Taiwan Journal of Linguistics
Vol. 15.2, 1-35, 2017
DOI: 10.6519/TJL.2017.15(2).1

OPTIONAL ERGATIVITY WITH UNERGATIVES IN PUNJABI*

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ABSTRACT

In this paper, we describe and analyze the previously undocumented ergative case patterns with unergatives in the Indo-Aryan language Punjabi. More specifically, we discuss unergative verbs in the language that optionally mark their subjects with an ergative case. We demonstrate that the lack of ergative marking is not associated with the intransitivity of the verbs since they obligatorily select implicit internal arguments, and are selected by transitive light verbs. We attempt a dependent case analysis (Coon 2010, 2013; Coon and Preminger 2012, 2013) of the Punjabi ergative, with optional feature inheritance between two v heads. The ergative is withheld in cases with no feature inheritance, forcing the external argument out of the vP domain containing the object. This paper ends with some preliminary observations on the mechanisms of optionality in the grammar.

Key words: unergatives, transitivity, light verbs, dependent case, feature inheritance

*We are grateful to the anonymous *Taiwan Journal of Linguistics* referees for insightful comments on earlier drafts of this paper. We would also like to express our gratitude to the audience at South Asian Languages Analysis Roundtable (SALA-31), Lancaster University, UK, and the participants at Lingchai, held at the Indian Institute of Technology Delhi, for their inputs. In addition, we thank our Punjabi informants who helped us with the data. For all errors, the authors are to be held responsible.

1. INTRODUCTION[1]

Aspect-based split ergativity is a well-attested phenomenon in Western Indo-Aryan languages/WIALs (cf. Amritavalli, 1979; Bhatt, 2007; Davison, 2004; Deo & Sharma, 2006; Kachru, 1987; Kachru & Pandharipande, 1978; Mahajan, 1990, 1997, 2012; Mohanan, 1994; Subbarao, 2012 among others). It has been noted by many scholars that the transitivity of the lexical verb is a crucial determinant of ergative case marking in these languages (Bobaljik, 1993; Comrie, 1978; Davison, 2004; Dixon, 1979, 1994; McGregor, 2009 among many others), with the subjects of transitive predicates obligatorily receiving an ergative case. Amritavalli (1979), Mahajan (2012) and Platts (1874) also identify the transitive light verb as an ergative case licenser in instances of compound verb constructions.

An unresolved problem is that unergatives differentially mark their subjects with a nominative or an ergative. If unergatives allow implicit internal arguments (as suggested by the Implicit Object Conjecture of Bobaljik, 1993; Hale and Keyser, 1993; Laka, 1993 among others), we expect their subjects to be obligatorily marked with an ergative. This is however not true, as is shown in (1) for Hindi-Urdu, a well-studied WIAL. Optionality is also an issue with regard to the case alternation between nominative and ergative case on the subject in unergative-light verb constructions (2).

(1) *jɔn (-ne)* *khããsaa*
John (-erg) cough.perf.m.sg
'John coughed.' (Mohanan, 1994)

[1] The data reported here was collected from native speakers of Punjabi in New Delhi and Kanpur, Uttar Pradesh in two phases-the summer and the winter of 2013. The following abbreviations are used in this article: nom, nominative case; erg, ergative case; acc, accusative case; dat, dative; abl, ablative; 1, first person; 2, second person; 3, third person; sg, singular; pl, plural; m, masculine gender; f, feminine gender; hab, habitual; prog, progressive; perf, perfective; pres, present tense; past, past; tr, transitive; dem, demonstrative, N, noun.

(2) *jɔn (-ne)* *khããs* *d̪iyaa*
John(-erg) cough give.perf.m.sg
'John coughed.'

This paper documents similar patterns of optionality with unergatives in another not so well-studied WIAL, Punjabi. Certain unergatives in this language have both nominative and ergative subjects in perfective structures.

We first rule out the possibility that this optionality arises from the dual argument structure representations of the predicates; in more precise terms, that they have both transitive and intransitive lexical entries (as suggested by Mahajan 2012: footnote 3 for Hindi-Urdu), with the former triggering the ergative and the latter, the nominative case on the subject. We base our claim on the following two empirical observations in Punjabi: (i) the unergatives are obligatorily transitive with overt/implicit objects, and (ii) they are selected by transitive light verbs that, as main/lexical verbs, obligatorily mark their subjects as ergative.

We instead analyze the Punjabi ergative as a dependent case, which is assigned to the external argument in the same vP2 domain as the internal argument. The ergative is blocked and the nominative assigned when the external argument is in a domain different from that of the internal argument. Schematically, (3) and (4):

(3) $[_{TP}\ [_{vP1}\ [_{vP2}\ \ \text{EA-erg}_{dependent}\ \ [_{VP}\ \text{IA-acc}_{structural}\ \ \text{V}]]]]$

(4) $[_{TP}\ [_{vP1}\ \text{EA-nom}_{structural}\ [_{vP2}\ \ \text{EA}_{t}\ \ [_{VP}\ \text{IA-acc}_{dependent}\ \text{V}]]]]$

We provide details on each of these observations in the following sections. In section 2, we present cases of morphological ergativity in Punjabi. In section 3, we put forth evidence for an underlying transitive representation for the unergative predicates. Section 4 includes instances of complex unergative constructions with transitive light verbs, following which, in section 5, a dependent case analysis of optional ergativity in Punjabi is proposed. Section 6 concludes the paper with some preliminary observations on optionality in grammar.

2. MORPHOLOGICAL ERGATIVITY IN PUNJABI

Punjabi, like Hindi-Urdu, shows morphological ergativity in the perfective aspect (Bhatia, 1993; Bhatt, 2007; Butt and Deo, 2001).[2] The transitive subject in the perfective construction in (5) is obligatorily marked with ergative *–ne*, and cannot trigger verbal agreement. The verb instead agrees with the unmarked (accusative valued) object in number and gender. In the imperfective domain, the subject of the transitive clause is case valued (with a phonetically null) nominative and agrees in number, gender and person with the verb-auxiliary complex, as is shown in (6).

(5) *munde-ne rottii khaaḍḍii*
boy-erg bread.f.sg eat.perf.f.sg
'The boy ate bread.'

(6) *mundaa rottii khããnḍaa e*
boy.nom bread.f.sg eat.hab.m.sg be.pres.3.sg
'The boy eats bread.'

Intransitive (unaccusative) subjects unsurprisingly never appear with ergative case marking as shown in (7) for 'to fall' and 'to go'.

(7) *mundaa/*munde-ne diggeyaa/gayaa*
boy.nom/*boy-erg fall.perf.m.sg/go.perf.m.sg
'The boy fell/went.'

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[2] Punjabi also shows person based differential subject marking as illustrated in (i), where ergative case marking appears on third person subjects, but not on first and second persons.
(i) **mẽ-ne/*ṭuu-ne/o-ne rottii khaaḍḍii*
*1-erg/*2-erg/3-erg bread.f.sg eat.perf.f.sg
'I /You/(s)he ate bread.'
We leave the issue of person based split ergativity in Punjabi for future research.

Unergatives, on the other hand, show a lot of variation with respect to ergative case marking on the subject in the perfective.[3] We concentrate on the unergatives 'to dance', 'to cough' and 'to laugh', which take an optional ergative case in the perfective aspect, as illustrated in (8-9). In the imperfective domain, these predicates always opt for nominative subjects (10).

(8) *kuɽii* *naccii/khãŋgii/hassii*
girl.nom dance/cough/laugh.perf.f.sg
'The girl danced/ coughed/ laughed.'

(9) *kuɽii-ne* *nacceyaa/ khãŋgeyaa/ hasseyaa*
girl-erg dance/cough/laugh.perf.m.sg
'The girl danced/ coughed/ laughed.'

(10) *kuɽii/*kuɽii-ne* *nacc/khãŋg/ hass* *rayii* *e*
girl.nom/*girl-erg dance/cough/laugh stay.prog.f.sg be.pres.3.sg
'The girl is dancing/coughing/laughing.'

We now proceed to the next section where we illustrate that this specific group of unergatives has implicit internal arguments. Despite being transitive, they allow both nominative and ergative cases to be assigned to their subjects. This new evidence is then used to motivate a clearer structural environment for ergativity in Punjabi in the following pages.

[3] Punjabi unergatives 'to spit' and 'to scratch' take obligatory ergative subjects in the perfective aspect; see an illustration in (i). We tentatively observe that like transitives ('to eat', 'to kill'), these predicates have internal arguments that signify objects ontologically differentiated from actions depicted by verbs. This may be an additional semantic factor for these predicates that make them different from optional ergative subject taking unergatives 'to laugh', 'to dance'.
(i) *kuɽii-ne/*kuɽii* *ʈ̪hukeyaa/khurkeyaa*
girl-erg/*girl.nom spit.perf.m.sg/scratch.perf.m.sg
'The girl spit/scratched.'

3. UNERGATIVES AS UNDERLYING TRANSITIVES

Opinion is divided on whether unergatives are underlying transitive predicates. Bobaljik (1993), Hale and Keyser (1993), Laka (1993), Mahajan (1987), Mithun (1991), Ortiz de Urbina (1989) and Uribe-Etxebarria (1989) posit that unergative predicates are transitives with an object NP. This view is captured in the Implicit Object Conjecture (11).

(11) The Implicit Object Conjecture (IOC)
All unergatives have direct objects.

To illustrate, Bobaljik (1993) argues that the unergative predicate 'to sneeze' in Hindi-Urdu is an underlying transitive, based on its ability to occur with a cognate object (12). The subject is marked ergative in this case.

(12) *anup-ne [kaafii-zorkii chiiNk] chiiNkii*
Anoop-ERG very-loud sneeze.ABS sneezed
'Anoop sneezed a very loud sneeze.' (Bobaljik, 1993:38)

Preminger (2012) contests these claims by noting that the predicates *eskiatu* 'ski' and *disdiratu* 'shine' in Basque do not have corresponding nominals *[eskia]$_N^o$ and *[disdira]$_N^o$. He questions the presence of implicit cognate objects for all simplex unergative predicates in the language. He also contends that the presence of ergative agreement (the 3person ergative ϕ in (13)), which is generally taken to indicate the presence of an implicit object, is also not a valid diagnostic, since it can also be found with unaccusative predicates.

(13) *jon-ek dantzatu d-ϕ-u-ϕ*
John-erg dance-Prt 3.Abs-sg.Abs-have-3sg.erg
'John danced.' (Preminger, 2012:1)

The question of verb valency for these predicates therefore remains unresolved in the cross-linguistic literature, prompting us to scrutinize the true nature of Punjabi unergatives in some detail. We observe,

through novel data, that Punjabi unergatives that take ergative subjects optionally are underlying transitives, based on their ability to (i) host cognate objects that license verbal agreement and, (ii) trigger telicity effects. We also provide evidence for implicit objects by employing an adjectival modification test.

To begin with, predicates of this class allow cognate objects (14). Note that the subject is optionally marked with an ergative despite the presence of an overt cognate object. The verb agrees with the object in gender and number when the subject is ergative marked; in other cases, the unmarked nominative subject triggers obligatory verbal agreement.

(14) *jɔn-ne/jɔn raavan-ḍii hassii hassi/hasseyaa*
John-erg/John.nom ravan-gen.f.sg laugh.f.sg laugh.perf.f.sg/m.sg
'John laughed Ravan's laughter.' (Lit. John laughed like Ravan)

The ability to host a cognate object is crucial in distinguishing unergatives from intransitive unaccusative verbs; consider the ungrammatical unaccusative sentence in (15) with an overt cognate object.

(15) **jɔn digg diggeyaa*
John.nom fall.N fall.perf.m.sg
'*John fell a fall.'

Cognate objects for unergatives also trigger telicity effects (see Borer, 1994, 2005; Dowty, 1979, 1991; Krifka, 1992; Tenny, 1987, 1994 and Verkuyl, 1972, 1989, 1996) for cross-linguistic discussion of the relation between telicity and direct (count noun) objects). Take (16) for illustration, where with the adverbial 'in one hour', telic readings are obtained in the presence of cognate objects. The subject is optionally assigned an ergative.[4, 5]

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[4] The predicate 'to sneeze' is used in (16) to bring out the telic reading successfully. One may also substitute it with 'to laugh' as in (i), but the telic reading is possible only when the reference is to discrete or independent episodes of laughter.
(i) *jɔn /jɔn-ne ikk khãnte vicc caar vaari hassi hasseyaa/hassi*

(16) *jɔn /jɔn-ne* *ikk* *kh́ãnte* *vicc* *caar* *nicchãã*
John.nom/John-erg one hour in four sneeze.f.pl
niccheyaa/nicchiiyãã
sneeze.perf.m.sg/f.pl
'John sneezed four sneezes in an hour.'

Cognate objects can also be modified using adjectives. The adjective agrees in number and gender with the object (17).

(17) *jɔn /jɔn-ne* *pyaarii* *hassii* *hasseyaa/hassii*
John.nom/John-erg lovely.f.sg laugh.f.sg laugh.perf.m.sg/f.sg
'John laughed a lovely laugh.'

Adjectives can also be employed when the cognate object is absent. This indicates that in an unergative structure with no overt object, there is an implicit internal argument that is modifiable by an adjective (18).[6]

John.nom/John-erg one hour in four instance laugh.f.sg laugh.perf.m.sg/f.sg
'John laughed four times in an hour.'

[5] In response to a query by an anonymous reviewer, we posit with Borer (1994, 2005) that telic interpretation does not follow from the nature of the verb, but from the nature of the object. The object must be overt (and quantifiable) to enable a telic reading. Contrast the following English examples (i)-(ii), where a telic reading is rendered possible only in the presence of an overt object.
(i) Terry sang for an hour/*in an hour,
(ii) Terry sang a ballad ?for an hour/in an hour. (Borer, 2005:47)

[6] A reviewer enquires whether adjectives are morphologically distinguishable from adverbs in Punjabi. Firstly, adverbs are accompanied with *naal* 'with' (i), which is not possible for adjectives. Moreover, adjectives, but not adverbs can occur with *waalaa*, which agrees with the modified noun in number and gender (ii). Importantly, *waalaa*-adjectives can modify implicit arguments, which is further proof of the transitivity of unergatives (iii).
(i) *kuRii/kuRii-ne* *pyaar* *naal* *hassii/hasseyaa*
girl.nom/girl-erg love with laugh.perf.f.sg/laugh.perf.m.sg
'The girl laughed sweetly (lit. with love).'
(ii) *kuRii-ne mitthii* *waalii* *ḏawaayii* *khaaḏḏii*
girl-erg sweet.f.sg wala.f.sg medicine.f.sg eat.perf.f.sg
'The girl ate sweet medicine.'
(iii) *karan-ne apnii cangii* *waalii* *hassii* *hassii* *te* *aman-ne*

(18) *siiṯaa /siiṯaa-ne pyaaraa hassii/hasseyaa*
Sita.nom/Sita-erg lovely.m.sg laugh.perf.f.sg/laugh.perf.m.sg
'Sita laughed a lovely laugh.'

An implicit object, however, cannot trigger agreement with the modifying adjective and the verb, as illustrated in the example above. The verb and the adjective instead manifest default (3 person masculine, singular) morphology. The implicit object also fails to produce telicity effects (19).

(19) **siiṯaa-ne ikk kh́ãnte vicc pyaaraa hasseyaa*
Sita-erg one hour in lovely.m.sg laugh.perf.m.sg
'Sita laughed a lovely laugh in an hour.'

The inability of implicit objects to trigger verbal/adjectival agreement or to generate telicity effects should not be treated as exceptional since the same patterns are also attested in the transitive domain. Consider the transitive predicates 'to eat', 'to drink', and 'to hit', which allow null or implicit objects (20)-(21).

(20) *siiṯaa-ne khaaḍḍaa*
Sita-erg eat.perf.m.sg
'Sita ate.'

(21) *siiṯaa-ne raam-nũũ kal caŋdãã maariyãã ṯe ajj siiṯaa-ne*
Sita-erg Ram-acc yesterday slap.f.pl hit.perf.f.pl.And today Sita-erg
pher $[\ ]_N^o$ *maariyãã*
again hit.perf.f.pl
'Sita slapped Ram yesterday, and again today.'[7]

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karan-erg self good.f.sg wala.f.sg laugh.f.sg laugh.perf.f.sg and aman-erg
maaRii waalii
bad.f.sg wala.f.sg
'Karan laughed his good laughter and Aman his bad one.'

[7] Example (21) cannot be an instance of NP movement. This is shown by the presence of a complex NP island in the second conjunct of (i).

(i) *siiṯaa-ne raam-nũũ kal caŋdãã maariyãã ṯe karan- nũũ ae pataa*
Sita-erg Ram-acc yesterday slap.f.pl hit.perf.f.pl and Karan-dat this (fact) know

Implicit objects in transitives can be modified with adjectives. However, there is no evidence of agreement between the implicit object and the verb or the adjective (22). Contrast this with transitive constructions with overt objects (23) that trigger agreement with the verb and the adjective.

(22) *siiṯaa-ne thãndaa khaaḍḍaa*
Sita-erg cold.m.sg eat.perf.m.sg(default)
'Sita ate cold food.'

(23) *siiṯaa-ne thãndii rottii khaaḍḍii*
Sita-erg cold.f.sg bread.f.sg eat.perf.f.sg
'Sita ate cold bread.'

Implicit objects in transitives also fail to trigger telicity effects, as illustrated by the unacceptable sentence in (24).

(24)**siiṯaa-ne ikk kh̃ãnte vicc thãndaa khaaḍḍaa*
Sita-erg one hour in cold.m.sg eat.perf.m.sg
'Sita ate cold food in an hour.'

A tentative answer for this peculiar behavior of implicit arguments (of transitives and unergatives alike) is that they are NPs without a D-feature (on lines with Landau, 2010) that is crucial for overt agreement morphology and telicity effects. This means that only DPs with full phi sets including a D feature can trigger phi agreement. However, both DPs and NPs require case for rendering the argument referential, as also discussed in Hinzen (2014), Pesetsky and Torrego (2007) among others. Specifically, Hinzen claims that case is the sole strategy in grammar that reads argument relations, thereby providing reference to arguments. This indicates that implicit arguments, too, need to be case valued like their overt counterparts. Their lack of phi features, however, prevents them

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e ki siiṯaa ajj pher $[\ ]_N^o$ *maaregii*
be.pres.3.sg that Sita today again hit.fut.f.sg
'Sita slapped Ram yesterday, and Karan knows the fact that she will slap him again today.'

from triggering morphological agreement. Needless to say, the status of implicit arguments as NPs that need case but do not trigger phi agreement requires closer investigation.

To summarize, Punjabi unergatives with optional ergative subjects are underlying transitives with either overt cognate objects or implicit objects. Overt cognate objects behave like overt objects of transitive verbs with regard to overt agreement and telicity effects. Implicit objects of both types of predicates, on the other hand, form similar patterns and fail to trigger either overt agreement or telicity effects.

4. TRANSITIVE LIGHT VERBS AND SUBJECT CASES

In this section, we turn our attention to unergative-light verb compounds. Two primary empirical results discussed in this section are - a) Punjabi 'transitive' unergative predicates are selected by transitive light verbs, and b) transitive light verbs and their main/lexical verb counterparts do not necessarily make the same choices vis-à-vis case-valued subjects. We evaluate these predicates as canonical light verbs, since they have all the properties of light verbs. We then proceed to compare them with the predicates that pattern closely with auxiliaries and illustrate how the latter force nominative subjects into unergative constructions.

To start, Punjabi unergatives co-occur with transitive light verbs. Consider the examples in (25)-(26), where the unergative verb 'to laugh' combines with the transitive light verbs, 'to give' and 'to take'.

(25) *jɔn(-ne)* *hass* *d̪iṭṭaa*
John(-erg) laugh give.perf.m.sg
'John laughed.'

(26) *jɔn(-ne)* *hass* *liṭṭaa*
John(-erg) laugh take.perf.m.sg
'John laughed.'

These unergatives generally fail to combine with intransitive (unaccusative) light verbs, as shown in (27). In instances where this combination is allowed, we obtain a serial verb interpretation and not a compound verb reading, as in (28).

(27) ?*jɔn/* jɔn-ne* *hass* *gayaa*
John.nom/*John-erg laugh go.perf.m.sg
'John laughed.'

(28) *jɔn/*jɔn-ne* *hass* *aayaa*
John-nom/*John-erg laugh come.perf.m.sg
'John returned after laughing (at some other place or at someone).'

As Mahajan (2012) notes, light verbs generally have lexical verb counterparts that are compatible with nominals marked with certain cases. It is also the case that light verbs replicate the case assigning properties of their lexical verbs. In other words, if a lexical verb obligatorily occurs with an ergative subject, its light verb counterpart automatically takes one too. However, as we illustrate here, Punjabi light verbs do not always copy the behavior of their lexical counterparts. Both 'to give' and 'to take' differ from their lexical verb forms when it comes to the choice of case-valued subjects. Consider the sentences below (29)-(30), where the lexical verbs obligatorily choose ergative subjects, in direct contrast to the optionality we observed in (25)-(26) in the case of the light verbs.

(29) *jɔn-ne/*jɔn* *siiṯaa-nũũ* *kiṯaab* *ḏiṯṯii*
John-erg/*John.nom Sita-dat book.f.sg.acc give.perf.f.sg
'John gave a book to Sita.'

(30) *jɔn-ne/*jɔn* *siiṯaa- ṯõ* *caa* *liṯṯii*
John-erg/*John.nom Sita-abl tea.f.sg.acc take.perf.f.sg
'John took tea from Sita.'

This difference indicates that there is no strict correlation between ergative assignment on the subject and the transitivity of the light verb.

Additional structural factors are required to make ergativity possible with transitive light verbs; i.e. the light verb (v) accompanied by the unergative main verb (V) must be in an appropriate syntactic context to allow ergative assignment on the subject. We defer an analysis along these lines till the next section. For the moment however, we take a slight detour to demonstrate that these predicates are true light verbs, based on how they behave with regard to light verb diagnostics. This together with our observations about Punjabi auxiliaries that require nominative subjects with unergatives will help us to formulate a more fitting analysis for optional ergativity in the later sections.

Light verb diagnostics include reduplication, stranding, infinitival forms and the wide distribution of these predicates.[8] We start with the reduplication test here. Consider (31), where 'to give' is witnessed in a reduplicated form.

(31) *jɔn/jɔn-ne* *hass* *ḍiṯṯaa* *shiṯṯaa* *e*
John.nom/John-erg laugh give.perf.m.sg Redup form be.pres.3.sg
'John has laughed.'

Light verbs can also be stranded away from the main verb. We observe this with 'to give' in (32).

[8] The first two diagnostics are taken from Butt and Ramchand (2005), while the last two are suggested by an anonymous reviewer. Butt and Ramchand's work also has a case diagnostic, which we do not employ here separately, as it is discussed as one of the main features of optional ergativity.

(32) *hass ṯe jɔn/jɔn-ne ḏiṯṯaa sii*[9]
laugh topic John.nom/ John-erg give.perf.m.sg be.past.3.sg
'John had laughed.'

The verb in question also has an infinitival form, as illustrated in (33).

(33) *jɔn-ne hass ḏenaa caayaa*
John-erg laugh give.inf want.perf.m.sg
'John wanted to laugh.'

Finally, the verb has a wide range of distribution, such that it appears with a large number of transitive/unergative predicates (34)-(35).

(34) *jɔn-ne bacce-nũũ maar/ḏe ḏiṯṯaa*
John-erg child-acc hit/give give.perf.m.sg
'John hit/gave away the child.'

(35) *jɔn/ jɔn-ne nacc/nicc*$^{h/}$*hass ḏiṯṯaa*
John.nom/John-erg dance/sneeze/laugh give.perf.m.sg
'John danced/sneezed/laughed.'

It can also occur in both imperfective and perfective structures (36)-(37). The same observations can also be made for 'to take'.

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[9] The Punjabi 3rd person past auxiliary *sii* agrees only in number but not in gender with the appropriate DP as in (i)-(ii). This contrasts with the Hindi past auxiliary *thaa* which agrees in both number and gender (iii)-(iv).

(i) *kuRii/mundaa hass rayii/reyaa sii*
girl/boy.sg.nom laugh stay.prog.f.sg/m.sg be.past.3.sg
'The girl/boy was laughing.'

(ii) *kuRiiyãã/munde hass rayiiãã/raye sann*
girl/boy.pl.nom laugh stay.prog.f.pl/m.pl be.past.3.pl
'The girls/boys were laughing.'

(iii) *laRkii/laRkaa hass rahii/rahaa thii/thaa*
girl/boy.sg.nom laugh stay.prog.f.sg/m.sg be.past.3.f.sg/m.sg
'The girl/boy was laughing.'

(iv) *laRkiiyãã/laRke hass rahĩĩ/rahe thĩĩ/the*
girl/boy.pl.nom laugh stay.prog.f.pl/m.pl be.past.3.f.pl/m.pl
'The girls/boys were laughing.'

(36) *jɔn baRi jaldii hass ḍenḍaa e*
John.nom very quickly laugh give.hab.m.sg be.pres.3.sg
'John laughs quickly.'

(37) *jɔn/ jɔn-ne hass ḍiṭṭaa sii*
John.nom/John-erg laugh give.perf.m.sg be.past.3.sg
'John had laughed.'

To summarize, evidence suggests that 'to give' and 'to take' are true or canonical light verbs, that together with unergative main verbs, appear in both nominative and ergative subject constructions. Interestingly, these same unergatives may also select predicates that do not satisfy the criteria for light verbs. These predicates include *cuknaa* (completion) and *paanaa* (ability), and they obligatorily assign nominative to their subjects. Some nominative subject constructions with these predicates are given below in (38)-(39).

(38) *jɔn/*jɔn-ne hass cukeyaa sii*
John.nom/*John-erg laugh complete.perf.m.sg be.past.3.sg
'John had finished laughing.'

(39) *jɔn/*jɔn-ne saareyaa ḍe saamne raavan jeyaa hass*
John.nom/*John-erg all of front ravan like laugh
paayaa sii
able.perf.m.sg be.past.3.sg
'John could laugh like Ravan in front of everybody.'

Unlike 'to give' and 'to take', the verbs in this class of predicates do not have lexical verb counterparts. They also do not satisfy all the light verb criteria. For instance, while they can be stranded away from the lexical verb (40), they fail to reduplicate (41), do not have infinitival forms (42) and also do not appear with all aspects (43). These same observations also hold for *paanaa*.

(40) *hass ʈe jɔn cukeyaa sii*
laugh topic John.nom complete.perf.m.sg be.past.3.sg
'John had finished laughing.'

(41) **jɔn hass cukeyaa shukeyaa sii*
John.nom laugh complete.perf.m.sg Redup form be.past.3.sg
'John finished laughing.'

(42) **hass cuknaa theek nayii sii*
laugh complete.inf correct neg be.past.3.sg
'To have laughed was not right.'

(43) **jɔn hass cukɖaa e*
John.nom laugh complete.hab.m.sg be.pres.3.sg
'John has finished laughing.'

An anonymous reviewer suggests comparing the verbs *cuknaa* and *paanaa* with the (temporal) auxiliary *rɛnaa*, for a more definite answer regarding their nature. Indeed, there are similarities between these two predicates and the auxiliary – neither meets the criteria for light verbs. While the temporal auxiliary has an infinitival form (44), and can be stranded from the main verb (45), it cannot be reduplicated (46). Moreover, 'rɛnaa' is a progressive auxiliary and appears in structures like (47) with an obligatory progressive reading; a perfective reading is impossible with it. We take these similarities to mean that both types of predicates are indeed auxiliaries and not light verbs.

(44) *jɔn-ɖaa hassɖe rɛnaa caŋgaa e*
John-gen laugh stay.inf good be.pres.3.sg
'For John to keep laughing is good.'

(45) *hass ʈe jɔn reyaa e*
laugh topic John.nom stay.prog.m.sg be.pres.3.sg
'John is laughing.'

(46) **jɔn* *hass* *reyaa* *sheyaa* *e*
John.nom laugh stay.prog.m.sg Redup form be.pres.3.sg
'John is laughing.'

(47) *jɔn* *hass* *reyaa* *sii*
John.nom laugh stay.prog.m.sg be.past.3.sg
'John was laughing/*laughed.'

As shown above, light verbs and auxiliaries in the language can be distinguished on the basis of the following tests: possibility to reduplicate and wide distribution of predicates. Light verbs test positive with respect to these tests, in contrast with auxiliaries that cannot be reduplicated and exhibit a restricted occurrence. We do not count predicate-stranding as a relevant test since light verbs and auxiliaries all behave alike when subject to it.

In a nutshell, unergatives co-occur with transitive light verbs and optionally case-mark their subjects with the ergative. These same main verbs when combined with auxiliaries force the nominative on their subjects. This indicates a variation in the structural environments in which the two cases are assigned – a TP where the nominative is valued and a vP where the ergative is valued. However, optional ergativity with the light verb v remains an issue. This concern is addressed in the next section.

5. ANALYSIS OF OPTIONAL ERGATIVITY

In this section, we attempt to understand the additional syntactic mechanisms involved in optional ergativity in Punjabi. Our proposal is that Punjabi ergativity is a dependent case assigned to the unergative subject inside a vP- also containing the internal argument- that inherits the features of a higher verbal head. The dependent ergative is blocked when the subject moves out of the lower vP domain, and hence out of the domain containing the object. In such cases, it receives a structural nominative from T. Our analysis builds on the dependent case approach

to ergativity as espoused by Coon (2010, 2013), Coon and Preminger (2012, 2013), Laka (2006) and Marantz (1991).

Marantz (1991) proposes a dependent case approach to ergative assignment that takes place in a post-syntactic morphological component. He posits that the ergative, like the accusative, is a dependent case assigned in a distinct position governed by V+I. The basic idea, as presented in Baker (2014), is stated in (48):

(48) If there are two distinct NPs in the same clause ("governed by V+I") then:
Mark the lower one with dependent case (accusative) and/or
Mark the higher one with dependent case (ergative).

According to (48), in a nominative-accusative language, the accusative case is a dependent case that is assigned to a lower nominal when the higher nominal is assigned a nominative case. The accusative is blocked in instances when the higher nominal is assigned a non-nominative/quirky case. Similarly, in an ergative-absolutive system, it is the higher nominal that is assigned the dependent ergative case when the lower nominal is assigned an absolutive case.

Like Marantz, Laka (2006), Coon (2010, 2013) and Coon and Preminger (2012, 2013) also espouse the idea of a dependent ergative. However, they contend that ergative assignment happens in the narrow syntactic component, with clause size playing a dominant role. Specifically, it is observed that for the subject to receive a dependent ergative case, it must be in the same domain as the object DP. To this end, Laka (2006) proposes an analysis based on clause-bifurcation or added-structure. Take the two structures in (49) and (50) from Basque for illustration. In (49), the subject of the progressive clause is marked with –*a*. This is the same marker found on the object of the perfective clause, whose subject is marked with the ergative case –*ak* (50).

(49) *emakume-a* *ogi-a* *jaten ari da*
woman-DET bread-DET eating PROG is
'The woman is eating (the) bread.'

(50) *emakume-a-k* *ogi-ak* *ja-n* *d-it-u*[10]
woman-DET-Erg bread-DET.PL eat-PRF 3A-PL-have3E
'The woman has eaten (the) bread.' (Laka, 2006: 177)

The progressive in (49) has a biclausal structure, with the main verb *–ari* 'to be engaged' selecting a PP ('in something'). This is shown in (51).

(51) $[_{IP}$ emakume-a$[_{V2P}$ $[_{PP}$ $[_{NP}$ $[_{V1P}$ PRO $[_{DP}$ ogi-a] jan $_{V1}]$ $_{N}]$ $_{P}]$ ari $_{V2}]$ $_{I}]$

In (51), the object *–ogi* 'bread' and the lexical verb *jaten* 'eat' are placed inside a PP clause. The external argument of this subordinate clause is a PRO that is generated in the specifier of VP. The higher clause has the progressive marker *-ari* as its predicate and *emakume* 'the woman' as the subject. The presence of the PP in this structure hides the transitivity of the clause from the external argument 'the woman' which consequently fails to be ergative marked (also see Forker, 2010; Kazenin, 1998, 2001; Kazenin and Testelec, 1999 for similar proposals for Nakh-Daghestanian languages).

In the perfective structures on the other hand, both external as well as internal arguments are present in the same clause, with the former receiving the ergative and the latter the absolutive case (52).

(52) $[_{IP}$ emakume-ak $[_{VP}$ $[_{DP}$ ogi-ak] jan$_{V}]$ ditu$_{I}]$

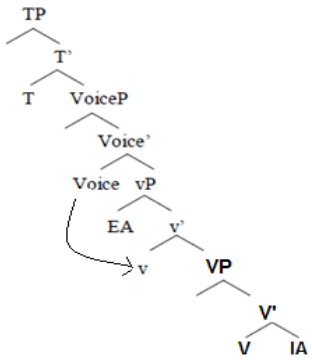
Coon (2010) and Coon and Preminger (2012) extend the analysis to other split-ergative languages by arguing that clausal bifurcation or added-structure is an essential feature of non-perfective aspects: these are constructed using spatial/locative building blocks (also see Bybee, Perkins and Pagliuca, 1994; Demirdache and Uribe-Etxebarria, 2000). These large clause structures embedded below the predicate obscure the transitivity of the predicate for the case assigning system. Consequently, the external argument is valued as nominative. Less structure renders the

[10] In example (50), both the subject and the object are marked with the ergative marker *–ak*. We would like to highlight that the first occurrence of *–ak* corresponds to the ergative marker and the next is a plurality marker.

transitivity of the predicate visible, thereby leading to the assignment of the ergative case to the external argument.

We believe that Punjabi ergativity can also receive a dependent case explanation (on lines with Laka 2006; Coon and Preminger 2012, 2013), albeit with some extra syntactic mechanisms to account for the optionality, which is allowed in perfective structures with unergatives. The extra mechanism involves feature inheritance as proposed by Roberts (2008). Roberts has the following representation in (53), for a sentence like 'John likes Mary'.

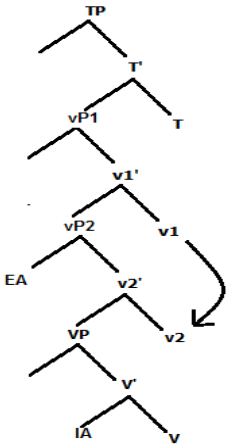
(53)



In (53), a voiceP with a full phi set of uninterpretable features dominates the vP. The v head inherits uninterpretable phi (uφ) features from voice, which enables it to case-value the internal argument. This suggests that in Robert's system, a phi defective v becomes a structural case valuer only by virtue of feature inheritance from a higher head. The external argument then receives a nominative case from T since voice is no longer an active head. Another important and possible consequence of this analysis, which Roberts does not address in his work, is that the voice head, upon discharging its phi-set to v, no longer provides an escape hatch (i.e., a specifier) for the external argument, which is then stranded inside vP. The DP fails to receive a nominative from T. In that scenario, there is another case assignment possibility: the external argument is assigned a dependent case by virtue of being in the same vP

domain as the internal argument. We believe that this possibility exists for Punjabi unergative structures with ergative subjects. The details of our analysis are given below, with the tree in (54), representing both simplex and compound verb structures.

(54)



The double vP structure in (54), borrowed from Mahajan (2012), has a lower transitive vP2 hosting the external argument and a higher vP1 hosting the light verb. Mahajan motivates the structure by dissociating the transitive vP (external theta) domain from the light verb domain. Adopting Robert's observation on Mahajan's double vP structure, the higher v1 in (54) has a full set of phi features, whereas the v2 is phi-defective. Simplex unergative structures without overt light verbs pattern similarly with complex unergative structures with overt light verbs in all respects such as (a) hosting cognate objects optionally (b) marking their subjects with either the nominative or the ergative case and (c) exhibiting either default verbal agreement or partial agreement in the presence of an overt object. We therefore contend that the simplex unergatives also have a double vP structure where the higher v1 hosts a phonologically covert light verb with a complete set of phi features; also see Mahajan (2012) for similar views on simplex unergatives in Hindi-Urdu. Note that the phi complete v1 is necessary in such structures to render the lower

phi defective v2 complete. The rest of the derivations remain the same as complex unergative structures, leading to either the nominative or the ergative case being assigned to the subject.

We follow Keine, Nisar and Bhatt (2014) and Baker and Atlamaz (ms.) in assuming that the perfective v (v2 in 54) in some languages introducing the external argument is phi defective. These phi defective heads are then rendered complete via feature inheritance from a higher verbal head. Once phi-complete, v2 case values the internal argument and the eternal argument is assigned a dependent ergative. Schematically,

(55) $[_{TP}\ [_{vP1}\ [_{vP2}\ \text{EA-erg}_{dependent}\ [_{VP}\ \text{IA-acc}_{structural}\ \text{V}]\text{v2}]\text{v1}]]$

In (55), the defective v2 inherits the phi features from v1 and case values the internal argument as accusative. This case value cannot be assigned to the external argument in the specifier owing to anti-locality constraints (Abels 2003; Grohmann 2003). In the process of feature inheritance however, v1 loses its edge feature. The external argument henceforth fails to use the edge of vP1 to move out of the lower verbal domain. It is stranded within the transitive vP2 along with the accusative object and receives a dependent ergative case. It should be noted that feature inheritance between the two verbal heads occurs only in the perfective. This may be explained by the phi-incompleteness of the v2 head in the perfective, which must be rendered phi complete (by feature inheritance) in order to assign a case to the internal argument.

Further, a reviewer questions the presence of the accusative on the internal argument in the perfective structures under discussion. It has been shown for ergative languages that the internal argument receives an absolutive from T (Ura 1996, 2001; Bittner and Hale, 1996). This pattern of absolutive as nominative is also discussed in Legate (2005, 2008) who exemplifies this class of languages with reference to Georgian. However, in addition to this class, Legate posits another class of absolutive case (absolutive as default) wherein it corresponds to a default morphological realization (accusative) of Case features on the object assigned by either T or v. This system is represented by languages such as Warlpiri, Niuean and Enga. We posit that Punjabi belongs to the absolutive-as-default group, where the case assigned on the object is not assigned by T, but by

v. This is suggested by the differences in agreement morphology on the v-T complex when it agrees with the intransitive subject and the transitive object. Intransitive subjects in the perfective that are case valued by T trigger full phi (+person) agreement on the v-T complex. On the other hand, the verbal complex shows only number agreement with the transitive object; there is never any T/person agreement.

Another query pertains to the issue of a higher v1 in the structure in (55), amounting to an increase in the clause size for dependent ergative case. Our answer is that the smaller vP2 is the domain for the dependent ergative. The higher v1 has no role to play in assigning a dependent ergative case after it loses its phi features to v2.

Additionally, as the reviewer also notices, T must be introduced into the derivation after the external argument has received an ergative case. This eliminates the possibility of long-distance nominative case valuation by T on the said DP. However, as the derivation proceeds and T is introduced into the computational workspace, it looks inside its complement domain and Agrees in phi features (number and gender) with the unmarked structural accusative object.[11]

In the account proposed here, the ergative is blocked in instances with no v1 to v2 feature inheritance. In such cases, v1 retains its phi features and the external argument uses the edge of v1 to move out of vP2. Assuming that T is introduced into the derivation at that point, the DP is assigned a nominative value by the T head.[12] With the movement of the external argument out of vP2, the domain for case valuation is enlarged. The nominative is assigned in the larger TP domain. The

[11] We are assuming with Bhatt (2005) that phi feature agreement can take place with previously case valued (but unmarked) DPs. Further, Chomsky's (2001) Weak Phase Impenetrability Condition (PIC) will also allow the object to remain visible in the computational workspace for agreement with T, till the next phase head C is introduced.

[12] We are yet to motivate why T is introduced late in (55), and early in (56). One reason for this could be that since v1 in (55) has no edge features and is consequently not a phase (Chomsky 2004), introducing its T head selector can be delayed. However, in (56), since v1 has an edge feature, T must be introduced as soon as its specifier is projected. This is, however, a tentative answer, and by no means conclusive (Though see Gallego (2009) and Richards (2008) for a similar idea). We leave this question open for future research.

internal argument does not receive a structural case value from the phi defective v2. Instead, it receives a dependent accusative in the larger TP domain, as shown in (56).

(56) $[_{TP}$ EA-nom$_{structural}$ $[_{vP1}$ EA$_t$ $[_{vP2}$ EA$_t$ $[_{VP}$ IA$_{dependent}$ V]v2]v1]]

To summarize, Punjabi unergatives exhibit an underlying representation where case domains are determined by the presence or absence of feature inheritance between two verbal heads. The varied sizes of the case domains – vP and TP – are crucial for the type of case values received by the two arguments of this class of unergatives. The cognate or implicit objects receive either (i) a structural accusative case from the closest v head or (ii) a dependent accusative case by virtue of being in the larger TP domain as the nominative subject. The external arguments likewise receive either a dependent ergative in the lower vP2 domain or a nominative in the higher TP domain.

A reviewer has questioned the use of a mixed system (dependent as well as structural) of case assignment in our analysis, wherein the perfective subject is assigned a dependent ergative while the object is assigned a structural accusative from v. We would like to note that the dependent case approach posited by Coon and Preminger (2012, 2013 among others) does not consider the notions of case-as-structural, and case-as-dependent as contradictory to each other. Instead, in this system, a dependent case can be assigned to a nominal only if it is located in the same domain as another unmarked (structural) case-valued nominal. Thus, dependent case assignment to a nominal in any given domain requires another nominal that is (structural) case valued by phi-agreement with a functional head. Baker and Vinokurova (2010) also suggest the possibility of a mixed case assignment system for Sakha, wherein accusative and dative cases are claimed to be assigned by the Marantz-style dependent case mechanism, while the nominative and the genitive are assigned structurally by functional heads. In keeping with these accounts, we also believe that the two methods of case licensing can co-exist in the grammar of a language.

That said, there are two other data sets that demand further explanation. First, there are transitives and certain unergatives that

obligatorily mark their subjects with the ergative case in the perfective. The second set involves imperfective structures where the assignment of the nominative to the subjects of unergative verbs is obligatory.

To start, the unergative predicate 'to scratch' and all transitive verbs have non-cognate objects, and their subjects are obligatorily assigned the ergative case as shown in (57) and (58) respectively.

(57) *munde-ne/* mundaa jakham khurkeyaa*
boy-erg/*boy.nom wound.m.sg scratch.perf.m.sg
'The boy scratched the wound.'

(58) *munde-ne/* mundaa rottii khaaḍḍii*
boy-erg/*boy.nom bread.f.sg eat.perf.f.sg
'The boy ate bread.'

In the dependent case account that we have presented above for optional ergativity in (55)-(56), it should be the case that for both (57) and (58), the lower (perfective) v is phi defective, thereby triggering feature inheritance from the higher v1. As a consequence, v1 fails to project its specifier. This restricts the external argument to the smaller vP2 domain, which, as a result, receives an obligatory dependent ergative case. Schematically,

(59) $[_{TP}\ [_{vP1}\ [_{vP2}\ \ \text{EA-erg}_{dependent}\ \ [_{VP}\ \text{IA-acc}_{structural}\ \ \text{V}]\text{v2}]\text{v1}]]$

The alternate derivation is where feature inheritance does not take place, and the external argument uses the specifier of the higher verbal head to move up to T and receive a nominative case. We suggest that this structural configuration will not fulfill the case requirements of the non-cognate objects of transitives and unergatives such as 'scratch'. Non-cognate objects are ontologically differentiated from their predicates and are referential in nature. With Hinzen (2014), we assume that structural case licenses referentiality on arguments, and non-cognate objects obligatorily require a structural accusative case from their closest v head. Therefore, only structures with v1-v2 feature inheritance will have structural case-valued non-cognate objects and thereby survive the

semantic interface. In a configuration without feature inheritance, the non-cognate object will not be structurally case valued, leading to a derivational crash at the interface. Needless to mention, this proposal is tentative and needs more in-depth inquiry.

We now move on to the imperfective constructions. Unlike the perfective structures with unergatives that optionally mark their subjects with an ergative, and the transitives and unergatives with non-cognate objects that mark their subjects with an obligatory ergative, Punjabi imperfectives always mark their subjects with a nominative.

(60) *mundaa naccegaa*
boy.nom dance.fut.m.sg
'The boy will dance.'

(61) *mundaa jakkham khurkegaa*
boy.nom wound scratch.fut.m.sg
'The boy will scratch the wound.'

(62) *mundaa rotti khayegaa*
boy.nom bread eat.fut.m.sg
'The boy will eat bread.'

In (60)-(62), irrespective of the type of predicate, the imperfective structures have obligatory nominative on the subjects. This suggests that the external argument obligatory moves out to the larger TP domain to receive a nominative from T. Schematically:

(63) $[_{TP}$ EA-nom$_{structural}$ $[_{vP1}$ EA$_t$ $[_{vP2}$ EA$_t$ $[_{VP}$ IA-acc$_{structural}$ V]v2]v1]]

As with perfective structures, we propose that the imperfective structures with unergatives and transitives alike have a double vP structure (63). However, unlike the perfective structures, both verbal heads of the imperfective are phi complete. This rules out the possibility of feature inheritance between the two verbal heads. In such a scenario, the lower v2 values the internal argument as structural accusative, while the higher v1 provides the external argument with an escape hatch. T

which is simultaneously introduced into the derivation then accesses the subject and values it as nominative. Importantly, both case-valuations happen simultaneously. The external argument is not stranded in the lower vP2 domain with a dependent ergative.

6. SUMMARY AND IMPLICATIONS FOR OPTIONALITY

In this paper, we have discussed optional ergative subject constructions with unergatives in Punjabi. We have shown that both unergatives and the light verbs that they co-occur with are underlying transitives and yet they fail to obligatorily mark their subjects with an ergative case. Optional ergativity therefore needed a further explanation. We sought an answer in the dependent case approach, where we proposed that the object may be licensed either by structural case valuation from the closest v head or by a dependent accusative case in unergative perfective structures. This has implications for the assignment of case on the external argument, which is either licensed as a dependent ergative in the lower vP domain or as a structural nominative in the larger TP domain.

In the end, we would like to briefly address the implications that our analysis has for issues pertaining to optionality within the minimalist program.[13] Chomsky (2001) states the following about optionality:

"The natural suggestion [for constraining optional operations]… is a general economy principle: an optional rule can apply only when needed to yield a new outcome." (Chomsky, 2001:34)

In the above quote, the phrase 'new outcome' refers to two or more derivations that are semantically novel in that each has a different interpretive effect. These derivations prima facie involve the same lexical items but yield different interpretations. Chomsky takes this to suggest that optionality arises from different numerations underlying the derivations. In more concrete terms, the presence or absence of an uninterpretable feature in a given numeration has implications for narrow syntactic computations and consequent semantic interpretations. For

[13] Thanks to a reviewer for prompting us to address these concerns.

instance, in the case of Object Shift constructions, an extra EPP feature on the v triggers movement of the object to its edge, where it is also interpreted (see Chomsky, 2001:33-34). In another derivation emerging from a separate numeration lacking an EPP feature on v, the object remains in situ and is thus accordingly interpreted.

A different account is given by Longobardi (2000), who derives multiple derivations from the same numeration, provided that the derivations produce distinct semantic outcomes. For illustration, take the following post verbal subject construction in Italian from his work.

(64) *Ha telefonato uno studente*
telephoned a student

For (64), the post verbal subject has two possible interpretations; it can either be interpreted as generic or as existential. Longobardi takes this to mean that the same numeration can have two different derivations. In one case, the subject remains in its post verbal base position (VP internal) and receives an existential reading. Alternatively, it moves higher to spec, TP, followed by remnant VP movement to the leftmost periphery of the clause and is interpreted as generic. This analysis is in line with Diesing's (1992) Mapping Hypothesis, and does not necessarily associate movement with the presence or absence of specific features in the numeration.

For both Chomsky and Longobardi, optional derivations must lead to different semantic outcomes, irrespective of whether or not they emerge from different underlying representations. However, the optionality observed with unergative perfectives in Punjabi is without any semantic consequence. The external argument, irrespective of its ergative or nominative case value, has the same meaning. Consider the example in (65) with the unergative predicate 'to sneeze', where the subject can be marked as nominative or ergative without any difference in meaning.

(65) *john/john-ne* *niccheyaa*
John-nom/John-erg sneeze.perf.m.sg
'John sneezed.'

Additionally, as we have already shown, these optional structures are obtained from the same numeration consisting of a cognate object, a phi defective v2 and a phi complete v1. This could be taken to indicate that optionality in the unergative domain in this language does not result from different numerations. It rather results from different case domains within which case assignment takes place. These case domains are in turn decided by feature inheritance- a smaller vP2 case domain in instances of v1 to v2 feature inheritance and a larger TP case domain in instances with no feature inheritance.

In this sense, our account is in line with Biberauer and Richards' (2006) work wherein optionality is obtained not by multiple numerations, but by different derivations in the computational workspace. In more precise terms, we agree with their claim that the same set of lexical items and features can produce semantically non-distinct outputs, none of which is more costly than the other. In Punjabi unergatives with optional ergative subjects, both derivations with either ergative or nominative subjects are derived from the same numeration, without any cost differences. This optionality is therefore a case of 'true optionality' which is located not in the numeration, but in the derivational component. If this account is right, then the grammar allows free variation with some derivational outputs ruled out at the interfaces. The implications of such an analysis for grammatical architecture, however, need to be worked out in more detail.

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[Received 15 July 2015; revised 16 February 2016; accepted 16 February 2016]

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旁遮普語中非作格動詞選擇性的作格現象

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本文描述及分析印度亞利安語系旁遮普語中前人未曾注意到的的作格現象。旁遮普語的非作格動詞可選擇性地將主語標記為作格。本文證明，不帶作格標記與動詞的不及物性無關，因為他們強制選擇隱含的內部論元，並且被及物輕動詞所選擇。本文藉由「依附格」的概念（Coon 2010,2013; Coon and Preminger 2012, 2013）來分析旁遮普語中的作格。在兩個動詞中心語之間可有選擇性的特徵繼承，在不發生特徵繼承的情形下，作格獲得了保留，因而強迫外部論元必須移出帶有賓語的動詞短語範疇。本文最後對於語法中的可選性機制整理出一些初步的觀察。

關鍵字：非作格、及物性、輕動詞、依附格、特徵繼承