

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’.¹ 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^hal
 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).

¹For 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^hal 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^hal 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^hal=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^huum* ‘wander’, *hans* ‘laugh’, *hat* ‘move’, *g^huul* ‘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 verb² 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’.

²The 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^har ban ga-yaa
 house.M.Sg make go-Perf.M.Sg
 ‘The house (got) built.’
 b. *lar^hkaa 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^h āās* ‘cough’, etc. (Davison 1999). These verbs allow an optional *ne* after the subject to mark volitional action.

- (18) a. raam k^hāās-aa
 Ram.M.Sg cough-Perf.M.Sg
 ‘Ram coughed.’
 b. raam=*ne* k^hāās-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^hkiī* ‘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’.³

- (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. lar̥kii paanii=mē utr-ii
 girl.F.Sg water=in descend-Perf.F.Sg
 ‘The girl descended in the water.’
 b. kaḥṭii paanii=mē utr-ii
 boat.F.Sg water=in descend-Perf.F.Sg
 ‘The boat descended in the water.’

³As 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) lar̥kii
 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) kaftii
 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. lar̥kii=se paani=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. *kaftii=se paani=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. lar̥kii=se kaftii 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 *lar̥kii* '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 *kaftii* '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 *bar̥h* 'increase', *uṭh* 'rise', *nikal* 'come out', *gir* 'fall', *car̥h* '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 *ciryaa* '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 ciryaa 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^haag* '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^haag 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^hāās-aa
 Ram.M.Sg cough-Perf.M.Sg
 'Ram coughed.'
 b. raam=ne k^hāās-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).⁴

(38)	hebben	=	-telic
	zijn	= _c	+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

⁴Zaenen assumes LFG for her analyses. In (38), the ‘=_c’ 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.⁵ 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 ‘=_c’ 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.

⁵Note 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) =_c -
- b. k^hāās V (↑PRED)=‘cough<SUBJ>’
 (↑SEM-PROP POST-STATE) = -
 (↑SUBJ SEM-PROP ANIM) =_c +
- 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) =_c -
 (↑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.⁶ 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) =_c +
 |
 ...]

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.⁷

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 =_c +) fails.

⁶Mohanan (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.

⁷Standard 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^hããs* ‘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^hããs-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^hããs* ‘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^hããs* *ga-yaa*
 boy.M.Sg cough go-Perf.M.Sg
 ‘The boy got coughed.’ (POST-STATE features of *k^hããs* 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^hããs* ‘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^haag-taa* *hai*
 that boy.M.Sg very fast run-Impf.M.Sg be.Pres.3.Sg
 ‘That boy runs fast.’

- b. vo lar̥kaa b^haag ga-yaa
 that boy.M.Sg run go-Perf.M.Sg
 ‘That boy ran (away).’

In (49a), the verb *b^haag* 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^hããs* ‘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^hããs* ‘cough’ and a partial lexical entry of the ergative case marker *ne* are:

- (50) *ne*
 [(SUBJ ↑)
 (↑CASE) = erg
 ((SUBJ ↑) SEM-PROP VERB-CLASS) =_C bodily-function
 (↑SEM-PROP CONTROL) = INT
 | ...]

- (51) *k^hããs* 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^hããs* 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.⁸ 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. lar̥ke=*ne* k^hããs-aa
 boy.M.Sg=Erg cough-Perf.M.Sg
 ‘The boy coughed (intentionally).’
 b. *lar̥ke=*ne* gir-aa
 boy.M.Sg=Erg fall-Perf.M.Sg
 ‘The boy fell (intentionally).’

⁸In 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^h 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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