku] sarita akkadi=nunci wellipoyinaa-di  
       [Kumar=DAT anger.NOM come-INF=because] Sarita.NOM there=from left-3.N.S.  
       ‘Because Kumar got angry, Sarita left.’

Although structures with INF clauses allow disjoint subjects, if the subject of the non-finite adjunct is not pronounced, control applies. In other words, the unpronounced subject in (21a–b) can only be *Sarita*. No matter how much context is provided, a reading with disjoint subjects is infelicitous.<sup>5</sup>

- (21) a. [\_\_\_\_<sub>i</sub>/<sub>\*k</sub> koopam wacc-ina=anduku] sarita<sub>i</sub> akkadi=nunci wellipoyinaa-di  
anger.NOM come-INF=because] Sarita.NOM there=from left-3.N.S.  
'Because Sarita got angry, she left.'
- b. [\_\_\_\_<sub>i</sub>/<sub>\*k</sub> sinimaa cuus-tunna=appuḍu] sarita<sub>i</sub> paapkaarn tinna-di  
[\_\_\_\_[NOM] movie watch-INF=while] Sarita.NOM popcorn ate-3.N.S.  
'While Sarita was watching a movie, Sarita ate popcorn.'

Once an overt pronoun is used, it may not refer to *Sarita*, as the sentences in (22) indicate.

- (22) a. [aame<sub>\*i/k</sub> koopam wacc-ina=anduku] sarita<sub>i</sub> akkadi=nunci wellipoyinaa-di  
[she.NOM anger.NOM come-inf=because] Sarita.NOM there=from left-3.N.S.  
'Because she got angry, Sarita left.'
- b. [aame<sub>\*i/k</sub> sinimaa cuus-tunna=appuḍu] sarita<sub>i</sub> paapkaarn tinna-di  
[she.NOM movie watch-INF=while] Sarita.NOM popcorn ate-3.N.S.  
'While she was watching a movie, Sarita ate popcorn.'

I take the structures in (21) as instances of Circumstantial Control in the sense that the movement of the subordinate subject – and thus the control relation – does not have to happen all the time; it depends on the circumstances, namely, the exhaustion or otherwise of the numeration.<sup>6</sup> To elaborate, sentence (21a) starts with the numeration in (23a). By the time the INF clause and matrix vP are formed in (23b), no argument is left in the numeration to check the theta-role feature of matrix vP, as (23c) shows. This is why *Sarita* undergoes sideward movement; it copies out of the CNP clause, (23d), and merges with the matrix clause, (23e).

- (23) a. {sarita<sub>1</sub>, koopam<sub>1</sub>, wacc<sub>1</sub>, -ina<sub>1</sub>, anduku<sub>1</sub>, akkadi<sub>1</sub>, nunci<sub>1</sub>, wellipoy<sub>1</sub>, Tense<sub>1</sub>, Agr<sub>1</sub>}
- b. i. [INF [NP sarita=ki] koopam wacc-ina=anduku]  
[INF [NP Sarita=DAT] anger.NOM come-INF=because]

<sup>5</sup>Sengupta (2000) and Davison (2008) make the same observation about Bengali and Hindi respectively, as (i)–(ii) illustrate. To elaborate, there seems to be a division of labor between null and lexical subjects of INF clauses in Bengali and Hindi. A null subordinate subject has to be coreferential with the matrix subject, (ia, iia). A pronounced subordinate subject, on the other hand, may not be coreferential with the matrix subject (iia, iib).

(i) **Bengali**

- a. nɔYon<sub>i</sub> [\_\_\_\_<sub>i,\*k</sub> gaybe bole] efeche  
Nayan [\_\_\_\_ will sing COMP] has come  
'Nayan has come to sing.'
- b. nɔYon<sub>i</sub> [Je<sub>\*i,j</sub> gaybe bole] efeche  
Nayan [3.S.NOM will sing COMP] has come  
'Nayani has come because he<sub>\*i,j</sub> will sing.'

(from Sengupta 2000, 302-303; (93-94))

(ii) **Hindi**

- a. [\_\_\_\_<sub>i,\*k</sub> is baat=koo sun-tee=hii] pitaa=koo<sub>i</sub> beeṭee=par<sub>j</sub> taras aa-yaa  
[\_\_\_\_ this matter=DAT hear-IMPF.OBL=only] father=DAT son=on pity came-P.F.  
'As soon as father<sub>i,\*k</sub> heard this matter, he<sub>i</sub> felt pity for his son<sub>j</sub>.'
- b. [us=kee<sub>\*i,j</sub> is baat=koo sun-tee=hii] pitaa=koo<sub>i</sub> beeṭee=par<sub>j</sub> taras aa-yaa  
[3.SG=GEN this matter=DAT hear-IMPF.OBL=only] father=DAT son=on pity came-P.F.  
'Father<sub>i</sub> felt pity for his son<sub>j</sub> as soon as the son<sub>j</sub> heard this matter.'

(from Davison 2008, 33; (12b))

<sup>6</sup>In Haddad (2007), I refer to this type of control as optional control (see also Davison 2008, 33). I use the term circumstantial control here because I think it is more descriptive. While 'option' implies that movement may or may not take place, 'circumstantial' puts emphasis on the idea that for movement to happen a condition must be satisfied. This condition is the exhaustion of the numeration.

- ii. [<sub>Matrix vP</sub> akkadi=nunci wellipoyinaa-di]  
 [<sub>Matrix vP</sub> there=from left-3.N.S.]

- c. {sarita<sub>0</sub>, koopam<sub>0</sub>, wacc<sub>0</sub>, -ina<sub>0</sub>, anduku<sub>0</sub>, akkadi<sub>1</sub>, nunci<sub>0</sub>, wellipoy<sub>0</sub>, Tense<sub>1</sub>, Agr<sub>1</sub>}  
 d. [<sub>NP</sub> sarita]  
 e. [<sub>Matrix vP</sub> [<sub>NP</sub> sarita] akkadi=nunci wellipoyinaa-di]

Examples (20)–(22) suggest that  $\alpha$  may move to  $\beta$  for the satisfaction of  $\beta$ , but this movement only takes place when the numeration is exhausted and there is no other token that may satisfy the formal requirements of  $\beta$ . The result is Circumstantial Control.<sup>7</sup>

Structures that involve a CNP clause, on the other hand, are grammatical only if they receive an Obligatory Control interpretation. If control is movement, this means that movement in structures with CNP clauses is not circumstantial. That is, it has to take place irrespective of whether the numeration is exhausted or not. This kind of movement is responsible for the control interpretation that structures with CNP clauses strictly require.

As an alternative, I suggest that the CNP subject moves to the matrix clause, not to check a feature of its own or a feature on the target, but to license the merge of the CNP clause.

#### 4 Theoretical Assumptions

Two types of control proposed in the literature are Propositional Control and Predicational Control. Propositional Control is commonly used with reference to control into complements. The approach assumes that the subordinate clause is a closed proposition. That is, it has its own subject that is coreferential with the subject of the matrix clause. The different versions of the PRO Theory of Control (Chomsky 1995, Landau 2000, 2004, Martin 1996; among others) assume that the subject position is filled with PRO, (24a). The Movement Theory of Control as proposed by Hornstein (1999) and Boeckx and Hornstein (2003, 2004) argues that the subject position is filled with a deleted copy that is identical to the copy of the subject in the matrix clause, (24b).

- (24) a. Tom<sub>i</sub> managed [PRO<sub>i/\*k</sub> to win the race].  
 b. Tom managed [~~Tom~~ to win the race].

Predicational Control, on the other hand, is usually used in connection with control into adjuncts. The argument is that the subordinate clause in an Adjunct Control structure is an unsaturated predicate (with an open subject position) that may be predicated of the subject in the matrix clause through co-indexation between the adjunct clause and the matrix subject (Williams 1992; Landau 2000, 176–178; Landau 2007, 304). In this sense, sentence (25a) looks like (25b) rather than (25c).

- (25) a. Tom escaped after kissing Mary.  
 b. Tom<sub>i</sub> escaped [after  $\emptyset$  kissing Mary]<sub>i</sub>.  
 c. Tom<sub>i</sub> escaped [after PRO<sub>i/\*k</sub> /~~Tom~~ kissing Mary]<sub>i</sub>.

The CNP clause in Telugu Adjunct Control structures is propositional. That is, it is a predicate with a closed/filled subject position. This idea is uncontroversial since the CNP subject may actually be pronounced in Backward Control structures. In this section, I suggest that despite the propositional quality of the CNP clause, the head of the adjunct clause bears a predicative/non-propositional [PRED] feature, which is usually characteristic of structures with an open/unfilled subject position. This predicative feature makes it necessary that the CNP clause undergo merge as a predicate rather than a proposition. That is, although the CNP clause is similar to the adjunct in (25c), it behaves like the adjunct in (25b), which is only possible if the CNP subject undergoes movement. Section 4.2 spells out the details. First, however, I lay out some theoretical assumptions related to the merge

<sup>7</sup>A JSAL reviewer asked whether the unpronounced subject in (21) could be *pro*, especially that Telugu is a pro-drop language. I rule out *pro* simply because *pro* may have an independent reference (e.g., it may refer to someone mentioned earlier in discourse), in which case no control relation is enforced. In (21a–b), however, there is an interpretational dependency between the unpronounced subjects of the subordinate clauses and the subjects in the matrix clauses.



of adjuncts and to predication in section 4.1. In section 5, I provide evidence from Sinhala, another South Asian language, to show that if the head of the CNP clause is propositional (i.e., if the CNP clause may merge as a proposition), no movement of the subject — and thus no control interpretation — is necessary.

#### 4.1 The Merge of Adjuncts

In Minimalism, merge is defined as an instance of a probe-goal relation between two syntactic objects determined by the features on the heads of the probe and the goal; that is, if  $\alpha$  and  $\beta$  merge, some feature  $F$  of  $\alpha$  must probe  $F$  on  $\beta$  (Chomsky 2000, 132–135; Hornstein 2001, 56; Adger 2003, 91; Pesetsky and Torrego 2006).

Whereas the above definition is true of the merge of complements, it does not automatically apply to the merge of adjuncts. Unlike complements, adjuncts do not have to meet the selection requirements of the head they merge with (Chomsky 2004, 117). This means that adjuncts do not enter a probe-goal relation with the head of the structure they adjoin to, and accordingly they do not value features on probes.

Still, adjunction is a type of merge. Following Webelhuth (1992, 86), I assume that when properties of a syntactic object cannot be determined by selection, its behavior may be dictated by the properties of its own head. Similarly, Chomsky (2006, 6) holds that in order for a phrasal structure to undergo merge, its head must have a feature indicating that it can merge. Applying this assumption to the adjuncts under investigation, we may conclude that the merge of a CNP clause with the matrix clause depends solely on the characteristics of the head of the former. In Section 5, I present evidence to show that CNP clauses, although semantically propositional, syntactically they are dominated by a predicative head with a [PRED] feature.

#### 4.2 Predication

For the purpose of this paper, I adopt the structural theory of predication as proposed by Rothstein (2001). According to this theory, predication relations may be determined on purely syntactic grounds without reference to semantics. Stated differently, although mapping between semantic and syntactic predicates is possible, “syntactic predication relation can be defined without reference to semantic or thematic concepts” (Rothstein 2001, 60–61). For example, a pleonastic element may appear in the subject position of a predicate constituent only to satisfy a syntactic condition, namely, the Predicate Licensing Condition in (26).

##### (26) Predicate Licensing Condition

Every syntactic predicate must be syntactically saturated ... by being linked to a nonpredicate constituent, its subject. (Rothstein 2001, 47)

According to Rothstein, the Predicate Licensing Condition may be satisfied in two ways: (i) directly or (ii) indirectly. It is satisfied directly if a non-predicate constituent fills the subject position of a predicate, and together they form a closed maximal constituent. In other words, they form a proposition, or a constituent with a filled subject position. It may be satisfied indirectly if the subordinate predicate is linked to (or predicated of) a non-predicate constituent in a higher clause.

In addition, there are two types of predicates: inherent (27a) and derived (27b) (Rothstein 2001, 58–60, (55)). Examples of inherent predicates are APs and VPs. An example of derived predicates is a predicative CP. A CP is inherently non-predicative — that is, propositional — unless an operator is inserted in Spec,CP, binding a syntactic variable inside CP, in which case it becomes predicative. For example, *for you to read* in (28) is a derived predicate.

- (27) a. Inherent predicates are maximal projections of lexical heads.  
 b. Derived predicates are derived from maximal projections of functional heads by syntactic operations.

(28) I bought a book [<sub>CP</sub> OP<sub>i</sub> [<sub>C'</sub> for [<sub>IP</sub> you to read  $t_i$ ]]].

Most crucially, Rothstein (2001, 58–60) holds that predicates (inherent or derived) cannot function as arguments, as (29), explicitly states (see also Stowell 1991). For example, sentences (30a–b) are ungrammatical because a derived predicate occupies an argument position.

(29) Predicates are not assigned theta-roles since theta roles are assigned to syntactically closed maximal projections.

- (30) a. \*I persuaded John [<sub>CP</sub> OP<sub>i</sub> [<sub>C'</sub> [for John to meet t<sub>i</sub>]]].  
 b. \* [<sub>CP</sub> OP<sub>i</sub> [<sub>C'</sub> [For John to meet t<sub>i</sub>]]] would seem unlikely.

In the following section, I present evidence to show that CNP clauses are syntactically predicative.

## 5 CNP Clauses as Predicative

Evidence that Telugu CNP clauses behave like open predicate constituents comes from two sources. First, CNP clauses in Telugu may never take an overt complementizer, which indicates that they do not project higher than IP (see Jayaseelan 2004). In other words, they are not CPs, which according to Rothstein qualify as inherently non-predicative constituents.

Further, Telugu CNP clauses may never merge as arguments (see Masica 1976, 127). Observe the sentences in (31). I take it that the NPs (or, more appropriately, DPs) in (31a–b) are arguments. The prediction is that none of these positions may be filled with a CNP clause. This prediction is borne out, as the sentences in (32) illustrate.

- (31) a. [<sub>NP</sub> samayaṃ] aṅṅee [<sub>NP</sub> dhanam=e]  
 [<sub>NP</sub> time] mean [<sub>NP</sub> wealth=EMPH]  
 ‘Time is nothing but money.’  
 b. [<sub>NP</sub> aalaysam] aṅṅee [<sub>NP</sub> naṣṭam=e]  
 [<sub>NP</sub> delay] mean [<sub>NP</sub> loss=EMPH]  
 ‘Delay is nothing but a waste.’
- (32) a. \*paapkaarn tinna-ḍaaniki sari-ayina samayaṃ aṅṅee [sinimaa cuus-tuu(=e)]  
 popcorn eating=for proper=happening time means [movie watch-CNP(=EMPH)]  
 ‘The best time to eat popcorn is while watching a movie.’  
 b. \*kaafii taaga=ḍaaniki sari=ayina samayaṃ aṅṅee [pani=ki well-i(=e)]  
 coffee drinking=for proper=happening time means [work=DAT go-CNP(=EMPH)]  
 ‘The best time to have coffee is before going to work.’

If the CNP clauses in (32) are substituted by INF CP adjuncts, the result is the grammatical structures in (33).

- (33) a. paapkaarn tinna-ḍaaniki sari-ayina samayaṃ aṅṅee [sinimaa cuus-tunna=appuḍ=e]  
 popcorn eating=for proper=happening time means [movie watch-INF=while=EMPH]  
 ‘The best time to eat popcorn is while watching a movie.’  
 b. sarita kaafii taaga=ḍaaniki sari=ayina samayaṃ aṅṅee  
 Sarita.NOM coffee drinking=for proper=happening time means  
 [kumaar pani=ki well-ina=tarwaat=e]  
 [Kumar.NOM work=DAT go-INF=after=EMPH]  
 ‘The best time for Sarita to have coffee is after Kumar goes to work.’

Let us assume that the above observations suffice to conclude that Telugu CNP clauses may not merge as closed predicate constituents. The question is: in what capacity do they merge when they adjoin to the matrix clauses of Adjunct Control structures? In section 4.1, I suggested that the merge of an adjunct depends on the feature specification of the head. Assuming that CNP clauses do not qualify as closed predicate constituents, this means that they undergo merge as open predicates. Stated differently, the head of the CNP clause bears a [PRED] feature that dictates how the adjunct may undergo merge.

However, evidence from Backward Control structures like (34) shows that the subject position of CNP clauses is filled clause-internally, which means that CNP clauses cannot be inherent predicates.

- (34) ~~kumaar~~<sub>i/\*k</sub> [kumaar=ki<sub>i</sub> jwaram wacc-i] haaspaṭal wellaa-ḍu  
~~Kumar~~.NOM [Kumar=DAT fever.NOM come-CNP] hospital went-3.M.S.  
 ‘Having had a fever, Kumar went to hospital.’

Further, only lexical projections, such as VPs or APs, qualify as inherent predicates (see (27a)). CNP clauses are IPs, which are not lexical projections. Therefore, we are left with one possibility: To undergo merge as open predicates in accordance with the feature specification [PRED] of their heads, CNP clauses must qualify as derived predicates. According to Rothstein, this is possible only if a syntactic operation converts them to open predicates (see (27b)). I suggest that the operation in this case is movement. The CNP subject moves to the matrix predicate, allowing the CNP clause to merge as an open predicate that is indirectly predicated of an element in the matrix clause.

If this approach is on the right track, at least four questions arise. First, how can a phrasal structure be a saturated predicate, while its head bears a [PRED] feature? The contradiction is due to the fact that a [PRED] feature indicates that a phrasal structure is an open predicate that needs to be saturated.

The answer to this question depends crucially on the main premise of the structural theory of predication as delineated in section 4.2: “Syntactic predication relation can be defined without reference to semantic or thematic concepts” (Rothstein 2001, 60). In the present analysis, this means that semantically the CNP clause can be a saturated predicate, yet syntactically it projects a predicative head with the feature [PRED]; it does not project a non-predicative head, namely, a CP. This idea is reminiscent of the role of D in DP. A bare NP is crucially predicative; the projection of D<sup>0</sup> renders it non-predicative (Higginbotham 1987, Rothstein 2001). Szabolcsi (1994) makes a more explicit comparison between C<sup>0</sup> and D<sup>0</sup>, holding that they both “enable a ‘proposition’ to act as an argument.” If the observation that arguments are necessarily non-predicative is correct, then C<sup>0</sup> and D<sup>0</sup> are similar in that they both are non-predicative heads. CNP clauses do not project as high as CP. In other words, they lack the non-predicative head C<sup>0</sup>.

The second question is: why do we not adopt the approach in Rothstein (2001) and assume that a null operator is inserted at the edge of the CNP clause, binding a variable inside the clause? In this case, no movement would be involved. This approach is problematic on two grounds. First, if the assumption that CNP clauses are not CPs is correct, this means that there is no site available for the merge of the null operator. Second, the CNP clause of Backward Control structures may contain an overt non-variable lexical item that cannot be bound by an operator.

In addition, it is worth mentioning that not all derived predicates involve an operator that binds a variable. Another type of derived predicates is sentential predicates; these are “maximal projections that constitute a fully saturated argument structure,” yet they can “function as predicates, without the presence of an operator” (Heycock 1994, 263). In other words, sentential predicates do not involve operator-gap dependency. For example, the Hebrew example (35) (from Heycock and Doron 2003, (58b)) contains the sentential predicate *Sotim oto ba-boker* ‘one drinks it in the morning’ and the subject *kafe tov* ‘good coffee’. According to Heycock and Doron (2003, 95), the subject is base-generated — that is, no movement is involved — and it is “interpreted by virtue of abstraction over a position within the clause, which is occupied syntactically by a pronoun,” in this case *oto* ‘it.’

- (35) kafe tov Sotim oto ba=boker  
 coffee good drink.3MP it in.the=morning  
 ‘Good coffee, one drinks it in the morning.’ Hebrew

Based on the above, one can consider CNP clauses as sentential predicates à la Heycock and Doron (2003). Unlike Heycock and Doron’s sentential predicates, however, CNP clauses are non-finite and, most crucially, they involve movement. See Iatridou, Anagnostopoulou, and Izvorski (2001) who also

suggest that movement may make a category predicative.<sup>8</sup>

The third question is related to the derivation as presented in section 2.2. If the subject moves to license the merge of the CNP clause, the question is: what type of movement is this? Obviously this type of movement is not self-serving since the moving element does not check a feature of its own. Closer observation shows that this type of movement is not different from the movement that takes place to check a feature on the target. In both cases, an element moves in order to serve a purpose other than its own, resulting in the convergence of the structure. This means that one can still label this type of movement as Enlightened Self Interest. If this is correct, then Enlightened Self Interest should read as follows:<sup>9</sup>

(36) **Enlightened Self Interest**

The movement of  $\alpha$  to  $\beta$  takes place in order to

- a. check a feature on  $\alpha$ ,
- b. check a feature on  $\beta$ , or
- c. license the merge of the constituent that dominates  $\alpha$ .

The fourth question is: at what point does the CNP clause realize that it is not going to project a non-predicative CP and thus urge its subject to move? This usually happens when the numeration is exhausted. If movement happens before the numeration is exhausted, then the undesired operation Look Ahead must be involved, in which case the CNP clause is expected to foresee the problem and take action.

Fortunately, the implementation of Look Ahead becomes unnecessary if we assume that the computational system works with subarrays of the numeration rather than with the whole numeration at once (Chomsky 2000). In this sense, the CNP and matrix clauses in sentence (37) would be assembled based on two separate subarrays, as (38a–b) illustrate. The CNP and matrix clause form independently based on these subarrays, (38c). When the CNP subarray is exhausted, the CNP clause realizes that its head is predicative and that there are no more items at its disposal to change the situation. This is when the subject copies out of the CNP clause and merges in the matrix clause, (38d). Upon merging with the matrix predicate, the subject licenses the merge of the CNP clause as a predicate, (38e). Subsequently, the matrix clause projects as IP, and the matrix copy of the subject moves to Spec,IP, (38f). The matrix copy c-commands the two other copies, forming a chain with each of them. At PF, chain reduction applies, and one copy survives deletion. If the copy in matrix Spec,IP is spared, the outcome is Forward Control. Alternatively, the copy in the CNP clause may be pronounced, and the result is Backward Control.

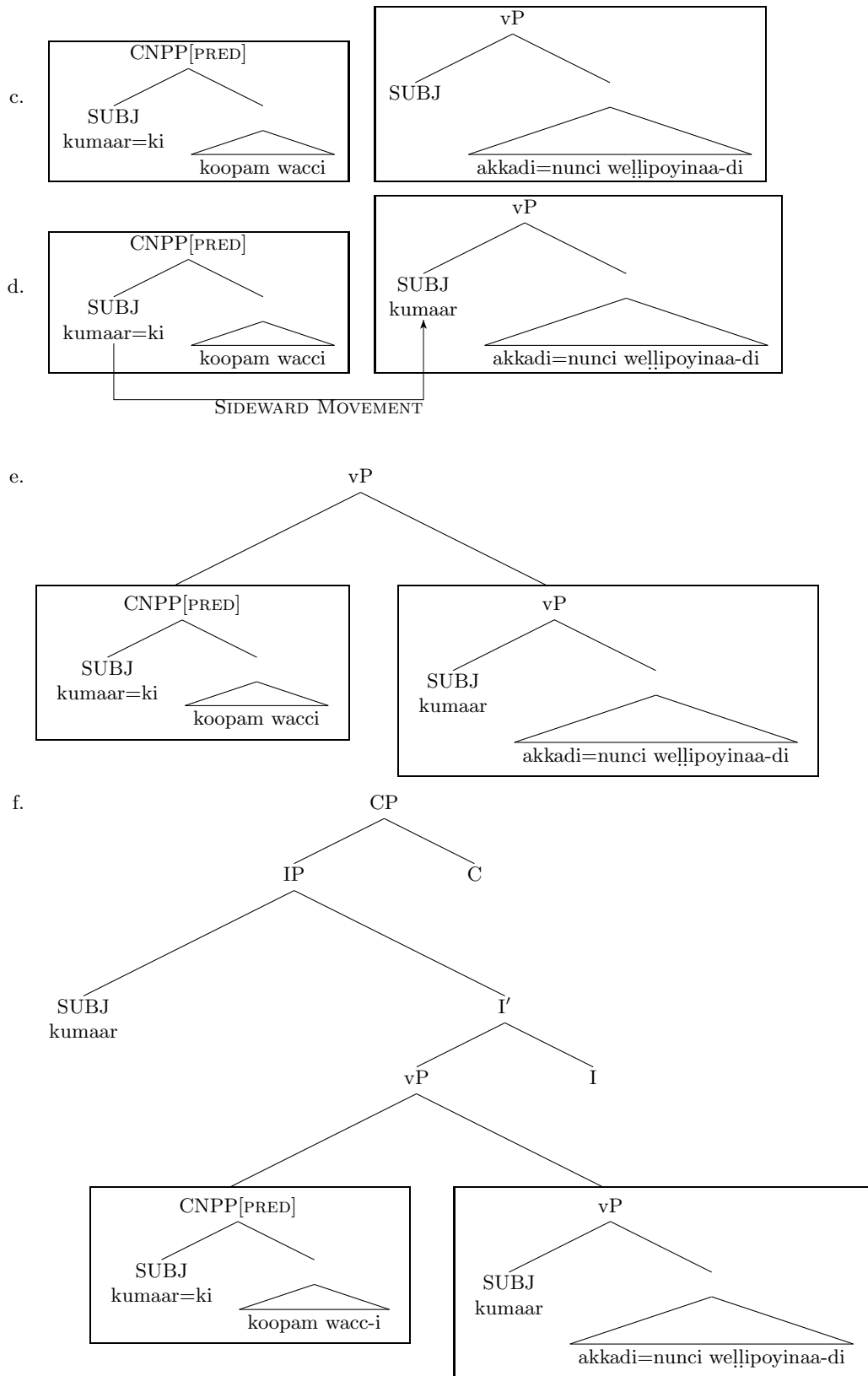
(37) [kumaar=ki koopam wacc-i] akkadi=nunci wellipoyinaa-di  
 [Kumar=DAT anger.NOM come-CNP] there=from left-3.N.S.  
 ‘Having got angry, Kumar left.’

(38) a. CNP Subarray: {kumaar<sub>1</sub>, koopam<sub>1</sub>, wacc<sub>1</sub>, -i<sub>1</sub>}  
 b. Matrix Subarray: {akkadi<sub>1</sub>, nunci<sub>1</sub>, wellipoy<sub>1</sub>, Tense<sub>1</sub>, Agr<sub>1</sub>}

<sup>8</sup>I thank a JSAL reviewer for bringing this source to my attention.

<sup>9</sup>The derivation of the Adjunct Control structures under examination suggests that movement may take place to satisfy more than one requirement. For example, the CNP subject may move to satisfy the thematic requirement of the matrix predicate and to license the merge of the CNP clause. This is not always the case, however. In Haddad (2009a), I show that Telugu licenses Expletive Control into CNP clauses, (i). In this case, the CNP expletive cannot satisfy the thematic requirement of the matrix clause. The expletive moves to the matrix clause for one reason, namely, to license the merge of the CNP clause.

(i) [*pro*<sup>EXP</sup> tufaanu wacc-i] *pro*<sup>EXP</sup> naa=illu kuulin-di  
 [ flood come-CNP my=house.Nom collapsed-3.N.S.  
 ‘The flood came, and my house collapsed.’



Adjunct Control into CNP clauses is a feature that Telugu shares with all South Asian languages. I suggest that this type of control is derived by movement, and that movement takes place in order to license the merge of a predicative CNP clause. If this is correct, a non-trivial prediction follows: If CNP clauses in a given language of South Asia behave as non-predicative constituents, movement becomes unnecessary and control interpretation becomes optional at best. Fortunately, such a language exists. The details are in the following section.

## 6 Sinhala CNP Clauses as Non-Predicative

Like Telugu, Sinhala licenses Adjunct Control into CNP clauses; sentence (39) is an example (Gair et al. 1998, 275, (9a)). Note that the CNP subject, which is obligatorily silent, has to be coreferential with the matrix subject.

- (39) mamə; [\_\_\_\_<sub>i</sub>/\*<sub>k</sub> gedərə gihil-la] kəæmə kəæwa  
           [\_\_\_\_ home go-CNP] food ate  
           ‘I went home and ate.’ Or ‘Having gone home, I ate.’ Sinhala

However, Sinhala CNP clauses have other functions that Gair (2003) describes as “unusual” and “unique” among South Asian languages. They can function as independent, matrix predicates, as sentences (40)–(41) illustrate.<sup>10</sup>

- (40) mahattea gihil-la  
       gentleman go-CNP  
       ‘The gentleman has gone.’ Sinhala  
       (from Gair 1970,153, in Taylor 2006, 151, (4))

- (41) mamə Renu-wə dækka habeı dən əyə gihil-la  
       I Renu-ACC saw but now 3F.S. go-CNP  
       ‘I saw Renu but now she has gone.’ Sinhala  
       (from Taylor 2006, 151, (5))

In addition, CNP clauses in Sinhala may be realized in an argument position, (42). Note that in this case the CNP clause takes an overt complementizer.

- (42) [horek tamange kəæmə horəkam kərə-la kiyəla] ohu dææka  
       [robber self.GEN food theft do-CNP COMP] he saw  
       ‘He saw that a robber had stolen his food.’ Sinhala  
       (from Taylor 2006, 159, (24b))

Assuming that independent clauses are CPs and that an overt complementizer is evidence of a CP layer, we may conclude that the CNP clauses in (40) through (42) project as high as CP.<sup>11</sup> This is further supported by the fact that independent clauses and arguments are non-predicative, which is an inherent characteristic of CPs. This means that the CNP subject in Sinhala Adjunct Control structure does not have to move in order to license the merge of the CNP clause. The head of the CNP clause is non-predicative and it may merge with the matrix clause as a closed predicate. Therefore, unless there is another reason for the subject to move, control into Sinhala CNP clauses should be optional. This prediction is correct, as (43)–(44) show (from Gair et al. 1998, 275–277, (9b) and (14a)). Compare (43) with (39) above.

- (43) mamə [kalyaani gedərə gihil-la] kəæmə kəæwa  
       I [Kalyani home go-CNP] food ate  
       ‘Kalyani went home and I ate.’ Or ‘Kalyani having gone home, I ate.’ Sinhala

<sup>10</sup>Gair et. al (1998) analyze *-la* in (40)–(41) as homonymous with the CNP marker in (39). However, Taylor (2006) provides an elegant polysemy analysis of the Sinhala *-la*, capturing the aspectual perfective meaning that characterizes its different uses.

<sup>11</sup>The fact that the CNP clauses in (40)–(41) are independent clauses with non-finite verbs may sound bizarre. However, see Nikolaeva (2007) and works within for evidence that finiteness and main clause status are not necessarily linked and that independent clauses may be non-finite.

- (44) [amma geməṭə      gihil-la] mamə seerəmə gedərə wəḍə kəraṇṇə oonə  
 [mother village-DAT go-CNP] I      all      house work do      necessary  
 ‘With Mother gone to the village, I have to do all the housework.’      Sinhala

Control into CNP clauses in Sinhala obtains only when the CNP subject is unpronounced (e.g., (39) above). This means that Adjunct Control in Sinhala is Circumstantial Control as defined in section 3.2. In other words, the CNP subject moves only if the numeration is exhausted and the subject position of the matrix clause is still vacant. The movement of the CNP subject takes place in order to satisfy the thematic requirement of the matrix predicate.

## 7 Conclusion

One of the main arguments used against the Movement Theory of Control is related to the trigger for movement, or why movement takes place. Given that subordinate subjects of control structures in several languages (e.g., Icelandic) check case in the subordinate clause, it is hard to argue that movement takes place for the purpose of the structural licensing of the subject (see Sigurðsson 2008, Bobaljik and Landau 2009). At the same time, the assumption that the subject moves in order to satisfy the thematic requirement of the matrix predicate is contentious. In this paper, I show that this kind of movement results in Circumstantial Control.

In the case of Telugu Adjunct Control into CNP clauses, however, I argue that the subject moves in order to license the merge of the subordinate constituent that dominates it. The head of the CNP clause in Telugu bears a [PRED] feature. This feature only allows the adjunct to merge as a predicate that will eventually be saturated by an element in the matrix clause. The movement of the CNP subject to the matrix clause satisfies this requirement. In contrast, CNP clauses in Sinhala do not bear a [PRED] feature. That is, they may merge as propositions. The result is that the movement of the CNP subject, and thus control, is optional.

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